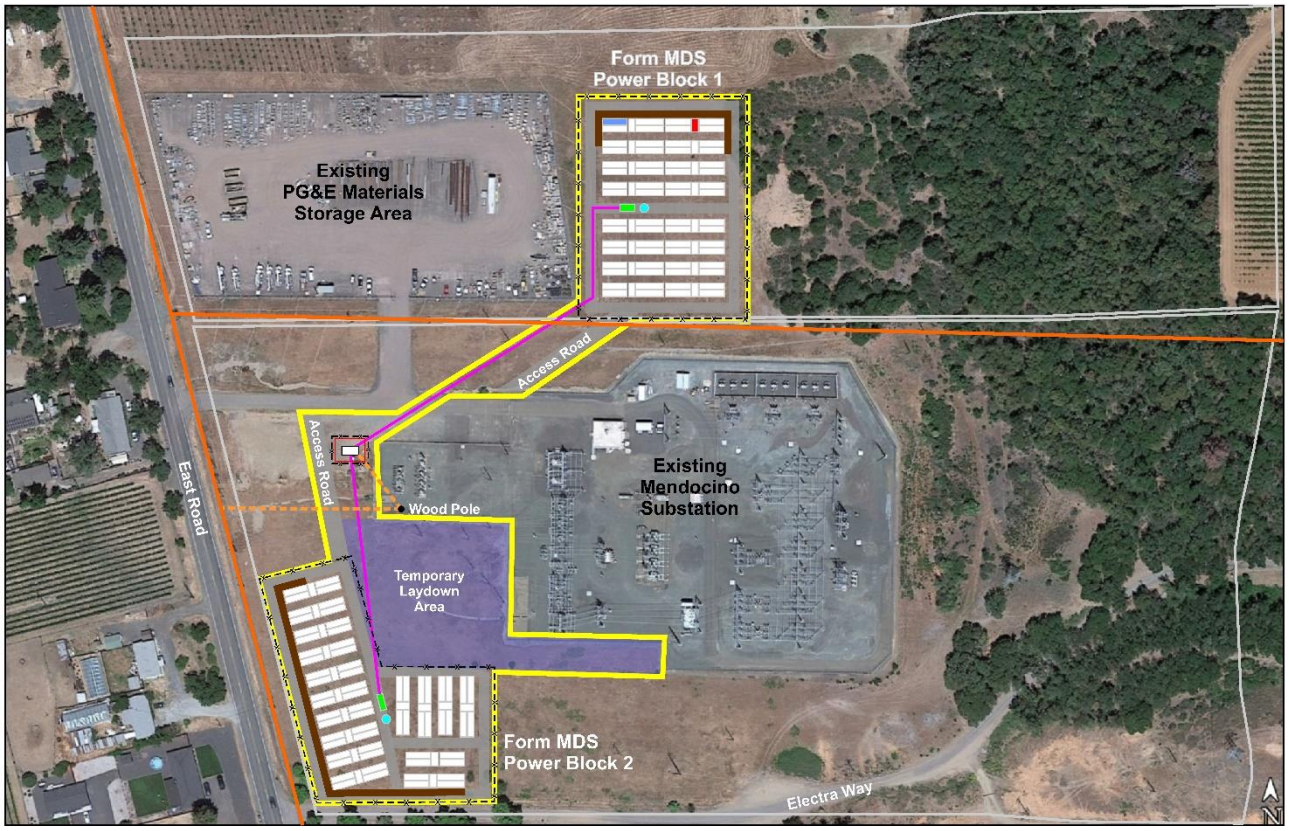
Initial Study
and
Proposed Mitigated Negative Declaration

East Road Storage Project



CALIFORNIA
ENERGY COMMISSION
Gavin Newsom, Governor

October 2023
CEC- 500-2023-055-D

INITIAL STUDY AND PROPOSED MITIGATED NEGATIVE DECLARATION

East Road Storage

(CEC- 500-2023-055-D)

Lead Agency

California Energy Commission

October 2023

CALIFORNIA ENERGY COMMISSION
1516 NINTH STREET
SACRAMENTO, CA 95814-5512
www.energy.ca.gov

NOTICE OF INTENT TO ADOPT A MITIGATED NEGATIVE DECLARATION

East Road Storage
(CEC- 500-2023-055-D)

Form Energy, Inc. (applicant, or Form Energy) proposes to install a demonstration energy storage project in response to a request for proposals from the Energy Commission (CEC) for non-lithium long-duration storage projects. The project, East Road Storage (Project), would be located in the community of Redwood Valley, Mendocino County, California.

The Lead Agency for undertaking environmental review under the California Environmental Quality Act (CEQA) is the public agency that has the greatest responsibility for carrying out, supervising, or approving a project. Where the award recipient is a private entity, the Lead Agency is the public agency that has the greatest responsibility for supervising or approving the project as a whole (14 California Code of Regulations §§ 15050 and 15051). In this case, the CEC will serve as the lead responsible for reviewing, and ultimately approving or denying, this Project.

This Notice of Intent is provided to inform parties, responsible agencies, and members of the public that CEC staff have proposed for adoption a Mitigated Negative Declaration (MND) for this project. Staff have prepared an MND based upon the assessment of potential environmental impacts outlined in the East Road Storage Initial Study (IS). As discussed below, both of these documents are available for public review.

Project Description

The applicant proposes to construct and operate the East Road Storage Project at 7475 East Road and 7399 East Road, which are adjacent parcels owned by Pacific Gas and Electric (PG&E), in the community of Redwood Valley, California. The Project would be located on vacant portions of the PG&E land also occupied by an equipment and materials storage area and the Mendocino Substation.

The Project would consist of two power blocks, each containing 64 Form Energy multi-day energy storage (MDS) battery enclosures and 16 auxiliary enclosures. It would provide 5 megawatts (MW)/500 megawatt hours (MWh) of 100-hour, iron-air, energy storage. Because this multi-day storage project would have a large storage capacity, it would be able to charge and discharge energy for extended periods. For example, the Project can charge during months when net loads are low and dispatch power during months when net loads are high. This would allow PG&E to use stored energy during times when it is otherwise not readily available. The proposed Project is expected to

operate for at least five years, during which time it would receive quarterly and periodic maintenance. At the conclusion of the Project, the applicant would also be responsible to remove (i.e., decommission and demolish) its facilities, and restore the site per the requirements of its contract with PG&E.

Staff Conclusions

Energy Commission staff have completed an independent review of the East Road Storage Project. Staff concludes that the Project, as mitigated, would not have a significant effect on the environment. Staff concludes that compliance with the mitigation measures detailed in the Initial Study would be sufficient to ensure there would be no significant impacts from the construction, operation, or demolition of the East Road Storage Project.

Availability of Documents

The Public Draft Initial Study for the East Road Storage Project can be found on the Commission's East Road Storage webpage at the following link: https://www.energy.ca.gov/programs-and-topics/programs/long-duration-energy-storage-program (Click "Publication, Reports and Documents" to find the Public Draft Initial Study) or by accessing the docket number (23-ERDD-07) through the docket webpage at: https://www.energy.ca.gov/proceedings/dockets/california-energy-commission-dockets.

Also, a Notice of Availability, which contains a QR code to the CEC webpage is being posted at the following location:

Ukiah Main Branch of
Mendocino County Library
105 N Main St.
Ukiah, CA 95482

This Notice of Intent has been mailed to a list of nearby property owners compiled in accordance with CEQA Guidelines section 15072(b). Additionally, this Notice of Intent has been provided to responsible agencies, trustee agencies, the Mendocino County Clerk, and organizations and individuals who have previously requested such notice. The Public Draft Initial Study was submitted to the State Clearinghouse for review by state agencies.

Public Comments

The public review period for the Initial Study begins on October 27, 2023. Written comments will be accepted until 5:00 p.m. on November 27, 2023.

The preferred method for submitting comments is via the Energy Commission's Dockets system. Click on the "Comment on this Proceeding" link. Please provide your full name, any organization name, an email address, a reference to Docket No. 23-ERDD-07, and preferably put your comment in an attached document (.doc, .docx, or .pdf format). After checking the box to ensure that responses are generated by a human user and not a

computer, click on the "Agree & Submit Your Comment" button to submit the comment to the Energy Commission Docket Unit.

Written comments may be submitted by email. Include the docket number 23-ERDD-07 and "East Road Storage Project Initial Study" in the subject line and email to docket@energy.ca.gov.

If preferred, a paper copy may be hand-delivered or mailed to:

California Energy Commission
Docket Unit, MS-4
Docket No. 23-ERDD-07
715 P Street
Sacramento, CA 95814

All written comments and materials filed with the Energy Commission will become a part of the public record of the Project.

Please note that the IS and MND are not decision documents for the Project, nor do they contain final findings of the Energy Commission related to environmental impacts. Staff's recommendation, along with any other recommendations and materials presented by the applicant, government agencies, and the public, will be considered at a public meeting held by the California Energy Commission to consider the Project, adopt the proposed MND, and issue a final decision on the grant application.

Please direct technical or project schedule questions to Yahui Yang, Project Manager, at (916) 776-0827, or by email at yahui.yang@energy.ca.gov. If you desire information on participating in the Energy Commission's review of the Project, please contact the Energy Commission's Public Adviser's Office, at (916) 957-7910 or toll free in California, at (800) 555-7794. The Public Adviser's Office can also be contacted via email at publicadviser@energy.ca.gov.

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Section 1

Proposed Mitigated Negative Declaration

Proposed Mitigated Negative Declaration

Initial Study
(CEC- 500-2023-055-D)

1 Proposed Mitigated Negative Declaration

1.1 Project Description

Project: Initial Study
7475 East Road and 7399 East Road
Redwood Valley, California

Applicant: Form Energy, Inc.
30 Dane St.
Somerville, MA 02143

The applicant proposes to construct and operate the East Road Storage Project at 7475 East Road and 7399 East Road, which are adjacent parcels owned by Pacific Gas and Electric (PG&E), in the community of Redwood Valley, California. The Project would be located on vacant PG&E land that is also occupied by an equipment and materials storage area and the Mendocino Substation.

The Project would consist of two power blocks each containing 62 Form Energy multi-day energy storage (MDS) battery enclosures and 16 auxiliary enclosures. It would provide 5 megawatts (MW)/500 megawatt hours (MWh) of 100-hour, iron-air, energy storage. Because this multi-day storage project has a large storage capacity, it is able to charge and discharge energy for extended periods. For example, the MDS battery can charge during months when net loads are low and dispatch power during months when net loads are high. Thus, allowing PG&E to use stored renewable energy during times when it is not readily available. The power blocks would be connected to the electrical grid via 880 feet of underground electrical line. From the pad-mounted switchgear, a 300-foot overhead primary line will be extended to a new (or existing) power pole within the substation that would also connect to a 12 kV distribution line along the east side of East Road.

At the conclusion of the project, the applicant would also be responsible to remove (i.e., decommission and demolish) its facilities, and restore the site per the requirements of its contract with PG&E.

1.1.1 Introduction

Pursuant to the California Environmental Quality Act (CEQA), the Energy Commission prepared an Initial Study (IS) for the proposed Project to determine if any significant adverse effects on the environment would result from Project implementation. The Initial Study uses the environmental checklist outlined in Appendix G of the CEQA Guidelines.

According to Article 6 (Negative Declaration Process) and Section 15070 (Decision to Prepare a Negative Declaration or Mitigated Negative Declaration) of the CEQA Guidelines, a public agency shall prepare or have prepared a proposed negative declaration or mitigated negative declaration for a project subject to CEQA when:

(a) The initial study shows that there is no substantial evidence, in light of the whole record before the agency, that the project may have a significant effect on the environment, or

(b) The initial study identifies potentially significant effects, but:

(1) Revisions in the project plans or proposals made by, or agreed to by, the applicant before a proposed mitigated negative declaration and initial study are released for public review would avoid the effects or mitigate the effects to a point where clearly no significant effects would occur, and

(2) There is no substantial evidence, in light of the whole record before the agency, that the project as revised may have a significant effect on the environment.

1.1.2 Environmental Determination

The IS was prepared to identify the potential environmental effects resulting from proposed Project implementation, and to evaluate the level of significance of these effects. The Initial Study is based on information provided by the applicant, their project description and associated submittals, site visits, requests for information and responses, tribal consultation, and additional research.

Based on the analysis in the IS, it has been determined that all project-related environmental impacts could be reduced to a less than significant level with the incorporation of feasible mitigation measures. Mitigation measures are proposed in the technical areas of Biological Resources, Cultural and Tribal Cultural Resources, Geology and Soils, Hazardous Materials, and Noise. See the respective technical area for the full text of the mitigation measures.

Therefore, adoption of a Mitigated Negative Declaration (MND) will satisfy the requirements of CEQA. The Project's mitigation measures included are designed to reduce or eliminate the potentially significant environmental impacts. Mitigation measures are structured in accordance with the criteria in Section 15370 of the CEQA Guidelines.

Section 2

Environmental Determination

2 Environmental Determination

2.1 Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" and requiring implementation of mitigation as indicated by the checklist on the following pages.

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

2.2 Environmental Determination

On the basis of 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 pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR, including revisions or mitigation measures that are imposed upon the Proposed Project, nothing further is required.

Jonah Steinbuck

Jonah Steinbuck, Director
Energy Research & Development Division
California Energy Commission

10/20/2023

Date

Section 3

Introduction

3 Introduction

3.1 Project Overview

Form Energy, Inc. (Form Energy) proposes to construct and operate a demonstration energy storage project, the East Road Storage Project (Project), on two adjacent parcels owned by Pacific Gas and Electric (PG&E) located at 7475 and 7399 East Road in the Redwood Valley area of Mendocino County, California. The Project would provide 5 megawatts (MW) of multi-day energy storage (MDS) with a storage capacity of 500 megawatt hours (MWh) using iron-air battery technology. When fully charged, the Project could discharge power to the grid continuously for 100 hours.

In 2021, Governor Gavin Newsom issued an Emergency Proclamation to accelerate plans for construction, procurement, and rapid deployment of new clean energy and storage projects to mitigate the risk of capacity shortages that were anticipated in 2021 and 2022. The California Energy Commission (CEC) developed its Long-duration Energy Storage (LDES) program to promote long-duration, non-lithium battery energy storage. Form Energy is designing its Project to meet the requirements of the CEC LDES program and is applying for a CEC grant to help fund the Project.

The Project site would occupy two areas within adjacent PG&E parcels. The northern parcel covers approximately 12.28 acres and contains an equipment and materials storage area. The adjacent southern parcel covers approximately 17.0 acres and contains PG&E's Mendocino Substation. Both parcels include vacant land where the Project components would be located.

The Project would include two power blocks. Power Block 1 would be located on the northern parcel, and Power Block 2 would be located in the southwest corner of the southern parcel. Each power block would contain 64 MDS battery enclosures with a generating capacity of 2.5 MW, for a total generating capacity of 5 MW. Each battery enclosure would contain about 10 battery modules. The battery enclosures would be constructed using modified shipping containers measuring approximately 8.5 feet wide, 37 feet long, and 8.5 feet high. The containers would be painted white. Each power block would include 16 auxiliary enclosures to support air and water management, one for every four battery enclosures. The auxiliary enclosures would be painted white and measure 8 feet wide, 18 feet long, and 8.5 feet high. They are not shipping containers but would look similar to them. Each power block would also contain a bi-directional inverter, medium-voltage step-up transformer, and a 10,000-gallon water storage tank having a height of about 15 feet. Each power block would have a sound wall surrounding a portion of the power block to reduce noise to the nearby residents. The existing dirt access road from East Road into the PG&E parcels would be modified to extend access to the two power blocks.

The power blocks would be connected to the electrical grid via 880 feet of electrical cable installed in a trench to connect the power block hubs to the pad-mounted switchgear. From the pad-mounted switchgear, a 300-foot overhead distribution line on wood poles would be extended to a new or existing distribution power pole within the substation that would also connect to a 12-kilovolt (kV) tap along the east side of East Road. Both power blocks would be surrounded by a 6-foot-tall chain-link security fence to restrict public access during construction and operation.

Because this multi-day storage project would have a large storage capacity of approximately 500 MWh, it could charge and discharge energy over extended periods. For example, the MDS batteries can charge during months when net loads are low and dispatch power during months when net loads are high, allowing it to take advantage of more seasonal trends and relieve more prolonged grid stress events. For the Project, Form Energy would use system forecasts and dispatch software to estimate optimal dispatch cycles.

The Project would be in operation for at least five years but could remain on-line longer. It would receive quarterly maintenance by Form Energy staff, including system diagnostics and any repairs needed to maintain the functionality of the MDS batteries. No Project support staff would otherwise be required onsite during operations.

3.2 CEQA Process

California public agencies must comply with the California Environmental Quality Act (CEQA) (Pub. Resources Code, § 21000 et seq.) before approving a project over which they have discretionary oversight. CEQA requires public agencies, such as the CEC, to identify the significant environmental impacts of its discretionary actions and to avoid or mitigate significant impacts, if feasible. Under CEQA, an activity that may cause either a direct or reasonably foreseeable indirect physical change in the environment is generally considered a "project" (Pub. Resources Code, § 21065). An activity funded by a grant may be considered a "project" under CEQA if it will cause a direct or reasonably foreseeable indirect physical change in the environment. As part of the CEC grant approval process, CEQA requires that an analysis be conducted to determine if the Project will have a significant effect on the environment.

3.3 CEQA Lead Agency

The lead agency for undertaking environmental review under CEQA is the public agency that has the principal responsibility for carrying out or approving a project (Cal. Code Regs., tit. 14, § 15367). If the project is to be carried out by a nongovernmental person or entity, the lead agency is the public agency with the greatest responsibility for supervising or approving the project as a whole (Cal. Code Regs., tit. 14, § 15051). The CEC is the lead agency because it is responsible for discretionary approval of the East Road Storage Project.

3.4 Initial Study

In accordance with CEQA, based on a preliminary review of the proposed Project, the CEC has determined that an Initial Study will be conducted to assess if the Project could have a significant impact on the environment (Cal. Code Regs., tit. 14, § 15063, subd. (a)). This Initial Study evaluates the potential environmental impacts that could reasonably be expected to occur from construction, operation, and demolition of the Project at the end of its useful life, based on information provided by Form Energy in its grant application and in response to requests for additional information. If the Initial Study identifies potentially significant effects, but project revisions are agreed to by Form Energy that would avoid or mitigate the effects to a point where no significant effects would occur, then a proposed mitigated negative declaration will be prepared (Cal. Code Regs., tit. 14, § 15070).

3.5 Organization of this Initial Study

This Initial Study evaluates the potential environmental impacts that might reasonably be anticipated to result from the construction, operation, and demolition of the Project. The analysis is broken down into issue areas derived from Appendix G to the CEQA Guidelines and the Warren-Alquist Act:

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

For each subject area, the analysis includes a description of the existing conditions and setting related to the subject area, an analysis of the proposed project's potential environmental impacts, and a discussion of mitigation measures, if necessary, to reduce potentially significant impacts to less-than-significant levels. As shown in the topics listed above, the CEC CEQA analysis documents include an analysis of Environmental Justice. Based on the analysis of impacts, a Mandatory Findings of Significance is also required.

Section 4

Project Description

4 Project Description

Form Energy, Inc. (Form Energy) proposes to install a demonstration energy storage project known as the East Road Storage Project (Project), on a Pacific Gas and Electric (PG&E) property in the Redwood Valley area of Mendocino County, California. (**Figure 4-1, Regional Location Map**). The Project would provide 5 megawatts (MW) of multi-day storage (MDS) with a storage capacity of 500 megawatt hours (MWh) using iron-air battery technology. When fully charged, the Project could discharge power to the grid continuously for 100 hours. The site consists of two adjacent parcels. The northern parcel (APN 166-050-02-00) at 7475 East Road covers approximately 12.18 acres and includes an equipment and materials storage area. The southern parcel (APN 166-050-03-00) at 7399 East Road covers approximately 17.0 acres and contains the Mendocino Substation (**Figure 4-2, Project Site**). An unnamed dirt road off East Road provides access to the Mendocino Substation and the equipment storage area on the northern parcel. The Project components would be installed on areas of both parcels that are vacant.

Figure 4-1. Regional Location Map

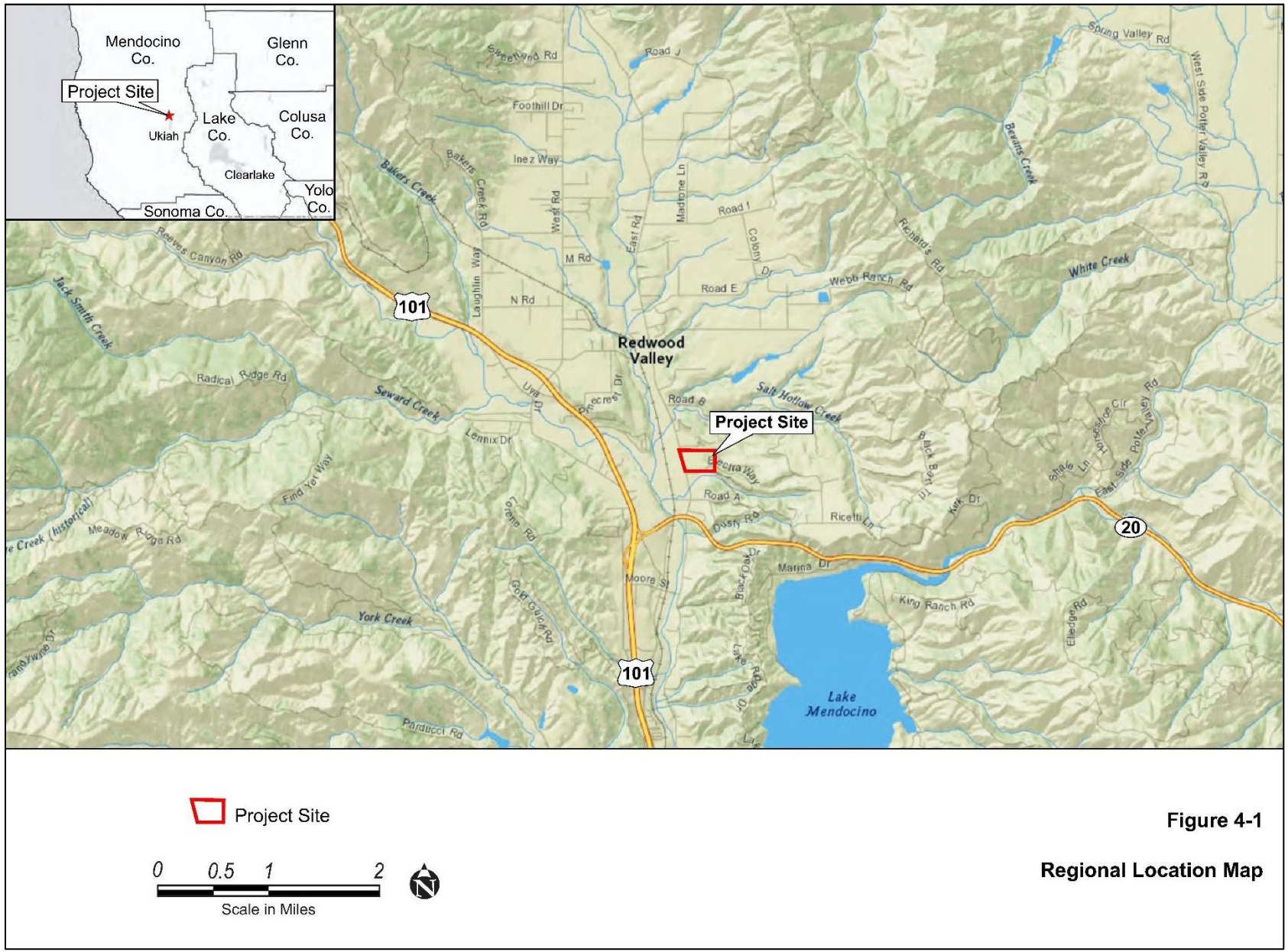
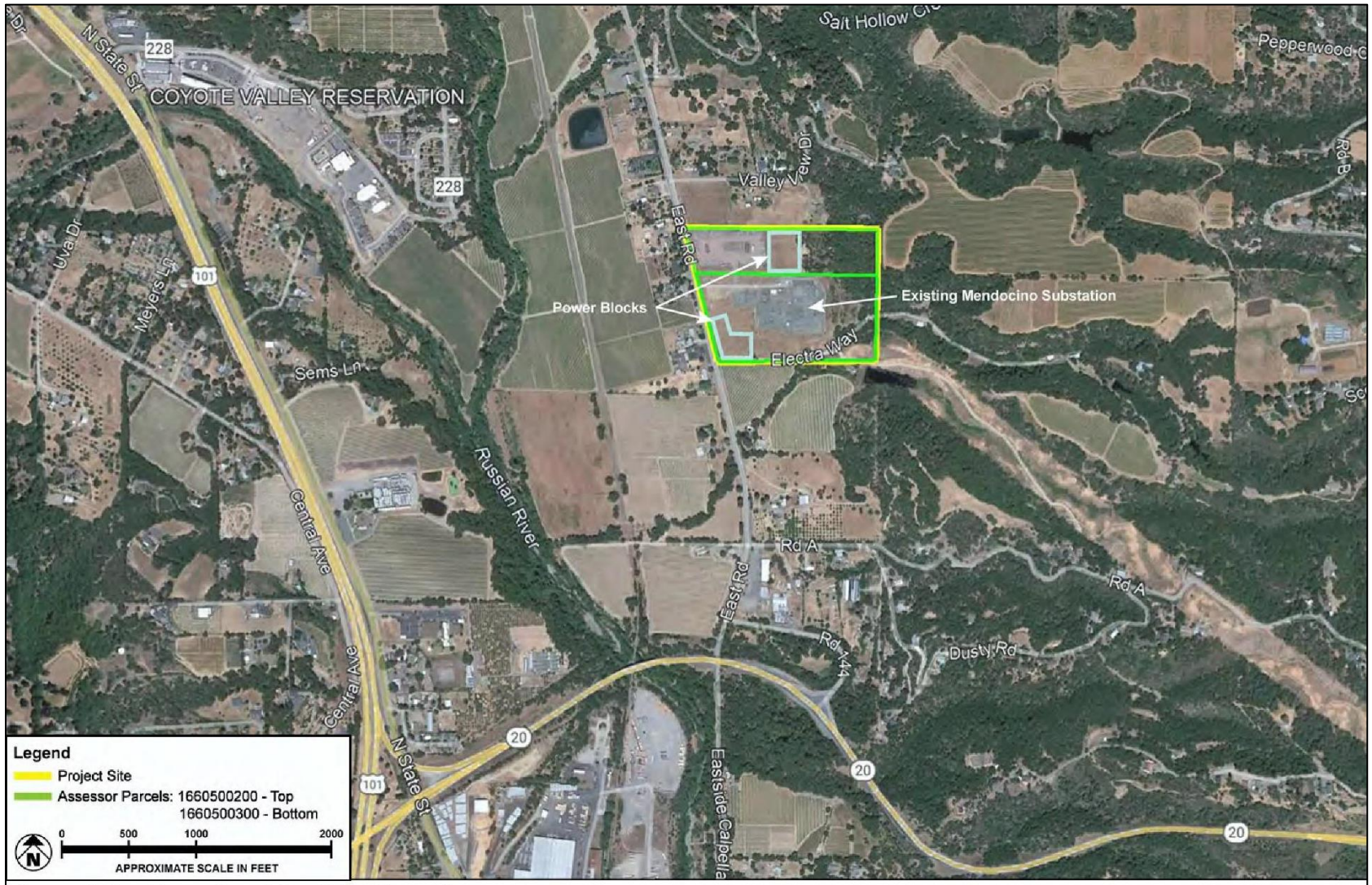


Figure 4-2. Project Site



Source: Pattern Energy Group LP and Form Energy, Inc.

Figure 4-2

Project Site

The battery system would be made up of multiple individual battery cells, each standing approximately 3 feet 3 inches tall. About 50 cells make up a battery module, which is about 35 cubic feet in size. Around 10 battery modules are placed in a modified shipping container. The cells include iron and air electrodes, the parts of the battery that enable the electrochemical reactions to store and discharge electricity. Each of these cells is filled with a water-based, non-flammable electrolyte. The battery operates through the principle of reversible rusting. While discharging, the battery absorbs oxygen from the air and converts iron metal to rust. While charging, the application of an electrical current converts the rust back to iron and the battery emits oxygen. During operation of the battery system, heat generated will be removed via a forced air thermal management system (i.e., fans). Like most aqueous batteries, iron-air batteries create a small amount of hydrogen while charging. In Form's iron-air battery, a fan dilutes the battery charging exhaust air with fresh air and exhausts it to the outside, where the non-toxic hydrogen gas promptly disperses.

The ratio of discharged to charged energy over the course of one full cycle, or round-trip efficiency, is 35 percent. This round-trip efficiency is inclusive of losses from power conversion and auxiliary loads at full power at standard environmental conditions (15 to 25 degrees Celsius). Iron-air chemistry is extremely stable. The primary loss of energy at the battery cell level is due to the significant overpotential required to cause the reaction to occur at the needed rate. This additional energy to "push" the reaction causes the iron-air chemistry to have a lower efficiency than other, more expensive battery chemistries. However, the stability of the iron-air reaction means that the possibility of thermal runaway is very low. At the system level, the primary loss of energy is due to power conversion losses, with smaller losses from auxiliary loads.

The Project would include two power blocks. Power Block 1 would be located on the northern PG&E parcel, and Power Block 2 would be located in the southwest corner of the southern parcel. Each power block has a generating capacity of 2.5 MW and would contain 64 MDS battery enclosures. The MDS battery enclosures would be constructed using modified shipping containers measuring about 8.5 feet wide, 37 feet long, and 8.5 feet high. The containers would be painted white. Additionally, each power block would include 16 auxiliary enclosures to support air and water management, one for every four battery enclosures. The auxiliary enclosures, which would also look like shipping containers, would be painted white and measure 8 feet wide, 18 feet long, and 8.5 feet high. Each power block would also contain a bi-directional inverter, medium-voltage step-up transformer, and a 10,000-gallon water storage tank, having a height around 15 feet. Due to the anticipated noise from the fans in the battery enclosures, a sound wall using acoustical treatments with concrete masonry unit (CMU) blocks or similar enclosures may be installed between the power blocks and the nearest residences (see **Figure 4-3, Site Plan**).

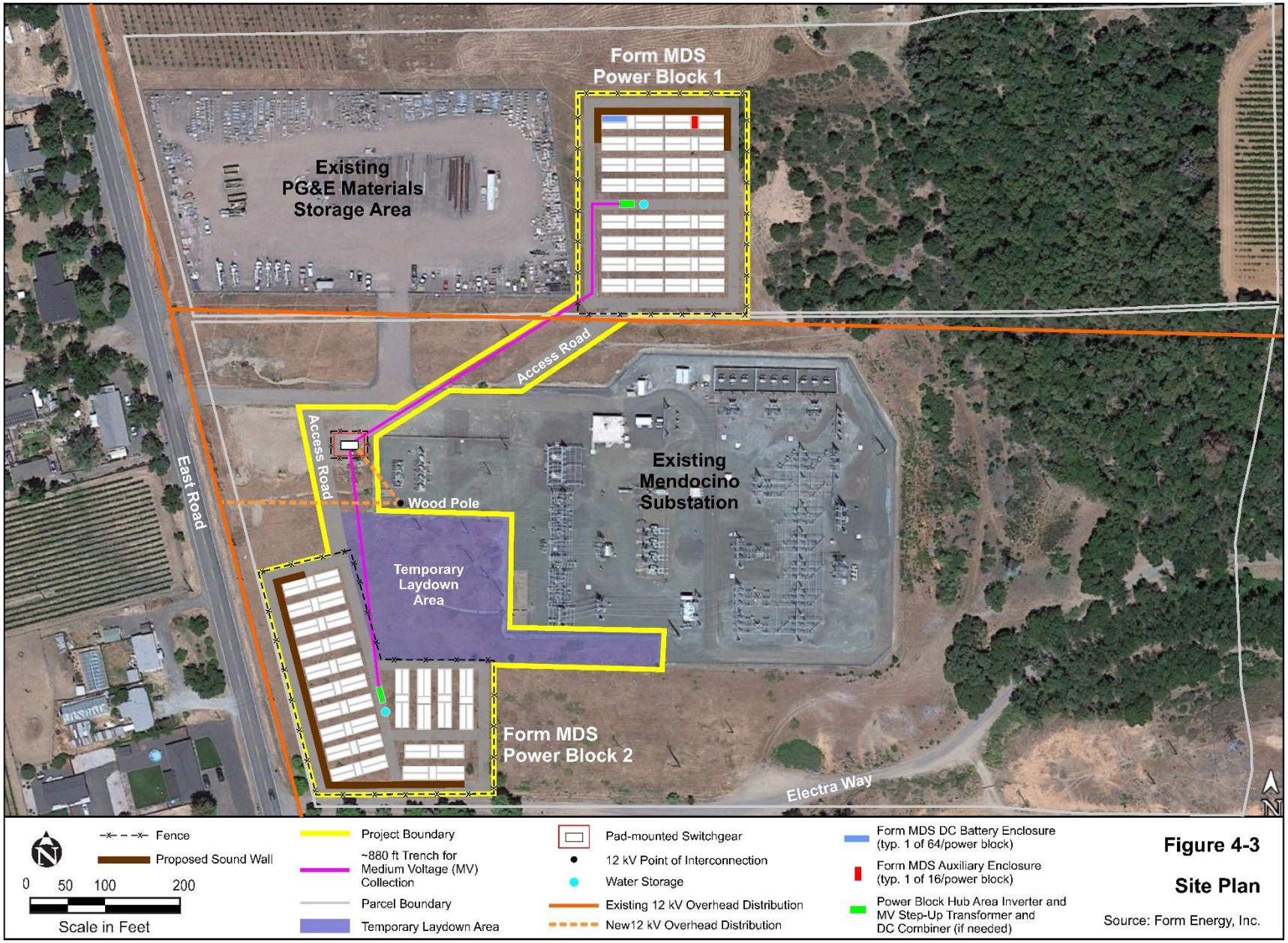
A couple of short road segments and on-site perimeter roads would be constructed to extend from the existing onsite dirt road to provide access to both power blocks. The power blocks would be connected to the pad-mounted switchgear via 880 feet of electrical

cable installed in a trench. From the pad-mounted switchgear, a 300-foot overhead primary transmission line would be extended to the Mendocino Substation 12-kilovolt (kV) tap and from the substation to the 12-kV distribution line running along the east side of East Road. Both power blocks and the pad-mounted switch gear would be surrounded by a 6-foot-tall chain-link security fence to restrict public access during construction and operation.

This multi-day energy storage project would have a large, 500-MWh storage capacity with the ability to charge and discharge energy over extended periods. For example, the MDS batteries can charge during months when net loads are low and dispatch power during months when net loads are high, allowing it to take advantage of more seasonal trends and relieve more prolonged grid stress events. During operation of the project, Form Energy would use system forecasts and dispatch software to estimate optimal dispatch cycles.

The Project would operate for at least five years, during which time it would receive quarterly maintenance by Form Energy staff. No support staff would otherwise be required onsite, and no night-lighting (other than minimal safety and security lighting) would be required for the facility. The system would provide 5 MW of electrical power to participate in California Independent System Operator (California ISO) markets, which could include wholesale energy, frequency regulation, spinning reserves, and flexible ramping.

Figure 4-3. Site Plan



4.1 Project Title

East Road Storage Project

4.2 Lead Agency Name and Address

California Energy Commission
715 P Street
Sacramento, California 95814

4.3 Lead Agency Contact Person and Phone Number

Yahui Yang, Project Manager
Energy Research and Development Division
California Energy Commission
715 P Street
Sacramento, California 95814
916-776-0827

4.4 Project Background

On July 30, 2021, Governor Newsom issued a Proclamation of State of Emergency in California to respond to a projected energy supply shortfall of up to 3,500 MW for the summer of 2021 and an anticipated shortfall of up to 5,000 MW for the summer of 2022. These shortfalls were the result of extreme drought, wildfires, and record-breaking heat events that put significant demand and strain on California's electric grid.

The Emergency Proclamation directed the CEC to work with the State's load-serving entities (i.e., utilities) on accelerating plans for the construction, procurement, and rapid deployment of new clean energy and storage projects to mitigate the risk of capacity shortages and to increase the availability of carbon-free energy produced by renewable energy sources at all times of day (California 2021). The Governor ordered an increase in energy capacity through an expansion of storage projects. Since then, the California Legislature passed Assembly Bill 205 (ch. 61, stats. 2022, sec. 4) (AB 205), which is codified in Public Resources Code sections 25640 through 25645.

In response to AB 205, the CEC developed the Long Duration Energy Storage (LDES) program promoting long-duration, non-lithium battery energy storage. The LDES program was approved as part of the State's 2022/2023 Fiscal Year budget.

The LDES program features $330 million in funds over two years to advance the scaling-up and commercial deployment of a range of emerging LDES technologies, initially prioritizing storage systems in the 3 to 10 MW range with a stretch goal for reaching 30 MW, and storage duration of 8 hours or longer with a stretch goal of reaching 20 to 100 hours. The program expects to move the LDES technologies into commercialization for rapid deployment without the need for future public funding.

Under the CEC LDES program, Form Energy proposes commercial deployment of a 5-MW (500-MWh), non-lithium-ion, LDES project that is the subject of this environmental document. The Project would demonstrate the capability of an iron-air, multi-day energy storage system to both support the integration of intermittent renewable resources and provide multiple days of continuous, zero-carbon power to the grid from those renewable resources.

4.5 Project Location

The proposed Project would be located in Redwood Valley, a census-designated place in Mendocino County, in northwestern California (**Figure 4-1, Regional Location Map**). The project location is in a rural area approximately 0.8 mile east of U.S. Route 101 and 0.5 mile north of State Route 20. Bordering counties include Humboldt and Trinity counties to the north; Tehama, Glenn, and Lake counties to the east; and Sonoma County to the south.

The Project site would be located on two adjacent parcels owned by PG&E at the existing Mendocino Substation (**Figure 4-2, Project Site**). The site addresses for the PG&E parcels are 7475 and 7399 East Road. An existing, unnamed dirt road from East Road provides access to both parcels and the PG&E facilities on the site. The two other roads nearest the site are Valley View Drive to the north and Electra Way to the south, which crosses into the southeast portion of the PG&E parcel where the substation is located.

Surrounding land uses include undeveloped areas, rural residences and outbuildings, and agricultural land. The property directly north of the project site includes a residence that would be approximately 250 feet northeast of Power Block 1, and another residence that is about 330 feet northwest from Power Block 1. A couple of residences are located across from the Project site along the west side of East Road. The closest one would be about 150 feet from Power Block 2. A cultivated vineyard is directly south of the Project site, along the south side of Electra Way. A woodland area and wooded hill lie directly east of the Project site.

4.6 Project Objectives

The proposed Project is designed to support the CEC's LDES program goals by achieving the following objectives:

- Deploy a 5-MW/500-MWh energy storage system to participate in the California Independent System Operator (California ISO) market providing power to the grid.
- Demonstrate the performance of Form Energy's multi-day energy storage system in a commercial project.

- Increase knowledge about how Form Energy's technology can provide a cost-effective zero-carbon renewable energy storage solution to meet the following challenges of:
    - Providing firm, dispatchable, zero-carbon capacity to avoid the need for natural gas plants to maintain grid reliability
    - Enabling firm renewable energy during any weather condition
    - Optimizing the use of transmission assets
    - Enabling electric resilience during multiple days of extreme weather or other grid emergencies
    - Identifying barriers to the efficient participation of MDS in California ISO markets

4.7 Mendocino County General Plan and Zoning Conformance

The *Mendocino County General Plan* shows that the Project site has a land use designation of Public Services where allowable uses include power substations and other support facilities (Mendocino County 2009). The site is in the Public Facilities zoning district, which is intended to be used for "specified public utility purposes" (Title 20, Chapter 20.108 of the Mendocino County Zoning Code). Power generating facilities are a typical use in the Public Facilities zone (see section **5.11 Land Use** for details). Because of the existing PG&E substation, the Project would be a permitted use in this zone, and a Conditional Use Permit or other discretionary permit is not required by the County (Mendocino County 2022).

4.8 Project Overview

The proposed Project would be located on land owned by PG&E where the existing Mendocino Substation is located, as shown in **Figure 4-3, Site Plan**. No expansion of the substation would be required for this project. As shown in **Figure 4-3,** both power blocks would include MDS direct current (DC) battery enclosures, related auxiliary enclosures, and water storage tanks. Power Block 1 would cover approximately 1.69 acres on the northern parcel, and Power Block 2 would cover approximately 1.79 acres on the southern parcel. A temporary laydown yard and construction parking would also be located on 1.04 acres of the southern parcel. The total area disturbed by the Project, including extensions of the internal access roads, would be about 4.8 acres, of which about 3.5 acres would be permanent and 1.3 acres (the laydown and parking area, plus the construction of the trench for the electrical cable) would be temporary.

The power blocks would be connected to the pad-mounted switchgear via 880 feet of electrical cable installed in a trench. From the pad-mounted switchgear, a 300-foot overhead distribution line would be extended to a new or existing distribution power pole within the substation that would also connect to a 12-kV distribution line on the east side

of East Road. (PG&E hasn't completed its engineering analysis to determine whether an existing pole can be used, or a new pole located inside the substation will be needed.)

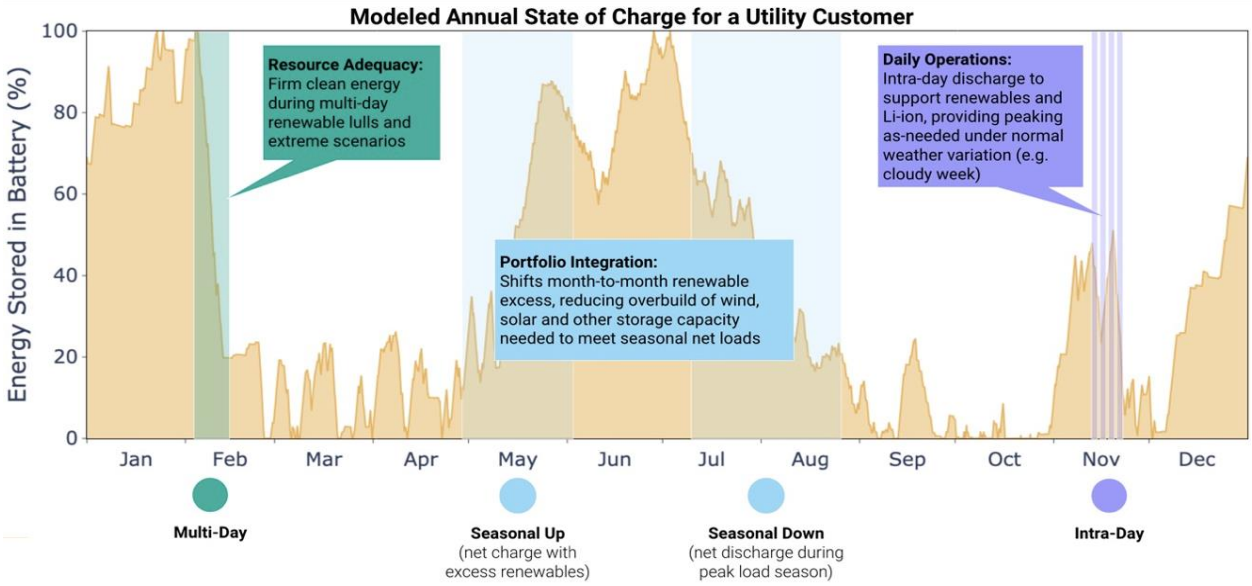
The Project would include the design, construction, installation, operation, and demolition/removal (at the end of the project) of the following facilities:

- Approximately 128 Form Energy MDS battery enclosures, and 32 auxiliary enclosures
- DC voltage networking
- A power conversion system (PCS) connecting the DC bus and alternating current (AC) network
- An AC network connecting the PCS and transformers
- 12-kV transformers and switchgear
- An AC network connecting the 12-kV switchgear and the existing 12-kV feeder
- An AC and DC electrical protection network for the system
- A communications network and energy management system (EMS) for coordinating system operations
- Water storage tanks (two, each with a 10,000-gallon storage capacity) and trenching and backfill for distribution lines for demineralized water
- 880 feet of electrical cable installed in a trench and backfilled to connect the power block hubs to the pad-mounted switchgear
- A 300-foot overhead distribution line that would be extended to a new or existing distribution power pole within the substation that would also connect to a 12-kV tap of the distribution line along the east side of East Road
- A couple of short road segments and on-site perimeter roads would be constructed to extend from the existing onsite dirt road to provide access to both power blocks, and the unpaved driveway for site entrance and exit from East Road would be improved and stabilized
- Site grading and temporary construction facilities (e.g., fencing, construction trailers, material laydown—to be removed at the end of construction)
- A sound wall in both power blocks to reduce operational noise at the nearby residences
- Chain-link security fencing and minimal downward directed and shielded lighting.

Generally, the MDS batteries would charge during hours of the day when California ISO's day-ahead prices are low, and discharge during the hours of the day when California ISO's day-ahead prices are high. During charging, PG&E would use a mix of renewable and fossil fuel resources. Because this multi-day energy storage project would have a

large, 500-MWh storage capacity, it would be able to charge and discharge energy for extended periods. For example, the MDS batteries can charge during months when net loads are low and dispatch power during months when net loads are high. The chart below, **Figure 4-4, Illustrative Modeled Annual State of Charge**, displays an annual dispatch plot showing how a portion of the full capacity of the battery can be used to provide daily cycling, while the remaining capacity is used for weekly and monthly cycles to take advantage of more seasonal trends and relieve more prolonged grid stress events. For the Project, Form Energy would use system forecasts and dispatch software to estimate optimal dispatch cycles.

Figure 4-4. Illustrative Modeled Annual State of Charge



4.9 Facility Construction

4.9.1 Schedule

Construction would be organized into the following activities:

- Construction Preparation and Site Grading (5 weeks)
  - Site grading and temporary construction facilities (e.g., fencing, construction trailers, material laydown). Improve and stabilize the unpaved driveway for site entrance and exit from East Road. A grader, dozer, and front-end load would be required for this work.
- Excavation and Undergrounding (18 weeks)
  - Excavation and trenching for installation of piping and conduit (including a water piping network for demineralized water distribution and electrical cable to connect the power blocks to the pad-mounted switchgear) followed by backfill. Excavators would be required for this work.

- Foundation Installation (8 weeks)
  - Installation of foundations for battery enclosures and balance-of-plant equipment, including the sound wall. Construction equipment required for this installation to be determined based on the results of the geotechnical investigation, including soil borings at various locations within the power block areas.
- Electrical Work (6 weeks)
  - Cable installation and terminations for all major equipment.
- MDS Battery Enclosure Installation and Electrolyte Fill (4 weeks)
  - Enclosure installation and electrolyte fill. This work would require at least one, 250-foot crane in addition to flatbed trucks.
- Commissioning (10 weeks)
  - Minor system adjustments to ensure the Project is operating properly.

Construction is planned to start in the fourth quarter of 2024. Overall construction of the power blocks would last six to nine months. Form Energy would like the system to come online in the fourth quarter of 2025. All noise-producing, construction-related activities would comply with local noise ordinances (see section **5.12 Noise** for details).

4.9.2 Workforce

The average daily construction workforce would vary between 5 and 10 construction workers, with a peak workforce of up to 10 workers. During commissioning, some project workers and PG&E personnel would be required to connect the Project to the PG&E substation and ensure it is functioning properly. The commissioning workforce would be onsite for up to 10 weeks, with an average of 5 workers and a peak workforce of 10 workers. Parking for the construction workforce would be located in the construction laydown area (approximately 1 acre in size) as shown in **Figure 4-3, Site Plan**.

The worker vehicle trips generated from Project construction assumes 10 employees would commute individually for a total of 10 daily round trips. Additionally, construction activity trips would include several trucks arriving and departing the site each day to deliver materials, including an estimated 3.5 acre-feet of water for dust suppression, supplies, and equipment. An estimated maximum of 13 truck trips per day would be required, with an average of eight daily two-way truck trips.

Portable restrooms (porta potties), hand-washing stations, and clean drinking water would be provided for the construction workforce.

4.9.3 Site Grading and Preparation

Prior to initial construction mobilization, any required preconstruction biological surveys would be performed, and any required sediment and erosion control measures would be implemented in accordance with an approved Storm Water Pollution Prevention Plan

(SWPPP). The existing dirt driveway off East Road would be stabilized for use by construction vehicles for site entrance and exit to reduce tracking of sediment onto the adjacent public roadway. Fencing, gates, communication, and security systems would be installed.

Given the relatively flat topography of the site, and adaptability of the MDS battery system and auxiliary structures for use in various terrains, a minimal amount of surface smoothing and grading would be required. No trees will be removed for preparation of Power Block 1. Although the Project will aim to avoid tree removal, detailed design may require the removal of four trees from the southwest corner for site preparation of Power Block 2. The rough locations of all foundations, trenches, roads, fences, sound walls, and equipment would be surveyed and marked. The internal access road would be graded, compacted, and graveled as required for construction, operations, maintenance, and emergency vehicle access per the grading plan drafted by a licensed California professional engineer.

Dust Control and Suppression

There would be minimal grading of the site to create access roads and level the site. Ground-disturbing activities would include trenching for underground electrical lines and communications cables, pipes, and foundations. The proposed Project would comply with all standards required by the Mendocino County Air Quality Management District (MCAQMD) to minimize fugitive dust, PM10 emissions, and other construction-related pollutants. See section **5.3, Air Quality** for discussions of applicable regulatory requirements.

System Installation

Grading, excavation, and trenching would be required for the installation of piping, electrical conduit, and foundations. This would require the use of excavators, compaction equipment, and water trucks. Excavation depths would be determined based on the results of the geotechnical investigation; however, it is expected that they would be less than four feet deep.

Concrete required for foundations or equipment pads would be purchased from an off-site supplier and trucked to the Project site for placement. Whether the concrete would be mixed on-site or pre-mixed off-site will depend on the preferences and specifications of the engineering, procurement, and construction (EPC) contractor. Similarly, the water supply for concrete would also be determined by the EPC supplier. Electrical equipment would be mounted or installed in-place and interconnected to PG&E's electrical distribution system.

4.9.4 Electrolyte Fill

At the end of the construction process, batteries would be filled with electrolyte, a water-based alkaline solution. After initial commissioning, the electrolyte would be stationary

and contained within the battery cells. The battery enclosures would serve as secondary containment for the electrolyte within the housed batteries. No electrolyte would be released during operation of the system.

Workers would wear appropriate personal protective equipment (PPE), be trained to handle electrolyte and the working solution, be equipped with spill cleanup kits, and be trained in proper spill response in the event that a spill occurred during electrolyte fill.

4.9.5 Substation Upgrades

Although PG&E has not completed its engineering analysis, it is anticipated that various interconnection and/or system upgrades would be required for the Project to interconnect with PG&E's distribution system. Distribution upgrades would include the installation of relays, a transmitter, telecommunication equipment, and a 300-foot 12-kV line extension from the Project's pad-mounted switchgear to the substation tap to the electrical lines on the east side of East Road. For the interconnection facilities, upgrades would include installing a receiver, meter, disconnect switch, and Supervisory Control and Data Acquisition (SCADA) recloser.

4.9.6 Commissioning

At the conclusion of construction, the Project would go through a commission phase to ensure it is operating properly. PG&E personnel would be required to connect the Project to the PG&E substation and Form Energy workers would modify the system to ensure it is functioning properly. The commissioning workforce would be onsite for up to 10 weeks, with an average of 5 workers and a peak workforce of 10 workers.

4.10 Operations and Maintenance

The proposed Project would operate for at least five years, during which time it would receive quarterly maintenance and preventative maintenance.

The facility would be remotely operated and monitored through a SCADA system. Staff would be on-call to respond to any alerts generated by the monitoring system and would visit the site quarterly to perform maintenance. About 96 work hours would be required for quarterly maintenance of the site using two to three workers. Form Energy plans to grow its service team according to the aggregate need across all projects, and the additional needs from this Project would be considered in the hiring plan. Employees would likely be based in the Project region.

All quarterly, preventative, and emergency operational and maintenance activities would be conducted by Form Energy. Quarterly maintenance would include demineralized water deliveries via a commercial water delivery service. Demineralized water would be stored onsite in a 10,000-gallon water tank located in each power block (**Figure 4-3**) and would be used to replenish battery electrolyte levels. Quarterly maintenance would also include servicing the MDS battery system and auxiliary enclosures to ensure that fans used for ventilation and temperature control are operating properly.

Preventative maintenance, occurring on a regular but less frequent basis than quarterly maintenance activities, would include inspections and diagnosis of:

- Inverters and auxiliary transformers
- Power path electrical connections and equipment from the inverter to the MDS battery enclosures
- Auxiliary electrical connections and equipment from the auxiliary transformers or main auxiliary panel to the MDS battery enclosures
- Water pipes, valves, storage, and pumps within the Project site
- Plant communication network, EMS, and SCADA system

Replacement parts and components would be warehoused off-site and deployed as needed. Non-emergency maintenance activities would occur during daytime hours.

4.10.1 Site Security

The power blocks would be accessed by spurs off the unnamed access road that serves the PG&E material storage yard and substation. The power blocks would have on-site perimeter and center line compacted and graveled dirt roads for emergency access and facility operations (**Figure 4-3**). The proposed Project would comply with applicable design and safety requirements for protective arrangements in electric supply stations when fencing the facility.

Minimal lighting would be used for operations and would be limited to safety and security functions. Motion sensitive, directional security lights would be installed to provide adequate illumination at points of ingress and egress. All lighting would be directed downward and shielded to focus illumination on the desired areas only and to minimize light trespass in accordance with applicable County requirements. If additional temporary lighting were to be required for nighttime maintenance, portable lighting equipment would be used, and removed from the site at the end of the maintenance work.

4.11 Decommissioning and Demolition

The estimated life of the Project would be approximately five years; however, the facility could stay online past the initial five-year period if commercially optimal to continue operation. Once the Project has completed its purpose, it would be decommissioned and the electrical connections to the PG&E substation would be terminated. Demolition would take six to nine months. All Project aboveground facilities and structures would be removed. Underground cables would be removed or abandoned in place, as part of the demolition. PG&E has not determined if the equipment added for this project would remain or be removed.

Demolition would likely involve a combination of salvage or disposal work performed in accordance with applicable federal, state, and local regulations. The iron-air battery

platform is composed of standard recyclable commodity materials. Form Energy is actively engaged in developing the supply chain required for end-of-life material management and a circular use framework, which would result in recycling pathways and offtakes for about 95 percent of end-of-life materials.

The MDS batteries would be drained of electrolyte by qualified environmental contractors and processed to separate the module, auxiliary equipment, and plumbing materials for recycling. Electrolyte can be re-processed, either for use within Form Energy's supply chain for additional iron-air deployments, or for third-party commercial use in acid wastewater management, or inputs in chemical industries.

Auxiliary equipment would be processed for scrap metal; where appropriate, motors or equipment can be resold. Plumbing parts, composed primarily of PVC and HDPE piping, could be processed as plastics recycling.

Modules would undergo a second advanced processing step to separate the anode, air electrodes, and packaging and direct materials to steelmaking, scrap metals, and plastic recycling markets respectively. Enclosures could be recycled as scrap metal.

Balance of plant equipment has standard electronics and equipment recycling pathways to scrap metal markets.

Project level infrastructure, including concrete, piping, and electricals/conduit could be managed via site level demolition/construction recycling processes for aggregate waste.

At end-of-life, the Project site would be returned to a state specified in relevant contracting and project approval conditions.

4.12 Intended Use of the Initial Study

As the lead agency pursuant to CEQA, the CEC is responsible for the preparation of this Initial Study. This Initial Study will be used in support of its discretionary decision to grant or deny Form Energy grant funding for the Project, as described previously in section 4.4. If the grant funding is approved, the Project would proceed to obtain all locally and federally required permits before starting construction.

4.13 References

Mendocino County 2009 – Mendocino County Department of Planning and Building Services. Mendocino County General Plan, Development Element. Adopted August 2009. Revised 2021. Figure 3-16 Land Use Policy Map, p. 3-71. Available online at: https://mendocinocounty.org/government/planning-building-services/plans/mendocino-county-general-plan. Accessed on August 17, 2023.

Mendocino County 2022 – Mendocino County Department of Planning and Building Services. Letter to the California Energy Commission regarding the Project at

7475 East Road, Redwood Valley (APN 166-050-002-00), Mendocino County. December 6, 2022.

California 2021 – State of California (California) Proclamation of a State of Emergency. Issued by Governor of California Gavin Newsom on July 30, 2021. Available online at: https://www.gov.ca.gov/wp-content/uploads/2021/07/Energy-Emergency-Proc-7-30-21.pdf Accessed on May 18, 2023.

Section 5

Environmental Setting, Environmental Impacts and Mitigation

5 Environmental Setting, Environmental Impacts and Mitigation

5.1 Aesthetics

This section describes the environmental setting, regulatory background, and impacts associated with the construction, operation, and demolition of the Project with respect to aesthetics in the existing landscape.

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

Environmental checklist established by CEQA Guidelines, Appendix G, Aesthetics.

5.1.1 Environmental Setting

Aesthetic Context of the Project and its Vicinity

The proposed Project would be located on two separate sites within adjacent PG&E-owned parcels approximately 0.8 mile east of U.S. Route 101 and north of the community of Calpella in Mendocino County, California. There is an existing PG&E substation and an equipment and materials storage area on the parcels abutting the east side of East Road, between Valley View Drive and Electra Way. The Project's proposed Power Block 1 site has a fenced PG&E storage yard to the west of it, between the site and East Road, see **Figure 5.1-1, Existing View of Power Block 1**. To the north is a ruderal field with one residence approximately 330 feet to the northwest and one approximately 250 feet to the northeast of Power Block 1. Woodlands and a wooded hill are to the east, and PG&E's Mendocino Substation is to the south. The Project's proposed Power Block 2 site

is near the northeast corner of East Road and Electra Way, with residences to the west across East Road, the PG&E substation to the north and east, and a vineyard to the south, on the south side of Electra Way, see **Figure 4-3, Site Plan**. **Figure 5.1-2, Existing View of Power Block 2**, provides a view of the proposed Power Block 2 site from Electra Way looking northwest toward East Road.

Figure 5.1-1. Existing View of Power Block 1 Site



Looking northeast, from the access road. A residence is visible in the mid-ground. The existing PG&E storage area is visible in the left side of the image.

Figure 5.1-2. Existing View of Power Block 2 Site

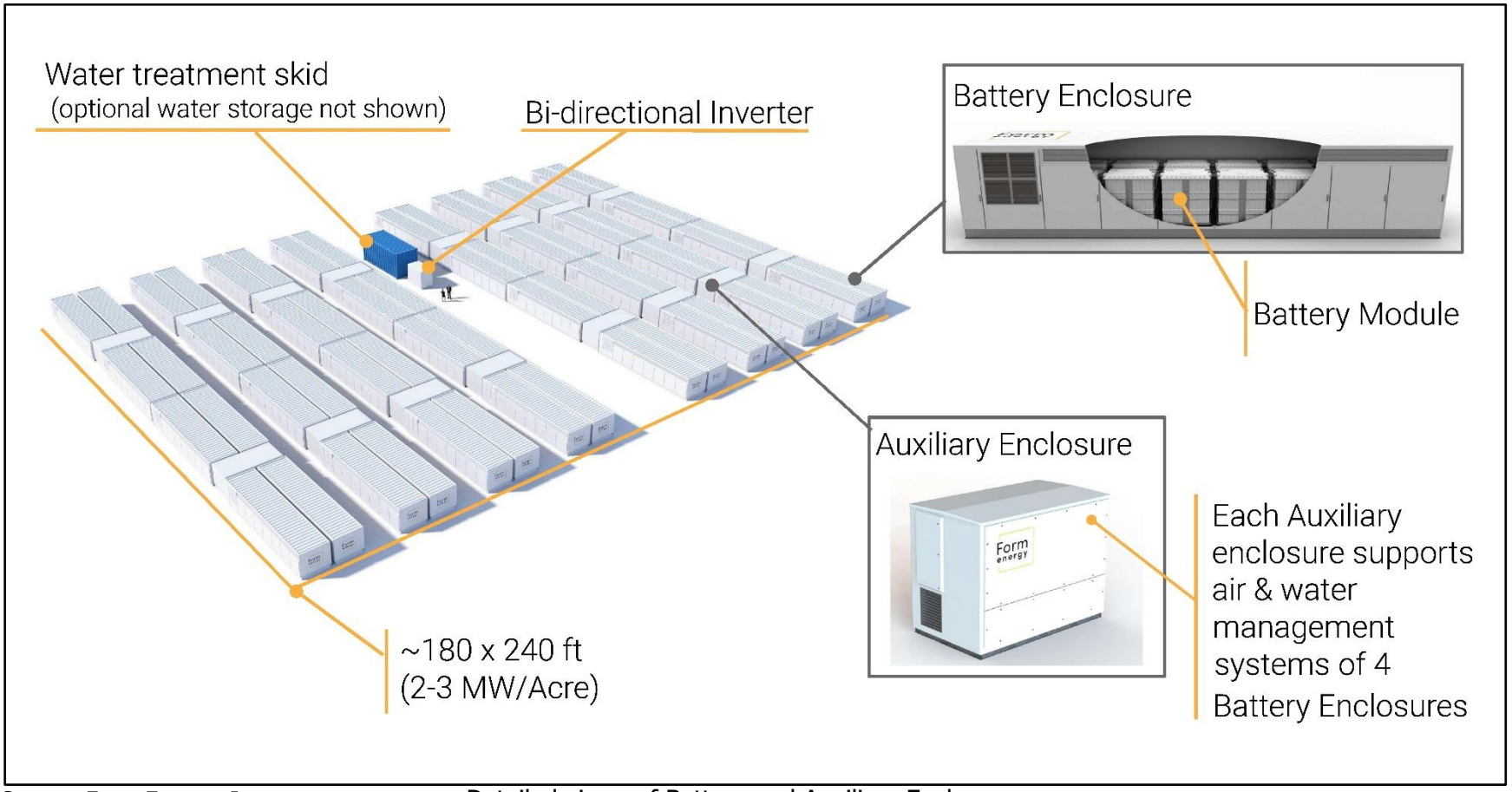


Looking northwest, from Electra Way. East Road is visible in the mid-ground, with a white car travelling south on it. The existing PG&E substation is visible in the right side of the image.

Power Block 1, located on the north parcel, would contain 64 MDS battery enclosures. Access to the site would be from an existing center access road. Power Block 2 would also contain 64 MDS battery enclosures, also with access from the center road. The MDS battery enclosures are modified shipping containers that are about 8.5 feet wide, 37 feet long, and 8.5 feet high, see **Figure 5.1-3, Artist's Rendering of Power Block 1 and Components**. The enclosures would be white in color. Each power block would contain MDS battery enclosures, auxiliary enclosures that support air and water management systems, a bi-directional inverter, and a 10,000-gallon water storage tank. There is one auxiliary enclosure for every four MDS battery enclosures. Each power block would have a perimeter access road within the fenced area and access roads between the MDS enclosures. A sound wall may be required in each power block between the battery enclosures and the nearest residences. There would be sufficient space around the MDS battery enclosures to allow for access by a 250-foot crane. Both power blocks would be surrounded by a six-foot-tall chain-link security fence, as would the pad-mounted switchgear.

The two PG&E parcels have a Mendocino County General Plan land use designation of "Public Service" and are zoned as a "Public Facility," subject to Division I of Title 20 of Mendocino County Code (Mendocino County 2020). Other parcels in the Project vicinity have the General Plan land use designation of "Rural Residential" and "Agricultural" use and are zoned for various types of Rural Residential (2-, 5-, and 10-acres), or for Agricultural uses.

Figure 5.1-3. Artist's Rendering of Power Block 1 and Components



Source: Form Energy, Inc.

Detailed views of Battery and Auxiliary Enclosures.
Power Block 2 will contain the same components, in a different orientation.

The proposed Project site is not located in an area designated as a protected scenic resource and is therefore not subject to scenic protection standards. Two routes near the Project site are listed as eligible for a State Scenic Highway designation, the first is Route 101, from Route 20 near Calpella to Route 20 near Willits, and the other is Route 20, from Route 101 near Calpella to Route 16. However, the proposed Project would not be visible from these routes because of intervening vegetation and topography, and the proposed site is not located near an officially designated scenic highway (Caltrans 2019).

Existing Views of the Project

Views of the proposed Project are limited to the residents near the project and motorists on East Road. The nearest adjacent residents to the proposed MDS battery enclosures would be approximately 150 feet away from Power Block 2 on the west side of East Road and 250 feet northeast of Power Block 1. There are a few trees on the site. No trees will be removed for Power Block 1. The Project team will aim to avoid tree removal, but detailed design may require the removal of four trees from the southwest corner for site preparation of Power Block 2. The visual change due to the Project would be largely viewed from motorists using East Road. Nearby residences would also notice a visual change; however, views from residences are not considered public views. The total area disturbed by the Project, including extensions of the internal access roads, would be about 4 acres, of which 3 acres would be permanent and 1 acre (the laydown and parking area) would be temporary. The PG&E substation and PG&E equipment and materials storage yard are each within chain link fences, are free of vegetation, and have a crushed rock ground surface.

Regulatory

Mendocino County General Plan, Resource Management Element. The Resource Management Element of the Mendocino County General Plan contains goals and policies to reduce impacts to scenic resources within the County. The following goals and policies from the Resource Management Element are relevant to the Project.

Policy RM-131. Protect the scenic values of the county's natural and rural landscapes, scenic resources, and areas of significant natural beauty.

Policy RM-135. Maintain and enhance scenic values through development design principles and guidelines, including the following:

- Reduce the visual impacts of improvements and infrastructure.

Policy RM-137. The County shall seek to protect the qualities of the nighttime sky and reduce energy use by requiring that outdoor nighttime lighting is directed downward, kept within property boundaries, and reduced both in intensity and direction to the level necessary for safety and convenience.

- Action Item RM-137.2: Encourage the use of motion sensors for indoor and outdoor lighting to reduce energy use.

5.1.2 Environmental Impacts

a. Would the project have a substantial adverse effect on a scenic vista?

Construction, Operation, and Demolition

No Impact. The flat topography and rural residential and agricultural character of this part of Mendocino County does not provide scenic vistas, which typically are views of extensive open spaces or views from elevated topographic positions. The nearest area of high elevation that could provide panoramic views that would include the Project site is directly adjacent to the site, on the east side. However, this land is privately owned; therefore, this hill would not provide public views of the site. Other areas of high elevation are located approximately 8 miles to the southeast (Shell Peak), approximately 7.4 miles to the northwest (Eagle Peak), and Laughlin Range, approximately 7 miles north. Views from these locations would overlook the rural residential, agricultural landscape, where you may be able to see the substation, but the new presence of a MDS facility would be indiscernible at this distance. The Project would therefore result in no impact to a scenic vista.

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

Construction, Operation, and Demolition

No Impact. The proposed Project may require limited tree removal, specifically, the potential removal of four trees from the southwest corner of the Project site for preparation of Power Block 2, depending on final site design. The possible installation of a sound wall would block some of the views of the battery and auxiliary enclosures and replace them with views of the sound wall by travelers on East Road. The Mendocino County General Plan does not identify any scenic resources in the area. Two routes near the Project are listed as eligible for a State Scenic Highway designation, but the Project site is not visible from an eligible or designated scenic highway or a historic building. Based on these conditions, there would be no impacts to scenic resources within a state scenic highway.

c. Would the project, 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?

Construction, Operation, and Demolition

Less than Significant. The Project is not located in an urbanized area. The Project is in a rural area, with primarily rural residential and agricultural land uses, as defined in the Mendocino County General Plan. The properties on which the Project would be sited are

designated for this Public Facility use. An existing substation and a storage yard currently occupy parts of the properties on which the Project would be sited. After demolition, the site would be returned to a state specified in relevant contracting and project approval conditions.

During construction, commissioning and demolition, the presence of equipment and vehicles would be noticeable to motorists on local roads, and from nearby residences. However, construction and demolition activities would be temporary (six to nine months).

During operation, the visual elements introduced by the Project in the landscape would be similar in nature to those of the existing PG&E storage yard and substation adjacent to the Project site. Currently, the portions of the parcels that are not occupied by the substation or storage yard are primarily covered in wild oats or, to the east, woodlands. Some vegetation and trees on the site may be removed by the project, in the southwest corner of the site, for site preparation of Power Block 2. The current land use designation of the site is Public Service. The addition of the MDS Enclosures would not be a significant change within the overall landscape, which already includes the industrial elements of a substation, equipment storage yard, and utility poles and towers. With the possible addition of a sound wall, the battery and auxiliary enclosures in Power Block 2 would be shielded from views by passing motorists, which would also block their views of the substation. The sound wall would be a slight improvement but would not be a significant change to the overall landscape.

The substation has taller visual elements (poles and other vertical structures) than the proposed Project. In addition, there are power distribution poles along the east side of East Road and multiple distribution poles within and near the substation site. One new pole may be added within the substation as part of the proposed Project. When viewed from East Road, the two PG&E parcels are backdropped by a wooded hill to the east. Tall lattice steel high-voltage transmission towers feeding the substation are visible to the east. The visual changes introduced by the proposed Project would be visible to a limited number of people, those living in the nearby residences and motorists on East Road. The most visible portion of the proposed Project would be the MDS Battery Enclosures and associated elements in Power Block 2, located near East Road and Electra Way. These enclosures look like standard shipping containers. Their presence would break up views of the substation and would be consistent with the current visual character of the site and vicinity, which includes a large equipment storage yard, the substation, and numerous power lines. Additionally, views of these enclosures may be blocked by the sound wall which would partially shield views of the Project and substation.

Due to the setting, the Project would not substantially degrade the existing visual character or quality of public views of the site and its surroundings. The only public views of the site are from East Road, a through road, and Valley View Road and Electra Way, dead-end roads leading to a limited number of residences. Motorists on the roads would only see the Project for a few moments and the experience with the Project in place would be similar in nature to the existing visual experience.

As noted in Section 5.1.1 and in **Section 5.11, Land Use**, the proposed Project would be consistent with applicable zoning, regulations, and the applicable policies of the Mendocino County General Plan; thus, the impact would be less than significant.

d. Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Construction, Operation, and Demolition

Less than Significant. Construction, commissioning and demolition activities would occur during daylight hours and would not include nighttime work that would necessitate the use of lighting within work areas. The surfaces of new structures and enclosures would be non-reflective and would not create glare. There is existing lighting within the substation as well as within the storage yard. Additionally, there is one light in the existing parking area and two streetlights across the street from the Project site on East Road. Adjacent residential properties also have night lighting.

For safety and security, minimal lighting would be used for operations. Motion sensitive, directional security lights would be installed to provide adequate illumination at points of ingress/egress. All lighting would be directed downward and shielded to focus illumination on the desired areas only and to minimize light trespass in accordance with applicable County requirements and National Electric Safety Code (NESC) requirements. If additional temporary lighting should be required for nighttime maintenance, portable lighting equipment would be used, and removed from the site at the end of the maintenance. Therefore, the impact would be less than significant.

5.1.3 Mitigation Measures

None required.

5.1.4 References

Caltrans 2019 – California Department of Transportation (Caltrans). Designated and Eligible California State Scenic Highways. Available online at: https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways. Accessed on: June 2023.

Mendocino County 2020 – Mendocino County General Plan Chapter 4: Resource Management Element. Adopted August 2009, revised 2020. Available online at: https://www.mendocinocounty.org/home/showpublisheddocument/54487/638055061981600000. Accessed in June 2023.

5.2 Agriculture and Forestry

This section describes the environmental setting, regulatory background, and impacts associated with the construction, operation, and demolition of the Project with respect to agriculture and forestry resources.

Agriculture and Forestry 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.	**Potentially Significant Impact**	**Less Than Significant with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
a. Would the project Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b. Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c. Would the project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d. Would the project result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e. Would the project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

Environmental checklist established by CEQA Guidelines, Appendix G, Agriculture and Forestry Resources.

5.2.1 Environmental Setting

A large portion of Mendocino County's economy is made up of agriculture, including fruit, nuts, and wine grapes. Mendocino County is ranked 35th of all the California counties when assessing the value of agricultural production (Mendocino County 2009). Existing uses near the project site include rural residences, agricultural fields and vineyards, and woodlands. Pacific Gas & Electric's Mendocino Substation and equipment storage area occupy two large areas on the properties where the Project facilities would be constructed. The Project site has a General Plan land use designation of Public Services and is zoned as Public Facilities.

Regulatory

Federal

No federal regulations related to agriculture and forestry resources apply to the Project.

State

Farmland Mapping and Monitoring Program. The California Department of Conservation (CDOC) established the Farmland Mapping and Monitoring Program (FMMP) in 1982 to assess the location, quantity, and quality of agricultural lands and conversion of these lands to other uses. Every even-numbered year, FMMP publishes a Farmland Conversion Report. FMMP data are used in elements of some county and city general plans, in regional studies on agricultural land conversion, and in environmental documents as a way of assessing project-specific impacts on farmland. The FMMP identifies and maps agricultural lands as Prime Farmland, Farmland of Statewide Importance, Unique Farmland, Farmland of Local Importance, and Grazing Land. The FMMP also designates Urban and Built-up Land, Other Land, and Water. These designations are described as follows:

- **Prime Farmland:** Land with the best combination of physical and chemical properties for the production of crops.
- **Farmland of Statewide Importance:** Similar to Prime Farmland, but with minor shortcomings (e.g., steeper slopes, inability to hold water).
- **Unique Farmland:** Land of lesser quality soils, but recently used for the production of specific high economic value crops. Land is usually irrigated, but may include non-irrigated orchards or vineyards as found in some climatic zones in California.
- **Farmland of Local Importance:** Defined for Mendocino County as farmland, presently cultivated or not, having soils which meet the criteria for Prime or Statewide, except that the land is not presently irrigated, as well as other non-irrigated farmland.
- **Grazing Land:** Land on which the existing vegetation is suited to the grazing of livestock.

- **Urban and Built-Up Land:** Land occupied by structures with a building density of at least one unit per 1.5 acres. This land is used for residential, industrial, commercial, construction, institutional, public administration, railroad and other transportation yards, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, water control structures and other developed purposes.
- **Other Land:** Land not included in any other mapping category, for example, low density rural developments; brush, timber, wetland and riparian areas not suitable for livestock grazing; confined livestock, poultry or aquaculture facilities; strip mines and borrow pits; water bodies smaller than 40 acres; and vacant and non-agricultural land surrounded on all sides by urban development and greater than 40 acres in area.
- **Water:** Perennial water bodies with an area of at least 40 acres.

Williamson Act. The Williamson Act, or California Land Conservation Act (Gov. Code, § 51200 et seq.), is designed to preserve agricultural and open space land. It allows private landowners to enroll in contracts that voluntarily restrict land uses to agricultural and open space uses. In return, Williamson Act parcels receive a lower property tax rate consistent with agricultural and open space uses instead of with their market rate value.

Local

Mendocino County General Plan, Resource Element. The Resource Management Element of the Mendocino County General Plan contains goals and policies related to agriculture and forestry within the County. The following goals and policies from the Resource Management Element are relevant to the Project (Mendocino County 2009):

Policy RM-110. Maintain land use compatibility and minimize conflicts between agricultural and non-agricultural uses.

Policy RM-111. Discretionary projects shall not undermine the integrity and economic viability of agricultural operations by causing or contributing to piecemeal land-use conversion, land fragmentation, urban encroachment, the introduction or concentration of incompatible uses of lands adjoining or within agricultural areas, or the extension of growth-inducing urban services such as public water or sewers.

5.2.2 Environmental Impacts

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

Construction, Operation, and Demolition

No Impact. FMMP mapping data show that the existing Mendocino Substation and site entrance area from East Road is classified as Urban and Built-up Land. The proposed Project's two power blocks are within the larger area directly east and north of the site

classified as Grazing Land (CDOC 2018). Onsite Project infrastructure would be located in both classification areas. No Prime Farmland, Unique Farmland, or Farmland of Statewide Importance are mapped on or next to the Project site; therefore, none would be converted to non-agricultural use, and there would be no impact.

b. Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?

Construction, Operation, and Demolition

No Impact. The Project site is zoned Public Facilities, which is not an agricultural zoning district. The General Plan land use designation is Public Services (Mendocino County 2023). The Project is considered a Major Impact Services and Utilities use type, which is a permitted use within the Public Facilities zoning district (Krog 2022). The Project site is not zoned for agriculture, and CDOC maps show that the Project site is not under a Williamson Act contract (CDOC 2022). Therefore, there would be no conflict with existing zoning or a Williamson Act contract, and there would be no impact.

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

Construction, Operation, and Demolition

No Impact. As stated previously, the Project site is zoned Public Facilities with a General Plan land use designation of Public Services. None of the proposed Project activities would occur on land zoned as forest, timberland, or timberland production. The construction, operation and maintenance, and demolition of the facility would not conflict with existing zoning of forest, timberland, or timberland production, and there would be no impact.

d. Would the project result in the loss of forest land or conversion of forest land to non-forest use?

Construction and Operation

No Impact. The Project site does not contain forest land and therefore would not result in the loss or conversion of forest land. Therefore, there would be no impact to forest land as a result of this Project.

e. Would the project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?

Construction, Operation, and Demolition

No Impact. Project construction would be confined to parcels APN 166-050-02-00 and APN 166-050-03-00, including all construction activities and staging/laydown areas. These parcels are zoned Public Facilities and thus allow the use of a battery energy

storage project that would connect to the Mendocino Substation. Construction would involve permanent disturbance of 1.2 acres for Power Block 1, and 1.8 acres for Power Block 2, as well as 1 acre of temporary disturbance for the laydown yard that would be used during construction.

Under CEQA, "Farmland" applies only to Prime Farmland, Unique Farmland, and Farmland of Statewide Importance. As described above, CDOC mapping data show that the Project would be constructed in areas classified under the FMMP as Urban and Built-up Land and Grazing Land, which are not Farmland classifications. The Project would cause no changes in the existing environment that could cause conversion of Farmland to a non-agricultural use or forest land to a non-forest use. Therefore, no impact would occur.

5.2.3 Mitigation Measures

None required.

5.2.4 References

CDOC 2018 – California Department of Conservation. Farmland Mapping & Monitoring Program. California Important Farmland Finder. Data Year 2018. Accessed on August 23, 2023. Available online at: https://maps.conservation.gov/DLRP/CIFF/

CDOC 2022 – California Department of Conservation. California Williamson Act Enrollment Finder. Accessed on August 23, 2023. Available online at: https://maps.conservation.ca.gov/dlrp/WilliamsonAct/

Krog 2022 – Krog, J. Letter to CEC from Mendocino County Department of Planning and Building Services. California Environmental Quality Act Compliance for Form Energy Inc. Project at 7475 East Road, Redwood Valley (APN 166-050-02-00), Mendocino County. December 6.

Mendocino County 2020 – County of Mendocino. Mendocino County General Plan: Resource Management Element. Adopted August 2009, Revised 2020. Accessed on June 27, 2023. Available online at: https://www.mendocinocounty.org/home/showpublisheddocument/54487/638055061981600000

Mendocino County 2023 – Mendocino County. *Zoning Web Map*. Accessed on: June 21, 2023. Available online at: https://www.mendocinocounty.org/government/planning-building-services/zoning-web-map.

5.3 Air Quality

This section describes the environmental setting, regulatory background, and impacts associated with the construction, operation, and demolition of the Project with respect to air quality.

Air Quality 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:	**Potentially Significant Impact**	**Less Than Significant with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
a. Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	☐	☐	☒	☐
c. Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☒	☐

Environmental checklist established by CEQA Guidelines, Appendix G, Air Quality.

5.3.1 Environmental Setting

Air Basin. The Form Energy Project would be in the Mendocino air basin in the jurisdiction of the Mendocino County Air Quality Management District (MCAQMD), which regulates sources of air pollution and the programs to improve air quality in the region. The climate in Mendocino County is mild and temperate, with cool, wet winters and warm, dry summers.

Criteria Air Pollutants. Air quality is determined by measuring ambient concentrations of certain criteria air pollutants including ozone, respirable particulate matter (PM10), fine particulate matter (PM2.5), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), and lead. Criteria pollutants include primary pollutants that are directly emitted, and secondary emissions that are formed in the atmosphere by chemical and photochemical reactions. Ozone is an example of a secondary pollutant that is not emitted directly from a source (e.g., an automobile tailpipe). It is formed in the atmosphere by reactions involving reactive organic gases (ROG), including volatile organic compounds (VOCs), and nitrogen oxides (NOx), which are regulated as precursors to ozone formation.

The California Air Resources Board (ARB) and the U.S. Environmental Protection Agency (U.S. EPA) develop and establish health-protective ambient air quality standards. The monitored levels of the pollutants are compared to the current National and California

Ambient Air Quality Standards (NAAQS and CAAQS) to determine degree of existing air quality degradation. The standards currently in effect in California are shown in Table 5.3-1.

Table 5.3-1. National and California Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards	National Standards
Ozone	1 hour 8 hours	0.09 ppm 0.070 ppm	— 0.070 ppm
Respirable Particulate Matter (PM10)	24 hours Annual Mean	50 µg/m^3 20 µg/m^3	150 µg/m^3 —
Fine Particulate Matter (PM2.5)	24 hours Annual Mean	— 12 µg/m^3	35 µg/m^3 12.0 µg/m^3
Carbon Monoxide (CO)	1 hour 8 hours	20 ppm 9.0 ppm	35 ppm 9 ppm
Nitrogen Dioxide (NO_2)	1 hour Annual Mean	0.18 ppm 0.030 ppm	0.100 ppm 0.053 ppm
Sulfur Dioxide (SO_2)	1 hour 24 hours Annual Mean	0.25 ppm 0.04 ppm —	0.075 ppm 0.14 ppm 0.030 ppm

Notes: ppm=parts per million; µg/m^3= micrograms per cubic meter; "—" = no standard
Source: ARB 2016.

Ambient Air Quality Attainment Status and Air Quality Plans. The U.S. EPA, ARB, and the local air district classify an area as attainment, unclassified, or nonattainment of a pollutant, and these designations dictate the air quality management planning activities needed to make future air pollutant reductions. The classification depends on whether the monitored ambient air quality data show compliance, insufficient data available, or non-compliance with the ambient air quality standards, respectively. Mendocino County is in attainment for all state and federal standards except the State PM10 standard. Table 5.3-2 summarizes attainment status in the Mendocino County air basin for the criteria pollutants under both the state and federal standards.

Table 5.3-2. Attainment Status for Mendocino County

Pollutant	California Designation	Federal Designation
Ozone	Attainment	Attainment
PM10	Nonattainment	Attainment
PM2.5	Attainment	Attainment
CO	Attainment	Attainment
NO_2	Attainment	Attainment
SO_2	Attainment	Attainment

Source: ARB 2022.

Toxic Air Contaminants. Toxic air contaminants (TACs) are air pollutants that may lead to serious illness or increased mortality, even when present in relatively low concentrations. Potential human health effects of TACs include birth defects, neurological damage, cancer, and death. There are hundreds of different types of TACs with varying degrees of toxicity. Individual TACs vary greatly in the health risk they present; at a given level of exposure, one TAC may pose a hazard that is many times greater than another. TACs do not have ambient air quality standards but are regulated by the local air districts using a risk-based approach. Diesel particulate matter (DPM) is classified as a TAC, and statewide and local programs focus on managing this pollutant through motor vehicle fuels, engine, and tailpipe standards because many toxic compounds adhere to diesel exhaust particles. The Project is not considered a stationary source subject to risk assessment programs.

Sensitive Receptors. Residential areas, day care centers, hospitals, and schools are some examples of sensitive receptors. Sensitive receptors include facilities or land uses that include members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. The site is surrounded by agricultural land and residences. There are residences approximately 150 feet from the southwestern portion of the site to the west of East Road and 250 feet or more from the northeastern portion of the site to the north.

Regulatory

Federal

Clean Air Act. The federal Clean Air Act (CAA) establishes the statutory framework for regulation of air quality in the United States. Under the CAA, the U.S. EPA oversees implementation of federal programs for permitting new and modified stationary sources, controlling toxic air contaminants, and reducing emissions from motor vehicles and other mobile sources.

Title I (Air Pollution Prevention and Control) of the federal CAA requires establishment of National Ambient Air Quality Standards (NAAQS) for criteria pollutants, air quality designations, and plan requirements for nonattainment areas. States are required to submit a state implementation plan (SIP) to the U.S. EPA for areas in nonattainment with NAAQS. The SIP, which is reviewed and approved by the U.S. EPA, must demonstrate how state and local regulatory agencies will institute rules, regulations, and/or other programs to attain NAAQS over time.

State

California Clean Air Act. The California Clean Air Act and the California Health and Safety Code requires each region to develop and implement strategies to attain CAAQS and establishes broad authority for California to regulate emissions from mobile sources. The MCAQMD must periodically prepare air quality management plans to show how the standards will be met.

U.S. EPA/ARB Off-Road Mobile Sources Emission Reduction Program. The California Clean Air Act mandates that ARB achieve the maximum degree of emission reductions from all off-road mobile sources in order to attain the state ambient air quality standards. Off-road mobile sources include construction equipment. The earliest (Tier 1) standards for large compression-ignition engines used in off-road mobile sources became effective in California in 1996. Since then, the Tier 3 standards for large compression-ignition engines used in off-road mobile sources went into effect in California for most engine classes in 2006, and Tier 4 or Tier 4 Interim (4i) standards apply to all mobile off-road diesel engines model year 2012 or newer. Engines used in large generator sets became subject to Tier 4 exhaust emissions standards for model year 2015 and newer. These standards address NOx emissions and toxic particulate matter from diesel combustion. The California Emission Standards for Off-Road Compression-Ignition Engines are as specified in California Code of Regulations Title 13, Division 3, Chapter 9, Article 4, Section 2423.

ARB In-Use Off-Road Diesel-Fueled Fleets Regulation. The regulation for in-use off-road diesel-fueled fleets is designed to reduce mobile-source NOx and toxic DPM. Depending on the size of the fleet of equipment, the fleet owner must ensure that the average emissions performance of the fleet meets certain statewide standards. In lieu of improving the emissions performance of the fleet, electric systems can be installed to replace diesel equipment in the fleet's average calculations. Presently, all equipment owners are subject to a five-minute idling restriction in the rule (Cal. Code Regs., tit. 13, § 2449).

ARB Portable Equipment Registration Program (PERP). This program allows owners or operators of portable engines and associated equipment commonly used for construction or farming to register their units under a statewide portable program that allows them to operate their equipment throughout California without having to obtain individual permits from local air districts.

ARB Airborne Toxic Control Measures (ATCM). Diesel engines on portable equipment and vehicles are subject to various ATCMs that dictate how diesel sources must be controlled statewide. For example, the ATCM to Limit Diesel-Fueled Commercial Motor Vehicle Idling generally limits idling of commercial motor vehicles (including buses and trucks) within 100 feet of a school or residential area for more than five consecutive minutes or periods aggregating more than five minutes in any one hour (Cal. Code Regs., tit. 13, § 2485). Diesel engines used in portable equipment fleets are subject to stringent DPM emissions standards, generally requiring use of only newer engines or verified add-on particulate filters (Cal. Code Regs., tit. 17, § 93116).

Local

MCAQMD Particulate Matter Attainment Plan. Mendocino County is in attainment for all Federal and State air quality standards except for the State PM10 standard. To make reasonable efforts towards achieving attainment, in 2005 the MCAQMD adopted a Particulate Matter Attainment Plan (2005 PM Attainment Plan). The 2005 PM Attainment

Plan was designed to meet the requirements of Senate Bill 656, which required the District to list particulate matter control measures it considers cost-effective and develop a schedule for their implementation by July 31, 2005.

MCAQMD CEQA Guidelines Thresholds of Significance. The MCAQMD adopted the following thresholds as recommendations for use in the CEQA process. For construction-related criteria air pollutant emissions, construction and/or demolition of a project may cause a significant impact if it would:

- Emit more than 54 pounds per day (lb/day) of reactive organic gases (ROG) or volatile organic compounds (VOC);
- Emit more than 54 lb/day of nitrogen oxides (NOx);
- Emit more than 82 lb/day of PM10 from exhaust; or
- Emit more than 54 lb/day of PM2.5 from exhaust. (MCAQMD 2010)

MCAQMD does not have a numerical significance threshold for fugitive dust emissions during construction. MCAQMD instead recommends implementing best management practices (BMPs).

MCAQMD Rules and Regulations. In MCAQMD Regulation 1, the MCAQMD defines a "Large Grading Operation" to include grading activity involving more than one (1) acre of exposed soil. Project construction activity would be subject to review by the MCAQMD as a large grading operation, according to Rule 1-200, which requires a permit for any project that has over one acre of disturbance.

MCAQMD Rule 1-430 – Fugitive Dust Emissions. The MCAQMD uses Rule 1-430 to prevent unnecessary amounts of particulate matter to become airborne by requiring the following controls:

- Reasonable precautions shall be taken to prevent particulate matter from becoming airborne, including, but not limited to, the following provisions:
    - Covering open bodied trucks when used for transporting materials likely to give rise to airborne dust.
    - Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty materials.
    - The screening of all open-outdoor sandblasting and similar operations.
    - The use of water or chemicals for the control of dust during the demolition of existing buildings or structures.
- The following airborne dust control measures shall be required during all construction operations, the grading of roads, or the clearing of land:
    - All visibly dry disturbed soil road surfaces shall be watered to minimize fugitive dust emissions.
    - All unpaved surfaces, unless otherwise treated with suitable chemicals or oils, shall have a posted speed limit of 10 miles per hour.

- Earth or other material that has been transported by trucking or earth moving equipment, erosion by water, or other means onto paved streets shall be promptly removed.
- Asphalt, oil, water or suitable chemicals shall be applied on materials stockpiles, and other surfaces that can give rise to airborne dusts.
- All earthmoving activities shall cease when sustained winds exceed 15 miles per hour.
- The operator shall take reasonable precautions to prevent the entry of unauthorized vehicles onto the site during non-work hours.
- The operator shall keep a daily log of activities to control fugitive dust.

5.3.2 Environmental Impacts

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.

a. Would the project conflict with or obstruct implementation of the applicable air quality plan?

Construction and Demolition

Less than Significant. The MCAQMD is the primary agency responsible for managing local air quality and administering other California and federal programs ensuring implementation of the air quality management plan. The 2005 PM Attainment Plan is the MCAQMD's current plan to achieve state ambient air quality standards, as the state PM10 standard is the only pollutant for which MCAQMD is designated non-attainment. (MCAQMD 2005.)

The PM Attainment Plan recommendations that may apply to the proposed Project include Section XII(4), Construction and Grading Activities. This section includes increased enforcement of existing Air Quality regulations and developing a regulation that would require permits for projects that have over one acre of disturbance. The Project would disturb 4.8 acres, about 3.5 acres of which would be permanently disturbed, while about 1.3 acres would be disturbed by trenching the cable from the two power blocks, and used as a temporary laydown area and for construction parking. Since the site disturbance will be greater than one acre, the applicant will be required to obtain a Large Grading Operation permit from the MCAQMD prior to the start of construction.

After obtaining the grading permit, the Project would not conflict with, or obstruct, implementation of the applicable air quality plan, and impacts would be less than significant.

Operation

Less than Significant. Operation of the site would occur remotely with minimal water delivery and maintenance. The operation of the MDS batteries does not directly cause

emissions of any regulated air pollutants during the charging or discharging phase. The onsite electricity supply allows the MDS batteries to be charged, and the Project would be operated to charge during periods of excess supply. Discharge would occur during periods of higher local demand for electricity, and this would tend to displace the electricity that would otherwise be produced by conventional generation resources. The PM Attainment Plan does not include any recommendations that would relate to the operation of the proposed Project. Therefore, the Project does not have the potential to obstruct the implementation of the applicable air quality plan and impacts would be less than significant.

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

Construction/Demolition

Less than Significant. The construction, commissioning and demolition-related increase in air pollutant emissions would occur in the regional context of the Mendocino air basin that is currently designated as "nonattainment" for PM10. Construction/demolition-phase activities include mobilizing vehicles and equipment for construction, crews, and materials. The site work would include grading, installing concrete foundations, paving, trenching and cable and pipeline routing. These activities during construction would generate emissions at the work area and along the roadways used to access the site. Immediately following the completion of construction. This commissioning would not include any off-road equipment, nor any heavy-duty vehicles, and would consist of 5-10 passenger vehicle trips daily to transport employees to and from the site. Emissions associated with these vehicle trips would be much lower than calculated construction emissions. The demolition work would include removing concrete foundations, paving, cable, and piping.

Construction, commissioning and demolition emissions would be caused by exhaust from vehicles and equipment (e.g., ozone precursors [volatile organic compounds and NOx], CO, and particulate matter [PM10 and PM2.5]) and fugitive dust that includes particulate matter from ground-disturbing activities. The mobile sources would be a mix of diesel-powered off-road construction equipment types, including: cranes, dozers, graders, excavators, loaders, and welders. On-road mobile sources would include diesel and gasoline-powered vehicles for linework and trucks for deliveries of concrete, water, and other materials. Outside of the work site, construction, commissioning and demolition traffic would cause exhaust emissions from the trucks and other vehicles used by crews, materials, and equipment to access the work site. Appendix A includes a summary of equipment and truck trips used to calculate the construction and demolition emissions presented in Table 5.3-3.

Construction and demolition are both expected to take approximately six to nine months. Commissioning is expected to take 10 weeks. The peak number of construction personnel would be 10 workers, and traffic to and from the site during construction would not exceed approximately 40 trips per day.

Concurrent construction of other projects near the Project site could result in increased local air quality impacts for the duration of simultaneous activities. Emissions generated by Project construction would be temporary and variable and would be similar in nature to emissions from other typical and nearby construction activities. Simultaneous construction of other cumulative projects near the Project site would also be likely to implement general MCAQMD recommendations for minimizing air quality impacts.

Table 5.3-3. Estimated Maximum Daily Construction Emissions (lbs/day)

	VOC	NOx	CO	SO_2	PM10 (exhaust)	PM2.5 (exhaust)	PM10 (fugitive)	PM2.5 (fugitive)
2024 Construction Emissions	4.57	43.91	36.19	0.08	1.97	1.81	5.42	2.77
2030 Demolition Emissions	2.87	15.14	27.26	0.06	0.36	0.48	0.36	0.10
Maximum Daily Construction Emissions	4.57	43.91	36.19	0.08	1.97	1.81	5.42	2.77
Threshold of Significance	54	54	None	None	82	54	None	None
Exceedance?	No	No	NA	NA	No	No	NA	NA

Source: Appendix A, Air Quality and GHG Emissions. MCAQMD 2010.

Table 5.3-3 shows that Project construction and demolition would not exceed the thresholds for significant construction impacts. The thresholds of significance (MCAQMD 2010) recommended by the MCAQMD define mass emission rates that represent a potentially significant net increase for ozone precursor emissions (NOx or VOC), PM10 or PM2.5. There are no applicable thresholds for CO or SO_2. All emissions that have a threshold are below the threshold of significance without mitigation, and so impacts are less than significant.

Demolition of the Project after its five-year life would include salvage or disposal in accordance with applicable federal, state, and local regulations. Demolition activities would be subject to the same requirements as construction activities. Demolition of the Project equipment and facilities would be about the same timeframe as construction, require approximately 5-10 employees, and would require less equipment usage and truck trips. Emissions from demolition were considered in the construction emissions, and would not exceed the thresholds of significance.

Construction, commissioning and demolition of the Project would not result in a cumulatively considerable net increase of any criteria pollutants for which the region is in non-attainment, and the construction and demolition-related emissions would not substantially contribute to any air quality violation. This impact would be less than significant.

Operation

Less than Significant. Potential emissions related to Project operation would be limited to deliveries and transportation to and from the site for maintenance activities. The batteries

themselves would not result in any air emissions. Operations at the proposed Project site would be minimal as the site would be operated remotely. Approximately five water trucks would deliver water to the site per month, and there would be routine maintenance. The operation phase emissions, shown in Table 5.3-4, include emissions from water trucks and maintenance vehicles to the Project site. Total vehicle trips to the site would be approximately five trips per month, operation emissions were calculated for a maximum daily value of one truck onsite per day.

Table 5.3-4. Estimated Maximum Daily Operation Emissions (lbs/day)

	VOC	NOx	CO	SO_2	PM10	PM2.5
Maximum Daily Operation Emissions	0.01	0.01	0.10	0.00	0.01	0.00
Threshold of Significance	180	42	755	None	82	54
Exceedance?	No	No	NA	NA	No	No

Source: Appendix A, Air Quality and GHG Emissions. MCAQMD 2010.

As shown in Tables 5.3-3 and 5.3-4, although the thresholds of significance are different for the construction and operations phases, the operation phase emissions would be much less than construction phase and would also be well below the thresholds of significance, and therefore would have less than significant impacts.

c. Expose sensitive receptors to substantial pollutant concentrations?

Construction and Demolition

Less than Significant. Construction, commissioning and demolition would generate toxic air contaminants routinely found in the exhaust of gasoline powered motor vehicles and of diesel-fueled equipment, including diesel particulate matter (DPM). The Project would not involve any permanent or stationary sources of air pollution, but construction would temporarily bring construction equipment into the Project site and onto roadways accessing the site. The nearest sensitive receptors are residences located directly across the Project on East Road, approximately 150 feet away.

Short-term emissions associated with construction, commissioning and demolition would occur onsite and along the roadways accessing the work areas. The proposed activities include mobilizing vehicles and equipment for construction, crews, and materials. The site work would include grading, installing concrete foundations, paving, trenching, and cable and piping routing.

Construction equipment and vehicles would access and move within the Project site throughout the short construction duration of approximately six to nine months. Demolition would be approximately the same period. Commissioning would occur over a 10-week period. Within the overall duration, the emissions would vary and would not occur for long periods; this minimizes the potential that any location would be exposed to substantial pollutant concentrations.

Toxic Air Contaminants (TAC) Health Risk Analysis

TAC emissions, primarily in the form of diesel particulate matter, would occur during the short-term construction period, and then intermittently during the limited operations and maintenance activities required for the proposed Project. Construction equipment using diesel fuel would be subject to the ARB In-Use Off-Road Diesel-Fueled Fleets Regulation and other controls including limitations on idling. As a result, the amount of diesel particulate matter that would be emitted from the proposed Project's activities would be minimal in comparison with the thresholds for PM10 and PM2.5. The potential exposure of sensitive receptors to diesel particulate matter emissions would be limited, as it would occur primarily during the limited construction period. The Project's construction and operation TAC emissions would cause less than significant health risk impacts.

Since off-road heavy-duty diesel equipment would only be used temporarily during construction, construction would not expose sensitive receptors to substantial emissions of TACs, and this impact would be less than significant.

Construction and demolition contractors would be required to follow the practices outlined in District Rule 1-430 – Fugitive Dust Emission, which would minimize the emissions of dust, for which the county is in non-attainment. This would ensure that receptors would not be exposed to substantial concentrations. Impacts under this criterion would be less than significant.

Operation

Less than Significant. Potential emissions related to Project operation would be limited to deliveries and transportation to and from the site for maintenance activities. The batteries themselves would not result in any air emissions. Operations at the proposed Project site would be minimal because the site would be operated remotely. Approximately five water trucks would deliver water to the site per month, and there would be routine maintenance.

Operation phase emissions would be less than construction phase emissions, and similarly would not expose sensitive receptors to substantial pollutant concentrations and would have less than significant impacts.

d. Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Construction and Demolition

Less than Significant. The Project would not include any sources likely to create objectionable odors. Construction, commissioning and demolition would involve the temporary use of vehicles and construction equipment and materials, such as fuels, that may generate intermittent, minor odors. Odors that occur in equipment exhaust would be minimized by mandatory use of ultra-low sulfur diesel fuel. These emissions would occur briefly during construction, commissioning and demolition and would cease at the end of those activities. There would be no notable impact of objectionable odors affecting a

substantial number of people. This impact would be less than significant, and no mitigation is required.

Operation

Less than Significant. Land uses that are likely to produce odors include operations associated with agriculture, waste management, refineries, wastewater treatment, and certain chemical and manufacturing plants. The proposed Project does not include any manufacturing or agricultural uses and would not emit objectionable odors. Impacts would be less than significant with no mitigation required.

5.3.3 Mitigation Measures

None required.

5.3.4 References

ARB 2016 – California Air Resources Board (ARB). Ambient Air Quality Standards, dated 5/4/2016. Available online at: https://ww2.arb.ca.gov/sites/default/files/2020-07/aaqs2.pdf

ARB 2022 – California Air Resources Board (ARB). Map of State and Federal Area Designations. Available online at: https://ww2.arb.ca.gov/resources/documents/maps-state-and-federal-area-designations. Accessed on June 22, 2023.

MCAQMD 2005 – Mendocino County Air Quality Management District (MCAQMD). Attainment Particulate Matter Plan. Available online at: http://www.co.mendocino.ca.us/aqmd/pdf_files/Attainment%20Plan_DRAFT.pdf. Accessed on June 22, 2023.

MCAQMD 2010 – Mendocino County Air Quality Management District (MCAQMD). Air Quality Thresholds. Available online at: https://www.co.mendocino.ca.us/aqmd/pdf_files/MCAQMDCEQARecomendations.pdf. Accessed on June 22, 2023.

5.4 Biological Resources

This section describes the environmental setting and regulatory background, and discusses potential impacts associated with the construction, operation, and demolition of the proposed Project with respect to biological resources.

Biological Resources Would the project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
c. Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☒	☐	☐
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of wildlife nursery sites?	☐	☐	☒	☐
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☒	☐	☐
f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Communities Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

Environmental checklist established by CEQA Guidelines, Appendix G, Biological Resources.

5.4.1 Environmental Setting

As described in **Section 4 Project Description** the proposed Project occurs on two adjacent parcels (Assessor Parcel Numbers 166-050-02-00 and 166-050-03-00) located in the unincorporated census designated place of Redwood Valley, Mendocino County, California (**Section 4 Project Description, Figures 4-1 and 4-2**). The northern parcel includes Power Block 1 while the southern parcel includes Power Block 2, the access road

between Power Block 1 and 2, a pad-mounted switchgear, a new extension of the existing overhead 12 kV distribution line, and the temporary laydown yard and construction parking area. Approximately 880 linear feet of trenching would be required to connect Power Block 1 and 2 to the pad-mounted switchgear (**Section 4 Project Description, Figure 4-3**).

For purposes of this analysis, the following designations apply:

- **Project site:** The Project site is defined as all areas subject to permanent and temporary impacts from the proposed Project. This area is approximately 4.8 acres in size and includes approximately 3.5 acres of permanent impacts from the development of Power Block 1 and 2, the extension of the access road to each power block, the pad-mounted switchgear, and installation of one new wood pole within the substation. Approximately 1.3 acres of temporary impacts would occur from the use of the laydown and parking area, extension of the overhead 12kV line, and from trenching required to install the underground electrical line between the power blocks.
- **Survey Area:** The Survey Area is defined as the Project site plus a 300-foot buffer. This area is approximately 33 acres in size.

The Survey Area is dominated by heavily disturbed vacant fields that have been historically used for agricultural purposes and existing development associated with the Pacific Gas and Electric (PG&E) Mendocino Substation. The edge of a densely vegetated hillside consisting of scrub and oak woodland habitats occurs along the eastern boundary of the Survey Area. Developed areas, including paved roads, rural residential properties, and vineyards are located immediately to the west and south. Rural residential properties and heavily disturbed vacant fields are located immediately to the north.

The topography of the Survey Area consists of gentle slopes of less than approximately four percent grade trending from the northeast to the southwest. The elevation within the Survey Area ranges from approximately 715 feet above mean sea level (amsl) to 745 feet amsl.

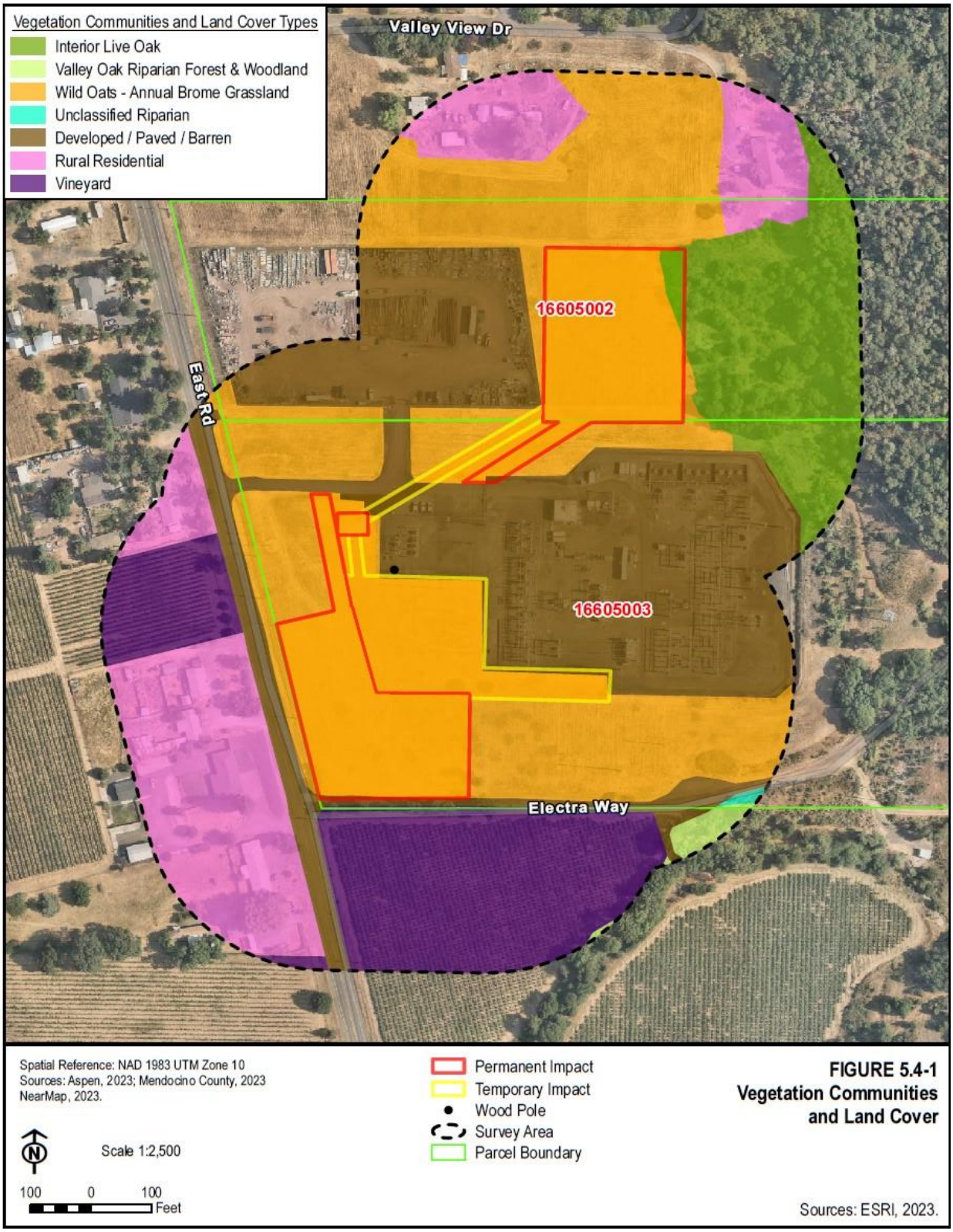
The sections below provide a summary of biological resources that are considered for this analysis and documented in the Biological Resources Technical Report (BRTR) prepared by the CEC consultant (**Appendix B**).

Existing Vegetation and Habitat

The Survey Area supports three natural community vegetation alliances as described in *A Manual of California Vegetation* (CNPS 2023, Sawyer et al., 2009) or listed on the California Department of Fish and Wildlife (CDFW) California Natural Community List (CDFW 2023a). These include *Avena* spp. – *Bromus* spp. Herbaceous Semi-Natural Alliance (wild oats – annual brome grassland), *Quercus wislizeni* – *Quercus parvula* Forest and Woodland Alliance (interior live oak – shreve oak woodland and forest), and *Quercus lobata* Riparian Forest and Woodland Alliance (valley oak riparian forest and woodland).

Figure 5.4-1 displays the vegetation communities and land covers present within the Survey Area.

Figure 5.4-1. Vegetation Communities and Land Cover



Most of the Project site supports previously disturbed areas dominated by wild oats (*Avena fatua*) and softchess (*Bromus hordeaceus*) with a few scattered trees and shrubs. The grasslands present in the Power Block 1 footprint were approximately four feet in height; whereas, grasslands within the remaining Project site had been recently mowed prior to the June site visit.

The grasslands within the Survey Area have been subject to a history of ongoing disturbance. A review of Google Earth aerial imagery dating back to 1993 indicates these areas are regularly maintained through mowing, likely for weed and fire abatement. Google Earth aerial imagery from February 2020 and May 2021 shows that much of the northern parcel where Power Block 1 and the existing PG&E yard occur has been converted from orchards to their current grassland or disturbed characterization. Additionally, the area immediately west of the substation appears to have been periodically disturbed by staging of vehicles and equipment over at least the past 30 years.

The trees present in the Project site include three valley oak (*Quercus lobata*) and four northern catalpa (*Catalpa speciosa*) trees located within or adjacent to the proposed Power Block 2 area. In addition, two northern California black walnut (*Juglans hindsii*) trees are located within the proposed temporary laydown yard area. There is also one northern catalpa tree adjacent to the Power Block 1 access road. In addition, a small area supporting interior live oak woodland occurs within of the northeast corner of Power Block 1. This area consists of interior live oak (*Quercus wislizeni*), madrone (*Arbutus menziesii*), black oak (*Q. kelloggii*), coyote brush (*Baccharis pilularis*), and poison oak (*Toxicodendron diversilobum*). The interior live oak woodland community occurring in the northeast corner of Power Block 1 is characterized as an early- to mid-successional stage, dominated by shrubs with scattered trees. Mid- to late-successional stages of this community, dominated by a much denser tree canopy and understory, occurs farther upslope of the Project site. Historic Google Earth aerial imagery suggests that the interior live oak woodland within the northeast corner of the Project site, extending east into the Survey Area, has been subjected to previous disturbance from off-highway vehicle (OHV) use periodically since 2018.

An unmapped intermittent stream (IS), IS-1, located within the southeast corner of the Survey Area supports a riparian corridor characterized as valley oak riparian forest and woodland. This riparian community is characterized by the presence of valley oak, interior live oak, black oak, willows (*Salix* spp.), and Himalayan blackberry (*Rubus armeniacus*).

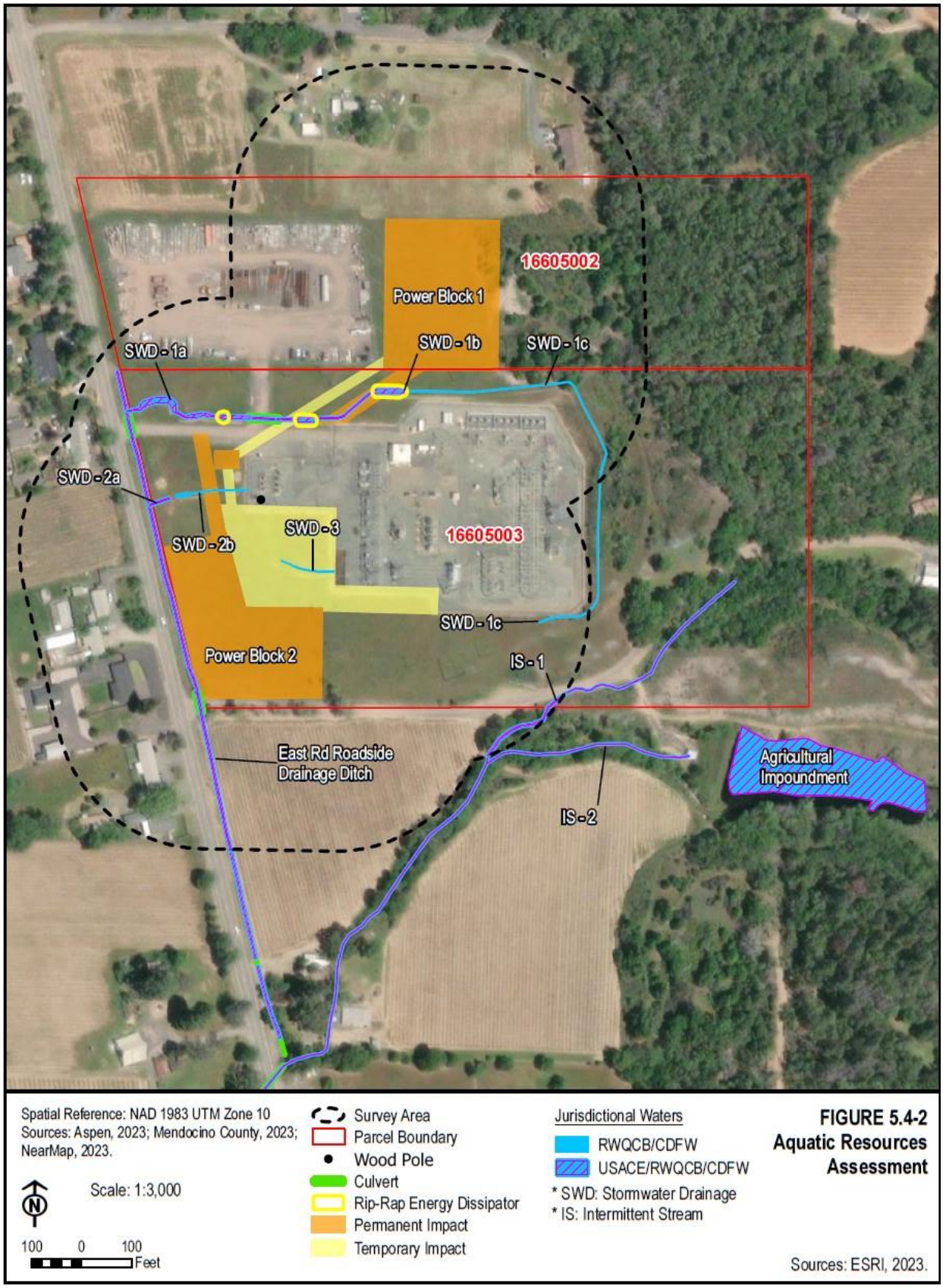
The vegetation communities within and adjacent to the Survey Area provide suitable habitat for nesting and foraging birds and other urban adapted species of wildlife. Species detected during the two biological site visits (**Appendix B**) included western fence lizard (*Sceloporus occidentalis*), house finch (*Haemorhous mexicanus*), northern mockingbird (*Mimus polyglottos*), acorn woodpecker (*Melanerpes formicivorus*), American crow (*Corvus brachyrhynchos*), and turkey vulture (*Catharses aura*). No active or inactive bird or raptor nests were identified during the site visits. Several mounds and burrows, presumably created and used by Botta's pocket gopher (*Thomomys bottae*), were also observed scattered throughout the grasslands in the Survey Area. Trees occurring within

and adjacent to the Survey Area could provide potential roosting habitat for bats; however, none were detected during the June and July 2023 reconnaissance-level surveys.

Jurisdictional Water Features

A formal preliminary assessment of jurisdictional waters was not conducted for the proposed Project. However, three human-made stormwater drainage (SWD) ditches/swales (SWD-1, -2, and -3 in **Figure 5.4-2**) were identified and mapped in the Survey Area. Each of these excavated features are mostly unvegetated and appear to convey water away from the Mendocino Substation during storm events. SWD-1 and a portion of SWD-2 (segment SWD-2a) have hydrologic connection to a roadside drainage ditch located along the east side of East Road where flows are further conveyed to an unnamed blue-line intermittent stream (IS-2) located approximately 1,320 feet south-southeast of the Project site. IS-2 is a tributary to the Russian River and discharges into the river approximately 0.3 mile west of East Road. SWD-3 is an isolated drainage that conveys flow away from the southwest corner of the substation but appears to end before connecting to the roadside ditch along East Road.

Figure 5.4-2. Aquatic Resources Assessment



As previously mentioned under Existing Vegetation and Habitat, a portion of IS-1 is located at the edge of a vineyard in the southeast corner of the Survey Area. This feature is a tributary to the larger IS-2, located outside of and adjacent to the southeast corner of the Survey Area, and supports valley oak riparian forest and woodland with a relatively dense tree canopy and shrubby understory.

Sensitive Habitats

The valley oak riparian woodland present within the southeast edge of the Survey Area is recognized by CDFW as an S3-ranked Sensitive Natural Community (CDFW 2023c). The Project site is located well outside of this natural community. No other sensitive habitats occur within or adjacent to the Survey Area.

Special-Status Species

Special-status species are plant and wildlife species that have been afforded special protection by federal, state, or local resource agencies or organizations. Methods to develop a list of special-status species that have the potential to occur in the Project site included a literature review that consisted of queries from the USFWS Information for Planning and Consultation (IPaC) species list, California Natural Diversity Database (CNDDB) RareFind 5, California Native Plant Society (CNPS) Rare Plant Inventory, California Consortium of Herbaria, iNaturalist, and eBird. Applicable species from the special-status species list in the Mendocino County General Plan were also incorporated into the literature review for the proposed Project (Mendocino County 2008).

Reconnaissance-level biological surveys were performed in June and July 2023. The surveys included confirming vegetation communities for mapping based on aerial imagery, identifying any potential jurisdictional features, developing a plant compendium for the Survey Area, and searching for any special-status or common wildlife or other indicators of presence (e.g., tracks, burrows, nests, etc.).

A total of 35 special-status species known to occur in the region were assessed due to their potential to occur within the Survey Area. These include 6 plant, 4 invertebrate, 2 fish, 2 amphibian, 1 reptile, 15 bird, and 5 mammal species. Attachment B-4 of **Appendix B** provides the full list and assessment of the special-status species that have either a low, moderate, or high potential to occur within the Survey Area. No special-status plants or wildlife species were detected during the surveys (**Appendix B**).

Regulatory

Federal

Endangered Species Act (16 U.S.C. § 1531 et seq., and 50 C.F.R., part 17.1 et seq.). The Endangered Species Act (ESA) designates and provides for protection of threatened and endangered plant and animal species, and their critical habitat. Its purpose is to protect and recover imperiled species and the ecosystems for which they depend. It is administered by the United States Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS). The USFWS is responsible for terrestrial

and freshwater organisms while NMFS is responsible for marine wildlife such as whales and anadromous fish (such as salmon). Species may be listed as endangered or threatened. All species of plants and animals, except pest insects, are eligible for listing. Species are defined to include subspecies, varieties, and for vertebrates, distinct population segments. The ESA protects endangered and threatened species and their habitats by prohibiting the "take" of listed animals and the interstate or international trade in listed plants and animals, including their parts and products, except under federal permit. "Take" is broadly defined in ESA to include "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in any such conduct" (16 U.S.C., §1532(19)). Take can also include significant habitat modification or degradation that directly results in death or injury to a listed wildlife species by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering (50 C.F.R., §17.3). Take of federally listed species as defined in the ESA is prohibited without incidental take authorization, which may be obtained through Section 7 consultation (between federal agencies) or a Section 10 Habitat Conservation Plan. The administering agencies are the USFWS, National Oceanic Atmospheric Administration (NOAA), and NMFS.

The Bald and Golden Eagle Protection Act (16 U.S.C. § 668-668c). This Act—enforced through regulations written by the USFWS—prohibits the "taking" of bald and golden eagles, including their parts, nests, or eggs. To take is defined as to "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, destroy, molest, or disturb" any bald or golden eagle, whether "alive or dead...unless authorized by permit". The administering agency is USFWS.

Migratory Bird Treaty Act (16 U.S.C §§ 703-711). The Migratory Bird Treaty Act (MBTA) makes it illegal to take, possess, import, export, transport, sell, purchase, barter, or offer for sale, any migratory bird, or the parts, nests, or eggs of such a bird except under the terms of a valid federal permit. The USFWS has authority and responsibility for enforcing the MBTA. The administering agency is USFWS.

Clean Water Act Sections 401 and 404 (33 U.S.C., §§ 1251—1376). The Clean Water Act (CWA) requires the permitting and monitoring of all discharges to surface water bodies. Section 404 (33 U.S.C. § 1344) requires a permit from the USACE for a discharge from dredged or fill materials into a water of the United States, including wetlands. Section 401 (33 U.S.C. § 1341) requires a permit from the regional water quality control board for the discharge of pollutants. By federal law, every applicant for a federal permit or license for an activity that may result in a discharge into a California water body, including wetlands, must request state certification that the proposed activity will not violate state and federal water quality standards. The administering agency is the USACE (Section 404) and the State or Regional Water Quality Control Board (Section 401).

Rivers and Harbors Act Section 10 (33 U.S.C. § 401 et seq.). Section 10 of the Rivers and Harbors Act of 1899 requires authorization from USACE for the construction of any structure in or over any navigable water of the United States. Structures or work outside the limits defined for navigable waters of the United States requires a Section 10 permit if the structure or the work affects the course, locations, or condition of the

water body. This applies to any dredging or disposal of dredging materials, excavation, filling, rechannelization, or any other modification of a navigable water of the United States and applies to all structures.

State

California Endangered Species Act (Fish and Game Code [CFGC] §§ 2050-2098). The California Endangered Species Act (CESA) of 1984 states that all native species of fish, amphibians, reptiles, birds, mammals, invertebrates, and plants, and their habitats, threatened with extinction and those experiencing a significant decline which, if not halted, would lead to a threatened or endangered designation, will be protected and preserved. CESA prohibits the take of any species of wildlife designated by the California Fish and Game Commission as endangered, threatened, or candidate species. The CDFW may authorize the take of any such species if certain conditions are met. These criteria are listed in Title 14 of the California Code of Regulations, Section 783.4 subdivisions (a) and (b). For purposes of CESA "take" means to hunt, pursue, catch, capture, or kill (CFGC § 86). The administering agency is CDFW.

Fully Protected Species (CFGC §§ 3511, 4700, 5050, and 5515). These sections designate certain species as fully protected and prohibit the take of such species or their habitat unless for scientific purposes (see also Cal. Code Regs., tit. 14, §670.7). The incidental take of fully protected species may also be authorized in an approved natural community conservation plan (CFGC § 2835). The administering agency is CDFW.

California Fish and Game Code. The following sections of the CFGC designate protections for birds and/or their nests or eggs. The administering agency is CDFW.

- Section 3503: This section makes it unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto.
- Section 3503.5: This section makes it unlawful to take, possess, or destroy any birds in the orders Falconiformes and Strigiformes or to take, possess, or destroy the nest or eggs of any such bird.
- Section 3513: This section protects California's migratory birds by making it unlawful to take or possess any migratory nongame bird as designated in the MBTA or any part of such migratory nongame birds.
- Section 3800: All birds occurring naturally in California that are not resident game birds, migratory game birds, or fully protected birds are nongame birds. It is unlawful to take any nongame bird except as provided in this code or in accordance with regulations of the commission or, when relating to mining operations, a mitigation plan approved by the department.

Furbearing and Mammal Protection. Additional regulations are in place protecting furbearing mammals as follows:

- **Fish and Game Code §251.1** prohibits the harassment of any furbearing mammal. Harass is defined as an intentional act that disrupts an animal's normal behavior patterns, which includes, but is not limited to, breeding, feeding, or sheltering.
- **California Code of Regulations Title 14 §460** states that fisher, marten, river otter, desert kit fox and red fox may not be taken at any time.

Native Plant Protection (CFGC § 1900 et seq.). The Native Plant Protection Act was enacted in 1977 and designates state rare and endangered plants and provides specific protection measures for identified populations. Those laws prohibit the take of endangered or rare native plants but include some exceptions for agricultural and nursery operations; for emergencies; after properly notifying CDFW, for vegetation removal from canals, roads, and other sites; due to changes in land use; and in certain other situations. The administering agency is CDFW.

Porter-Cologne Water Quality Control Act (California Water Code Division 7). The State Water Resources Control Board (SWRCB) and the nine Regional Water Quality Control Boards (RWQCBs) have jurisdiction over all surface water and groundwater in California, including wetlands, headwaters, and riparian areas. The SWRCB or applicable RWQCB must issue waste discharge requirements for any activity that discharges waste that could affect the quality of waters of the state.

California Lake and Streambed Alteration Notification/Agreement (CFGC § 1602). These sections stipulate that an entity shall not substantially divert or obstruct the natural flow of, or substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake, or deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake.

Oak Woodlands Preservation Act (California P.R.C. §21083.4). This Public Resources Code section states that if a County determines that a project in its jurisdiction may result in a conversion of oak woodland that would be considered significant under CEQA, then mitigation for this impact is required. The mitigation can include 1) conservation of oaks on the site; 2) replanting oaks (can be used for a maximum of 50 percent of the required mitigation); 3) contribution to the Oak Woodlands Conservation Fund; and/or 4) other mitigations developed by the County.

Local

The County of Mendocino General Plan. Goals, policies, and action items specific to the County's General Plan to protect and preserve the County's natural habitat and wildlife

are described in Chapter 4 Resource Management Element (Mendocino County 2009). Those policies that are important with respect to the proposed Project are as follows:

Policy RM-1: Protect stream corridors and associated riparian habitat.

- Action Item RM-1.1: Require adequate buffers for all projects potentially impacting stream corridors and/or their associated riparian habitats.

Policy RM-24: Protect the county's natural landscapes by restricting conversion and fragmentation of timberlands, oak woodlands, stream corridors, farmlands, and other natural environments.

Policy RM-25: Prevent fragmentation and loss of [the county's] oak woodlands, forests, and wildlands and preserve the economic and ecological values and benefits.

Policy RM-27: Conserve, restore and enhance natural resources, sensitive environments, and ecological integrity.

- Action Item RM-27.1: Identify and maintain wildlife movement corridors to support biodiversity and healthy natural processes.

Policy RM-28: All discretionary public and private projects that identify special-status species in a biological resources evaluation (where natural conditions of the site suggest the potential presence of special-status species) shall avoid impacts to special-status species and their habitat, to the maximum extent feasible. Where impacts cannot be avoided, projects shall include the implementation of site-specific or project-specific effective mitigation strategies developed by a qualified professional in consultation with state or federal resource agencies with jurisdiction (if applicable) including, but not limited to, the following strategies:

- Preservation of habitat and connectivity of adequate size, quality, and configuration to support the special-status species. Connectivity shall be determined based on the specifics of the species' needs.
- Provision of supplemental planting and maintenance of grasses, shrubs, and trees of similar quality and quantity to provide adequate vegetation cover to enhance water quality, minimize sedimentation and soil transport, and provide adequate shelter and food for wildlife.
- Provide protection for habitat and the known locations of special-status species through adequate buffering or other means.
- Provide replacement habitat of like quantity and quality on- or off-site for special-status species.
- Enhance existing special-status species habitat values through restoration and replanting of native plant species.
- Provision of temporary or permanent buffers of adequate size (based on the specifics of the special-status species) to avoid nest abandonment by nesting

migratory birds and raptors associated with construction and site development activities.

- Incorporation of the provisions or demonstration of compliance with applicable recovery plans for federally listed species.
- Action Item RM-28.1: The County shall develop CEQA standards that require disclosure of impacts to all sensitive biotic communities during a review of discretionary projects. These standards shall require the following mitigation:
    - Sensitive Biotic Communities – For all sensitive biotic communities, restore or create habitat at a no net loss standard of habitat value lost. Where it is determined that restoration or creation are ecologically infeasible, preserve at a 2:1 ratio for habitat loss.
    - Oak Woodland – Maintain and improve oak woodland habitat to provide for slope stabilization, soil protection, species diversity and wildlife habitat through the following measures:
        - To the maximum extent possible, preserve oak trees and other vegetation that occur near the heads of drainages or depressions to maintain the diversity of vegetation type and wildlife habitat as part of agricultural projects.
        - Comply with the Oak Woodlands Preservation Act (Public Resources Code Section 21083.4) to conserve the integrity and diversity of oak woodlands, and retain, to the maximum extent feasible, existing oak woodland and chaparral communities and other significant vegetation as part of residential, commercial, and industrial approvals.
        - Provide appropriate replacement of lost oak woodlands or preservation at a 2:1 ratio for habitat loss.

Policy RM-29: All public and private discretionary projects shall avoid impacts to wetlands if feasible. If avoidance is not feasible, projects shall achieve no net loss of wetlands, consistent with state and federal regulations.

Policy RM-31: For the purposes of implementing this General Plan, the County defines "special status species" and "sensitive biotic communities" to include all species and habitats identified as such by the [CDFW, USFWS], or NOAA Fisheries.

5.4.2 Environmental Impacts

This section assesses impacts based on the results of the literature review and biological site visits that are documented in the BRTR (**Appendix B**).

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

Construction/Demolition

Less than Significant with Mitigation Incorporated. The Project site primarily consists of heavily disturbed wild oats – annual brome grasslands and previously disturbed/ developed land cover types. Direct impacts to grasslands would occur from the removal of approximately 3.28 acres of vegetation during excavation and grading for Power Blocks 1 and 2 and the pad-mounted switchgear, extension of the access roads, and trenching between Power Blocks 1 and 2. Direct impacts to vegetation would also include the removal of approximately four isolated trees, including one northern California black walnut and three valley oaks, within the grassland area to accommodate the installation of Power Block 2. No tree removals or trimming will occur within the temporary impact areas. **Table 5.4-1** below provides a summary of permanent and temporary impacts to vegetation communities within the Project site.

Table 5.4-1. Project Impacts to Vegetation Communities and Land Cover Types within the Project Site.

	Wild Oats – Annual Brome Grassland (acres)	Interior Live Oak Woodland (acres)	Developed / Paved / Barren (acres)
Permanent Impacts	3.28	0.09	0.03
Temporary Impacts	1.26	0	0.12
Total Impacts	**4.54**	**0.09**	**0.15**

The grasslands and other land cover types within the Project site provide limited habitat suitability for special-status plant and wildlife species due to historic agricultural use and more recent mowing. Similarly, any trees that would be subject to removal are isolated and disconnected from broader bands of more suitable habitat for special-status species. It is highly unlikely that the Project site would support special-status plant species and there is a very low potential for any to occur within the Project site. If present, any special-status wildlife species would likely occur during migratory movements or periodic foraging events and would not be expected as resident species in the Project site. Due to the limited habitat suitability within the Project site along with the availability of similar or higher quality habitat in adjacent areas and throughout the general region, direct impacts from the removal of up to approximately 3.28 acres of grasslands would be considered less than significant.

Adjacent habitats, including the interior live oak woodland and the valley oak riparian forest and woodland habitat along the eastern and southeastern boundaries of the Project site provide higher habitat suitability for nesting birds and raptors and other special-status species, such as ten-mile shoulderband (*Noyo intersessa*), Coast Range newt (*Taricha torosa*), western pond turtle (*Emys [=Actinemys] marmorata*), and ringtail (*Bassariscus astutus*), among others. However, direct impacts would be limited to removal of understory vegetation and would occur within a very small portion along the edge of the previously disturbed, early-mid successional interior live oak woodland habitat. Removal of individual oak trees would be limited to the three isolated valley oak trees discussed above and would not occur within the broader live oak woodland habitat. The valley oak

riparian forest and woodland habitat is located outside of the Project site and direct impacts associated with vegetation removal would not occur.

Direct impacts to vegetation communities and habitat could also include increased exposure to fugitive dust, erosion and sedimentation, and hazardous materials spills during construction/demolition. As described in **Section 5.3 (Air Quality)**, the applicant has proposed to incorporate measures to control and suppress fugitive dust, which include but are not limited to, watering active construction/demolition sites at least three times daily, minimizing vehicle speeds to 10 miles per hour over unpaved areas, and limiting dust-generating activities during periods of high winds. As described in **Section 5.10 (Hydrology and Water Quality)**, erosion and hazardous materials control measures (including obtaining a NPDES permit and implementing a SWPPP) would be used throughout construction/demolition to reduce potential impacts. With the implementation of incorporated air quality measures and applicable permit conditions to control erosion and sedimentation, impacts to vegetation communities and habitat would be less than significant.

Indirect impacts to vegetation communities and habitat could include alterations to long-term hydrology and the degradation of habitat from the introduction and proliferation of noxious and invasive weeds. As discussed in **Section 5.10 (Hydrology and Water Quality)**, the proposed Project would not modify any drainage patterns or change the rate and amount of surface runoff from the Project site. Long-term erosion control measures would be implemented for exposed surfaces potentially subject to soil erosion in compliance with applicable local, State, and federal permits and regulations. Although the Project site is dominated by non-native grasslands that are subject to historic and ongoing disturbance from mowing, staging of equipment and vehicles, and OHV use, indirect impacts would occur if new sources of weeds (i.e., seeds or plant parts) are introduced into the Project site. If allowed to proliferate, new weed sources could reduce the quality of habitat in adjacent woodland and riparian habitats. The implementation of mitigation measure (MM) BIO-1, which includes requirements to clean vehicles and equipment prior to entering work areas, would ensure that impacts are reduced to less than significant.

Plants

No special-status plants were observed within the Survey Area during the June and July 2023 reconnaissance level surveys. A formal floristic botanical survey was not conducted. Based on the results of the site visits and literature review, no federally or State-listed plant species are expected to occur within or adjacent to the Project site due to a lack of suitable habitat, historic and ongoing disturbance, and/or factors associated with range, distribution, and elevation requirements.

Appendix B provides a detailed analysis of the special-status plant species that were considered for the proposed Project. The following special-status plant species were determined to have the potential to occur in or near the Project site:

- Mountain lady's-slipper (*Cypripedium montanum*) – CRPR 4.2, State Rank (SR) S4
- Bristly leptosiphon (*Leptosiphon aureus* – CRPR 4.2, SR S4

- Broad-lobed leptosiphon (*Leptosiphon latisectus*) – CRPR 4.3, SR S4
- Mendocino bush-mallow (*Malacothamnus mendocinensis*) – CRPR 1B.1, SR S1
- Beaked tracyina (*Tracyina rostrata*) – CRPR 1B.2, S2
- Cylindrical trichodon (*Trichodon cylindricus*) – CRPR 2B.2, SR S2

CRPR List 4 plants are characterized by limited distribution or are infrequently distributed throughout a broader area; therefore, there is a low vulnerability or susceptibility to threat within the state (CNPS, 2020). Plants included on CRPR List 4 do not clearly meet CEQA standards and thresholds for impact considerations as they generally do not meet the CEQA Section 15380 guidance criteria for listing as rare, threatened, or endangered. However, CNPS and CDFW recommend that CRPR List 4 plants be evaluated in a CEQA analysis for several reasons, including if the taxa may be more common in some regions but rare in others (CNPS, 2020). Because CRPR List 4 plants are not considered rare in the region and the removal of a small number of plants (i.e., a few individuals or less than 10 percent of the total occurrence) would not jeopardize the overall occurrence of the plant region-wide and/or would not result in a trend towards further listing or increased protection status, impacts to mountain lady's slipper, bristly leptosiphon, and broad-lobed leptosiphon, if present, would be considered less than significant.

The Project site has been subject to historic and ongoing disturbance for over 30 years, limiting the potential for special-status plants to occur. Due to the high level of disturbance and the dominance of non-native vegetation, there is a very low likelihood that Mendocino bush-mallow, beaked tracyina, or cylindrical trichodon occur within or near the Project site. Mendocino bush-mallow is a conspicuous perennial bush typically found in chaparral and cismontane woodland habitats. This species' blooming period occurs between June and August. Mendocino bush-mallow was not observed in the Survey Area during June and July 2023 reconnaissance level surveys. Cylindrical trichodon is often found in disturbed habitats (Baldwin et al., 2012; Calflora 2023; Stone 2021). However, the Project site does not support sandy or clay soil substrates that are associated with this species. Due to the very low potential for each of these species to be present, direct and indirect impacts to Mendocino bush-mallow, beaked tracyina, and cylindrical trichodon would not occur.

Wildlife

Appendix B provides a detailed analysis of the special-status wildlife species that were considered for the proposed Project. No special-status wildlife species were observed or detected during the June and July 2023 reconnaissance level surveys. Focused or protocol level surveys were not conducted. The literature review identified 29 special-status wildlife species with the potential to occur within or adjacent to the Project site (CDFW 2023b, eBird 2023, iNaturalist 2023, USFWS 2023). No recorded occurrences for any of these species were located within or near the Project site.

Invertebrates

The following special-status invertebrate species were considered for this analysis:

- Monarch butterfly (*Danaus plexippus plexippus*) – Federal listing candidate, State Rank (SR) S2
- Obscure bumble bee (*Bombus caliginosus*) – CDFW Special Animal, SR S1S2
- Western bumble bee (*Bombus occidentalis*) – CESA candidate for Endangered listing, SR S1
- Ten-mile shoulderband – CDFW Special Animal, SR S1S2

Monarch butterfly roosts in wind-protected tree groves, primarily preferring eucalyptus trees (*Eucalyptus* spp.). The Project site does not support suitable habitat for monarch butterfly roosting sites and the Project site is outside of the known overwintering range for the species. Monarch butterfly could occur as a migrant that moves through the area to preferable overwintering sites along the coast. Monarch butterfly larvae require milkweed species (*Asclepias* sp.) as their host plant as adult monarchs breed along their migration route (Jepson et al. 2015). Milkweed plants were not identified in or adjacent to the Project site during the June and July 2023 reconnaissance level surveys. Additionally, the Project site has been subject to historic and ongoing disturbance and supports a dominant community of non-native and invasive plants, which would limit the presence of milkweed host plants for monarch butterfly. Therefore, direct impacts to monarch butterfly would not occur.

The current ranges, distribution, and abundance of obscure bumble bee and western bumble bee are poorly understood (CDFW 2019; Xerxes Society 2018). Although the Project site is located within what has been previously identified as the historic range for both species, the Project site provides only marginal habitat (CWHR 2023; Hatfield et al. 2014). Several small burrows, likely created by Botta's pocket gopher, could be used for bumble bee nesting sites. Although no pre-existing bird nests were detected during the surveys, abandoned bird nests could also be used for bumble bee nesting sites. Additionally, the vegetation communities within and adjacent to the Project site could support annual floral food resources. An individual bumble bee identified as a possible yellow-faced bumble bee (*B. vosnesenskii*) was observed foraging in the Klamath weed growing along the edge of the grassland and woodland adjacent to the proposed Power Block 1 during the reconnaissance level surveys. Therefore, there is a moderate potential for obscure bumble bee and western bumble bee to occur, as these species have similar habitat requirements. As such, direct impacts associated with grading, trenching, excavation, and equipment and vehicle staging during construction/demolition could occur if nest sites, if present, are abandoned or destroyed or if available floral resources are altered or removed.

Ten-mile shoulderband is a poorly understood terrestrial snail species that is not tracked by the CNDDB. A review of iNaturalist observation records indicated that this species is primarily concentrated within the "redwood zone" of coastal Mendocino County but was

also observed within oak woodland / savannah habitat approximately 4.5 miles southwest of the Survey Area (iNaturalist 2023). Ten-mile shoulderband was determined to have a moderate potential to occur due to potential habitat within the interior live oak woodland that occurs adjacent to and along the northeast edge of proposed Power Block 1. Direct impacts would occur if ten-mile shoulderband individuals, if present, are trampled or crushed during construction/demolition.

Direct impacts to special-status invertebrates, if present, could also include increased exposure to fugitive dust, erosion and sedimentation, hazardous materials, noise, and vibration during construction/demolition. As described in **Section 5.3 (Air Quality)**, the applicant has proposed to incorporate measures to control and suppress fugitive dust, which include but are not limited to, watering active construction/demolition sites at least three times daily, minimizing vehicle speeds to 10 miles per hour over unpaved areas, and limiting dust-generating activities during periods of high winds. As described in **Section 5.10 (Hydrology and Water Quality)**, erosion and hazardous materials control measures (including obtaining a NPDES permit and implementing a SWPPP) would be used throughout construction/demolition to reduce potential impacts. Construction/ demolition activities would require the use of vehicles and heavy equipment capable of generating noise and ground vibration within and adjacent to the Project site. As discussed in **Section 5.13 (Noise)**, noise generated from construction/demolition activities would be localized and temporary in nature. Additionally, the use of mufflers on all internal combustion engine-driven equipment and quiet models of air compressors and other stationary noise sources would be required. Similarly, impacts from construction-related ground vibration would be short-term and confined only to the immediate work area (within approximately 25 feet). As such, direct impacts from fugitive dust, erosion and sedimentation, hazardous materials, noise, and vibration would be considered less than significant.

Indirect impacts to special-status invertebrates could include degradation of habitat from long-term alterations to hydrology and the introduction and proliferation of invasive and noxious weeds. As discussed in **Section 5.10 (Hydrology and Water Quality)**, the proposed Project would not modify any drainage patterns or change the rate and amount of surface runoff from the Project site. Long-term erosion control measures would be implemented for exposed surfaces potentially subject to soil erosion in compliance with applicable local, State, and federal permits and regulations. Although the Project site is dominated by non-native grasslands that are subject to historic and ongoing disturbance from mowing, staging of equipment and vehicles, and OHV use, indirect impacts would occur if new sources of weeds (i.e., seeds or plant parts) are introduced into the Project site. If allowed to proliferate, new weed sources could reduce the quality of adjacent woodland and riparian habitats.

The implementation of MMs BIO-1, BIO-2, BIO-3, BIO-4, BIO-5, and BIO--8, which include worker training, surveys for biological resources prior to ground-disturbing activities, biological monitoring during all initial vegetation removal and ground disturbing activities, focused surveys prior to any proposed project activities to determine the potential presence of obscure bumble bee and western bumble bee, the establishment of

avoidance buffers around bumble bee nesting sites, installation of exclusion fencing to prohibit terrestrial species from entering construction areas, avoiding the removal of oak trees, and ensuring that all vehicles and equipment are cleaned prior to entering work areas, would be required. Implementation of these measures would reduce impacts to less than significant.

Fish

The following special-status fish were considered for this analysis:

- Coho Salmon (*Oncorhynchus kisutch*), Central California Coast evolutionarily significant unit (ESU) – Federally and State Endangered, SR S2
- Steelhead (*Oncorhynchus mykiss irideus*), Central California Coast distinct population segment (DPS) – Federally Threatened, SR S3

The Project site does not support suitable habitat for any common or special-status fish species. Drainages 1 through 3 are mostly unvegetated and appear to only convey water away from the Mendocino Substation during storm events. Drainages 1 and 2, ultimately connect with the Russian River which is less than a mile away from the Project site and is known to support coho salmon and steelhead (CDFW 2023b, NOAA Fisheries 2012, 2016). In addition, portions of the Russian River are designated by NOAA Fisheries as critical habitat for the central California coast DPS steelhead and essential fish habitat for the central California coast ESU coho salmon. There is a low potential for these species to occur in IS-2 located adjacent to the southeast corner of the Survey Area. This feature is relatively small and provides limited instream conditions (i.e., sufficient water flows during spring/summer, clean gravel, sufficient dissolved oxygen, cool temperatures, low turbidity) required for spawning redds and the development of eggs and fry (NOAA Fisheries 2012; 2016).

Construction/demolition of the proposed Project would avoid these features during ground-disturbing activities. Therefore, direct impacts from the removal of suitable stream habitat for coho salmon and steelhead would not occur. Direct impacts could occur if sediment or hazardous materials are transported to these features during construction, resulting in degraded water and potential habitat quality.

Indirect impacts would be similar to those discussed above for invertebrates and would include the degradation of habitat from long-term alterations to hydrology and the introduction of noxious and invasive weeds.

As described in **Section 5.10 (Hydrology and Water Quality)**, erosion and hazardous materials control measures (including obtaining a NPDES permit and implementing a SWPPP) would be required throughout construction/demolition to minimize potential impacts. The implementation of MM BIO-7 would ensure that the applicant provides evidence to the CEC that all required permits in compliance with Section 1600 et seq. of the CFGC and Section 401 and 404 of the CWA have been obtained. Implementation of these measures would reduce impacts to less than significant.

Amphibians and Reptiles

The following special-status amphibians and reptiles were considered for this analysis:

- Foothill yellow-legged frog (*Rana boylii*), North Coast DPS – CDFW Species of Special Concern (SSC), SR S4
- Coast Range newt – CDFW SSC, SR S4
- Western pond turtle – CDFW SSC, SR S3

The Project site does not support suitable aquatic habitat for foothill yellow-legged frog, Coast Range newt, or western pond turtle. Drainages 1 through 3 are mostly unvegetated and only convey water during storm events. There is a low to moderate potential for these species to occur in IS-2 located adjacent to the southeast corner of the Survey Area.

Foothill yellow-legged frog is known to occur in some tributaries of the Russian River within five miles of the Project site (CDFW 2023b; CWHR 2022; iNaturalist 2023). Although IS-2 provides marginally suitable aquatic habitat, if present, yellow-legged frogs would not be expected to breed at this location. This feature is unlikely to support surface waters into June and July when breeding and development of egg and larvae typically occur for this species (CalHerps 2023; CWHR 2022). Additionally, the Project site is located beyond the typical 200-foot upland home range or dispersal distance from aquatic habitat for this species. Therefore, direct impacts from trampling or crushing during construction/ demolition are not expected to occur.

IS-2 also provides marginal habitat for Coast Range newt, although does not provide suitable habitat for western pond turtle. However, a small human-made agricultural impoundment located along IS-2 approximately 660 feet to the southeast of the Survey Area provides suitable aquatic habitat for both species. Additionally, the Project site is within the typical upland migration and/or dispersal distance of approximately 0.6-mile for Coast Range newt and 650 feet for western pond turtle (CalHerps 2023; Holland 1991; Jennings and Hayes 1994; NatureServe 2023). Several small mammal burrows that occur within the Project site could provide potential underground refugia for Coast Range newt if the species is present; however, it is unlikely that the species would use these burrows since the surrounding grasslands are sparsely vegetated and would therefore expose the animal to excess sun and heat. Although soils mapped within the Project site are described as typically slightly hard and friable in the upper ten inches, soils were observed to be compacted, likely due to ongoing mowing activities, during June and July 2023 reconnaissance level surveys, making it unlikely that western pond turtle could excavate a nest or use the area for overwintering. However, individuals may wander into the Project site during upland migration or dispersal movements. As such, direct impacts to western pond turtle nests or overwintering individuals from trampling or crushing during construction/demolition are not expected to occur but direct impacts to migrating or dispersing individuals, if present during project activities, could occur.

Direct impacts to special-status amphibians and reptiles, if present in adjacent habitat, could also include increased exposure to fugitive dust, erosion and sedimentation, hazardous materials, noise, and vibration during construction/demolition. As described in **Section 5.3 (Air Quality)**, the applicant has proposed to incorporate measures to control and suppress fugitive dust, which include but are not limited to, watering active construction/demolition sites at least three times daily, minimizing vehicle speeds to 10 miles per hour over unpaved areas, and limiting dust-generating activities during periods of high winds. As described in **Section 5.10 (Hydrology and Water Quality)**, erosion and hazardous materials control measures (including obtaining a NPDES permit and implementing a SWPPP) would be used throughout construction/demolition to reduce potential impacts. Construction/demolition activities would require the use of vehicles and heavy equipment capable of generating noise and ground vibration within and adjacent to the Project site. As discussed in **Section 5.13 (Noise)**, noise generated from construction/demolition activities would be localized and temporary in nature. Additionally, the use of mufflers on all internal combustion engine-driven equipment and quiet models of air compressors and other stationary noise sources would be required. Similarly, impacts from construction-related ground vibration would be short-term and confined only to the immediate work area (within approximately 25 feet). As such, direct impacts from fugitive dust, erosion and sedimentation, hazardous materials, noise, and vibration would be considered less than significant.

Indirect impacts would be similar to those discussed above for Invertebrates and would include the degradation of habitat from long-term alterations to hydrology and the introduction of noxious and invasive weeds.

The implementation of MMs BIO-1, BIO-2, BIO-3, BIO-5, and BIO-7, which include worker training, surveys for sensitive biological resources prior to ground-disturbing activities, biological monitoring during all initial vegetation removal and ground disturbing activities, relocation of Coast range newts or western pond turtles found within construction/ demolition areas, installation of exclusion fencing to prohibit terrestrial species from entering construction areas, ensuring that all vehicles and equipment are cleaned prior to entering work areas, and ensuring that the applicant provides evidence to the CEC that all required permits in compliance with the CWA and CDFW Section 1600 et. seq. have been obtained, would be required. Implementation of these measures would reduce impacts to these species to less than significant.

Birds

With the exception of a few non-native birds, such as European starling (*Sturnus vulgaris*) and house sparrow (*Passer domesticus*), the loss of active bird nests or young is regulated by the MBTA and CFGC §3503. Nesting bird surveys were not conducted and active nests were not observed during the June and July 2023 reconnaissance level surveys. Some birds likely nest on existing structures, in native vegetation adjacent to the Project site, and on open ground in and around the Project site.

Due to regular disturbance from mowing, vehicle and equipment staging, OHV activities, and ongoing operations at the Mendocino Substation in or immediately adjacent to the Project site, it is more likely that special-status avian species adapted to developed or semi-developed environments would nest in or near the Project site. These include species such as house finch (*Haemorhous mexicanus*), lark sparrow (*Chondestes grammacus*), acorn woodpecker (*Melanerpes formicivorus*), California quail (*Callipepla californica*), and American crow (*Corvus brachyrhynchos*), all of which were observed either foraging or migrating through the Project site during June and July 2023 reconnaissance level surveys. Attachment B-3 of **Appendix B** provides a full list of avian species observed during the surveys.

The following special-status birds were considered for this analysis:

- Cooper's hawk (*Accipiter cooperi*) – CDFW Watch List, SR S4
- Sharp-shinned hawk (*Accipiter striatus*) – CDFW Watch List, SR S4
- Great egret (*Ardea alba*) – CDFW Special Animal, SR S4
- Great blue heron (*Ardea herodias*) – CDFW Special Animal, SR S4
- Burrowing owl (*Athene cunicularia*) – CDFW SSC, USFWS Bird of Conservation Concern (BCC), SR S2
- Ferruginous hawk (*Buteo regalis*) – CDFW Watch List, SR S3S4
- Northern harrier (*Circus hudsonius*) – CDFW SSC, USFWS BCC, SR S3
- White-tailed kite (*Elanus leucurus*) – CDFW Fully Protected, SR S3S4
- Merlin (*Falco columbarius*) – CDFW Watch List, SR S3S4
- American peregrine falcon (*Falco peregrinus anatum*) – Federally and state delisted, CDFW Fully Protected, USFWS BCC, SR S3S4
- Yellow-breasted chat (*Icteria virens*) – CDFW SCC, SR S4
- Osprey (*Pandion haliaetus*) – CDFW Watch List, SR S4
- Yellow warbler (*Setophaga petachia*) – CDFW SSC, SR S3
- Red-breasted sapsucker (*Sphyrapicus ruber*) – SR S4
- Northern spotted owl (*Strix occidentalis caurina*) – Federally and state threatened, SR S2

Most of the special-status species listed above would not be expected to nest within or near the Project site due to a lack of suitable habitat and/or the current level of ongoing disturbance. For example, although numerous small mammal burrows, likely created by Botta's pocket gophers, were observed within the Project site, the site lacks California ground squirrel (*Otospermophilus beecheyi*) burrows, typically preferred by burrowing owls for nesting. The Project site and surrounding areas lack suitable cliff ledges, tall buildings, or similar sites that comprise suitable American peregrine falcon nesting habitat. Red-breasted sapsucker and northern spotted owl display strong nesting affinities towards conifer or mixed conifer forests which do not occur within or near the Project site. Osprey typically prefer habitats with dense tree canopies with snags or dead treetops for nesting, which are also not present within the Project site and only marginally occur in the adjacent oak woodland communities. The valley oak woodland associated with the IS-2 adjacent to the southeast corner of the Survey Area supports marginal nesting habitat for riparian species, such as yellow-breasted chat, yellow warbler, great egret,

and great blue heron; however, the narrow riparian corridor is abutted on either side by vineyards and private roads. Therefore, suitable nesting sites and territories are limited by size and ongoing disturbance for these species. Additionally, the Project site is located outside of the known breeding range for merlin, northern harrier, and ferruginous hawk.

Although nesting habitat for special-status birds does not occur or is marginal within or adjacent to the Project site, some species, including white-tailed kite, Cooper's hawk, and sharp-shinned hawk, may forage in the general region. Direct impacts would include the permanent conversion of up to three acres of potential foraging habitat, including grassland and up to four isolated trees, for these and other bird species. The Project site is highly disturbed, supports a low diversity of prey resources, and represents a negligible fraction of similar or higher quality foraging habitat available in the general region.

Direct impacts would occur if nests or eggs of any bird protected under the MBTA and CFGC § 3503 were destroyed during construction/demolition activities. If present, nests or eggs could be subject to destruction from vegetation removal, including the removal of up to four isolated trees located within the grassland habitat of the Project site.

Direct impacts could also occur if nests or breeding territories are abandoned due to increased levels of fugitive dust, noise, vibration, and human presence. As described in **Section 5.3 (Air Quality)**, the applicant has proposed to incorporate measures to control and suppress fugitive dust, which include but are not limited to, watering active construction/demolition sites at least three times daily, minimizing vehicle speeds to 10 miles per hour over unpaved areas, and limiting dust-generating activities during periods of high winds. Construction/demolition activities would require the use of vehicles and heavy equipment capable of generating noise and ground vibration within and adjacent to the Project site. As discussed in **Section 5.13 (Noise)**, noise generated from construction/demolition activities would be localized and temporary in nature. Additionally, the use of mufflers on all internal combustion engine-driven equipment and quiet models of air compressors and other stationary noise sources would be required. Similarly, impacts from construction-related ground vibration would be short-term and confined to the immediate work area (within approximately 25 feet). Therefore, direct impacts from fugitive dust, noise, and vibration would be considered less than significant.

Indirect impacts would include the degradation of habitat from the introduction of noxious and invasive weeds. Although the Project site is dominated by non-native grasslands that are subject to historic and ongoing disturbance from mowing, staging of equipment and vehicles, and OHV use, indirect impacts would occur if new sources of weeds (i.e., seeds or plant parts) are introduced into the Project site. If allowed to proliferate, new weed sources could reduce the quality of adjacent woodland and riparian habitats.

The implementation of MMs BIO-1, BIO-3, BIO-6, and BIO-8 would include worker training, biological monitoring during all initial vegetation removal and ground disturbing activities, focused surveys for nesting birds (if construction/demolition activities are scheduled during the breeding season), avoiding removal of oak trees, and ensuring that

all vehicles and equipment are cleaned prior to entering work areas. Implementation of these measures would reduce impacts to less than significant.

Mammals

The following special-status mammals were considered for this analysis:

- Pallid bat (*Antrozous pallidus*) – CDFW SSC, SR S3
- Ringtail (*Bassariscus astutus*) – CDFW FP
- Townsend's big-eared bat (*Corynorhinus townsendii*) – CDFW SSC, SR S2
- Fisher (*Pekania pennanti*) – CDFW SSC, SR S2S3
- American badger (*Taxidea taxus*) – CDFW SSC, SR S3

No special-status mammals were observed or detected in the Survey Area during the June and July 2023 reconnaissance level surveys. The Project site provides very marginal habitat for ringtail, fisher, and American badger as it is surrounded by roads, vineyards, residential and rural properties, and lacks connectivity to contiguous patches of less-disturbed, higher quality habitat. The Project site is subject to high levels of ongoing disturbance from nearby vehicle traffic, mowing, staging of vehicles and equipment, and current operations at the Mendocino Substation, which further limits the potential for these species to occur. There is a slightly higher potential that these species could use adjacent woodland and riparian communities during movement between more suitable denning and foraging habitats.

Pallid bat and Townsend's big-eared bat are both highly sensitive to human disturbance (CWHR 2022; WBWG 2023). Suitable roosting sites for pallid bat and Townsend's big-eared bat do not occur within the Project site due to ongoing anthropogenic disturbance and a lack of trees with suitable roosting features (e.g., crevices, cavities). Adjacent oak woodlands could support day roosting sites or maternal colonies of these species if adequate features, such as hollow trees, exfoliating bark, or tree cavities are available. If present, pallid bat and Townsend's big-eared bat could use the Project site and surrounding vegetation communities for foraging. To the extent feasible, construction/ demolition would occur during daylight hours which would avoid impacts to bats that forage at night.

Direct impacts to special-status mammals, if present, could include disturbance to denning or roosting sites in adjacent habitat from increased exposure to fugitive dust, noise, and ground vibration. Special-status mammals that den or roost in adjacent habitats are expected to be more tolerant of disturbance due to the baseline level of human activity from vehicle traffic, ongoing maintenance activities in the Project site, OHV use, and current operations at the Mendocino Substation.

Direct impacts could also occur if roosts, dens, or breeding territories are abandoned due to increased levels of fugitive dust, noise, vibration, and human presence. As described in **Section 5.3 (Air Quality)**, the applicant has proposed to incorporate measures to control and suppress fugitive dust, which include but are not limited to, watering active construction/demolition sites at least three times daily, minimizing vehicle speeds to 10

miles per hour over unpaved areas, and limiting dust-generating activities during periods of high winds. Construction/demolition activities would require the use of vehicles and heavy equipment capable of generating noise and ground vibration within and adjacent to the Project site. As discussed in **Section 5.13 (Noise)**, noise generated from construction/demolition activities would be localized and temporary in nature. Additionally, the use of mufflers on all internal combustion engine-driven equipment and quiet models of air compressors and other stationary noise sources would be required. Similarly, impacts from construction-related ground vibration would be short-term and confined only to the immediate work area (within approximately 25 feet). As such, direct impacts from fugitive dust, noise, and vibration would be considered less than significant.

Indirect impacts would include the degradation of habitat from the introduction of noxious and invasive weeds. Although the Project site is dominated by non-native grasslands that are subject to historic and ongoing disturbance from mowing, staging of equipment and vehicles, and OHV use, indirect impacts would occur if new sources of weeds (i.e., seeds or plant parts) are introduced into the Project site. If allowed to proliferate, new weed sources could reduce the quality of adjacent woodland and riparian habitats.

The implementation of MMs BIO-1, BIO-2, BIO-3, and BIO-5 would include worker training, preconstruction surveys and avoidance measures for special-status species (if present), biological monitoring, exclusion fencing, and ensuring that all vehicles and equipment are cleaned prior to entering work areas. Implementation of this measure would ensure that impacts are reduced to less than significant.

Operation

Less Than Significant Impact. As described in **Section 4 (Project Description)**, the facility would be remotely operated and monitored. Staff would respond to any alerts on an on-call basis. Quarterly site visits to perform routine maintenance and water deliveries would also occur.

Direct impacts to special-status species, if present during operations, could include exposure to increased levels of human presence, hazardous materials, and night lighting. Operations would include maintaining batteries that are filled with electrolyte fluid that would be contained within the battery enclosures. The battery enclosures would serve as secondary containment for the electrolyte. Minimal lighting would be used for operations and would be limited to safety and security functions. All lighting would be directed downward and shielded to focus illumination on the desired areas only. As such, impacts would be considered less than significant.

Direct impacts to special-status species, if present during operations, could also include exposure to increased levels of noise. A slight increase in ambient noise levels is anticipated to occur as a result of equipment operating within each proposed Power Block. As described in **Appendix D (Acoustic Analysis)**, the ambient noise levels at the Project site are typical of small towns or wooded and lightly used residential areas, averaging approximately 45.5 to 54.4 A-weighted decibels (dBA; scale accounting for human ear sensitivity). As described in **Section 5.13 (Noise)**, operational noise levels

of the Power Block equipment are anticipated to be approximately 4 to 9 dBA above daytime ambient noise levels and approximately 14 to 17 dBA above nighttime ambient noise levels, as analyzed at approximately 150 to 300 feet from the proposed Power Blocks. The noise levels with equipment operating would be levels typical of urban areas and not expected to degrade the use of habitat by special-status wildlife species in adjacent habitat. As discussed in **Section 5.13 (Noise)**, a noise attenuation wall is proposed along the northern boundary of Power Block 1 to block noise traveling northwards and also along the western boundary of Power Block 2 to block noise traveling westwards. The walls are not expected to significantly increase noise levels directed towards the woodland habitats as they are oriented to direct noise towards the developed Mendocino Substation and away from residences to the north of Power Block 1 and west of Power Block 2. Wildlife that nest, roost, den, or breed in the habitats adjacent to the Project site are expected to be more tolerant of disturbance due to the baseline level of human activity from vehicle traffic, ongoing maintenance activities in the Project site, OHV use, and current operations at the Mendocino Substation. It is expected that species not as tolerant of disturbance would move to similar habitats away from the disturbance. As discussed in **Section 5.13 (Noise)**, operations and maintenance would not produce any groundborne noise or vibration. Therefore, direct impacts from noise and vibration would be considered less than significant.

Indirect impacts could include the degradation of adjacent habitats from long-term alterations to hydrology and the introduction and spread of invasive and noxious weeds. As described in **Section 5.10 (Hydrology and Water Quality)**, the proposed Project would not modify any drainage patterns or change the rate and amount of surface runoff. Erosion control measures would be implemented during operations along exposed surfaces potentially subject to soil erosion and runoff in compliance with applicable local, State, and federal permits. Operational activities would be limited to existing access roads and facilities and would therefore minimize the risk of introducing noxious and invasive weeds. Therefore, indirect impacts would be considered less than significant.

b. Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Construction/Demolition and Operation

Less Than Significant with Mitigation Incorporation. Construction/demolition activities would occur within areas that do not support riparian habitat; however, the riparian corridor associated with IS-2 located adjacent to the southeast corner of the Survey Area could be subject to direct impacts from increased erosion and sedimentation or offsite transport of hazardous materials.

California's Oak Woodlands Preservation Act (Public Resource Code §21083.4) states that if a County determines that a project in its jurisdiction may result in a conversion of oak woodland that would be considered significant under CEQA, then mitigation for this

impact is required. Construction/demolition activities, including vegetation removal and grading, would result in disturbance to the edge of the early-mid successional interior live oak woodland located along the eastern boundary of Power Block 1. Removal of oak trees would not occur and direct impacts would be limited to the removal of understory vegetation. This would not constitute a conversion of oak woodland habitat and would therefore not be considered significant under CEQA.

Direct impacts to the interior oak woodlands and the valley oak riparian forest and woodland habitat along the eastern and southeastern boundaries of the Project site could occur from exposure to fugitive dust, erosion and sedimentation, and hazardous materials spills during construction/demolition. As described in **Section 5.3 (Air Quality)**, the applicant has proposed to incorporate measures to control and suppress fugitive dust, which include but are not limited to, watering active construction/demolition sites at least three times daily, minimizing vehicle speeds to 10 miles per hour over unpaved areas, and limiting dust-generating activities during periods of high winds. As described in **Section 5.10 (Hydrology and Water Quality)**, erosion and hazardous materials control measures (including obtaining a NPDES permit and implementing a SWPPP) would be used throughout construction/demolition to reduce potential impacts. With the implementation of incorporated air quality measures and applicable permit conditions to control erosion and sedimentation, impacts to vegetation communities and habitat would be less than significant.

Indirect impacts to oak woodlands could include alterations to long-term hydrology and the degradation of habitat from the introduction and proliferation of noxious and invasive weeds. As discussed in **Section 5.10 (Hydrology and Water Quality)**, the proposed Project would not modify any drainage patterns or change the rate and amount of surface runoff from the Project site. Long-term erosion control measures would be implemented for exposed surfaces potentially subject to soil erosion in compliance with applicable local, State, and federal permits and regulations. Although the Project site is dominated by non-native grasslands that are subject to historic and ongoing disturbance from mowing, staging of equipment and vehicles, and OHV use, indirect impacts would occur if new sources of weeds (i.e., seeds or plant parts) are introduced into the Project site. If allowed to proliferate, new weed sources could reduce the quality of habitat in adjacent woodland and riparian habitats. The implementation of MM BIO-1 and MM BIO-7 would include requirements to clean vehicles and equipment prior to entering work areas and provide evidence to the CEC that applicable permits in compliance with Section 1600 et seq. of the CFGC and Sections 401 and 404 of the CWA have been obtained. Implementation of this measure would reduce impacts to less than significant.

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

Construction/Demolition

Less Than Significant with Mitigation Incorporated. A formal preliminary assessment of jurisdictional waters and wetlands was not conducted for the proposed Project. Features that could potentially meet the regulatory requirements of Sections 401 and 404 of the CWA and Section 1600 et seq. of the CFGC were identified within and immediately adjacent to the Project site during June and July 2023 reconnaissance level surveys. These include Drainages 1 through 3 (see **Figure 5.4-2**) which are human-made, mostly unvegetated features that convey stormwater away from the Mendocino Substation during storm events and are at least partially located within the Project site. SWD-1 and SWD-2a have hydrologic connection to a roadside drainage ditch that occurs immediately west of the Project site and along the east side of East Road. These flows are further conveyed to IS-2 located approximately 1,320 feet south-southeast of the Project site. In addition, a portion of IS-1 is located at the southeast corner of the Survey Area.

A formal preliminary assessment will be required prior to any proposed Project activities that could potentially impact features within or immediately adjacent to the Project site that meet the requirements of CDFW, RWQCB, and/or USACE jurisdiction. If the formal preliminary assessment determines that any features that could be potentially impactedby proposed Project activities meet these requirements, applicable permits in compliance with Section 1600 et seq. of the CFGC and Section 401 and 404 of the CWA will be required.

Table 5.4-2 below provides approximate calculations of permanent and temporary impacts anticipated from construction of the proposed Project. Portions of Drainages 1 through 3 would be subject to direct impacts from grading, trenching, road expansion, and vehicle and/or equipment staging activities during construction/demolition. Disruption of these existing stormwater conveyance features could result in direct impacts if contributing to the degradation of water quality at the site. Access roads to the power blocks will cross Drainages 1 and 2; however, where access roads cross these features culverts would be installed, and water flows would not be impeded or redirected. Because these features do not support riparian habitat or provide important ecological function, direct impacts would be less than significant with the implementation of MM BIO-7. This measure includes providing evidence to CEC that the applicable permits in compliance with Section 1602 et seq. of the CFGC and Sections 401 and 404 of the CWA have been obtained.

Table 5.4-2. Approximate Project Impacts to Potentially Jurisdiction Federal and State Waters within the Project Site.

	SWD-1a (acres)	SWD-1b (acres)	SWD-1c (acres)	SWD-2a (acres)	SWD-2b (acres)	SWD-3 (acres)
Permanent Impacts	0	0.01	0	0	<0.01	0
Temporary Impacts	0	<0.01	0	0	<0.01	<0.01
Total Impacts	**0**	**<0.02**	**0**	**0**	**<0.01**	**<0.01**

Although the roadside ditch along East Road and IS-2 at the southeast corner of the Survey Area are located outside of the Project site, these features could be subject to direct impacts if sediment or hazardous materials are transported off site during construction/demolition.

Indirect impacts could include alterations to long-term hydrology. As discussed in **Section 5.10 (Hydrology and Water Quality)**, the proposed Project would not modify any drainage patterns or change the rate and amount of surface runoff from the Project site. Long-term erosion control measures would be implemented for exposed surfaces potentially subject to soil erosion in compliance with applicable local, State, and federal permits and regulations. Indirect impacts could also occur from the degradation of riparian habitat due to the introduction and spread of noxious and invasive weeds. This would be particularly applicable to the valley oak riparian forest and woodland habitat associated with IS-1 at the southeast corner of the Survey Area. The introduction and spread of noxious and invasive weeds can result in widespread and long-term indirect impacts by outcompeting and displacing native vegetation and modifying hydrological conditions and soil chemistry.

As described in **Section 5.10 (Hydrology and Water Quality)**, erosion and hazardous materials control measures (including obtaining a NPDES permit and implementing a SWPPP) would be required throughout construction/demolition to minimize potential impacts. The implementation of MM BIO-1 and MM BIO-7 would ensure that vehicles and equipment are cleaned prior to entering work areas and that the applicant provides evidence to the CEC that all required permits in compliance with Section 1600 et seq. of the CFGC and Section 401 and 404 of the CWA have been obtained. Implementation of these measures would reduce impacts to less than significant.

Operation

Less Than Significant. Because operations would not include any ground-disturbing activities, direct impacts to features meeting the requirements discussed under Construction/Demolition activities above, no direct impacts would occur.

Indirect impacts could include the degradation of adjacent habitats from long-term alterations to hydrology and the introduction and spread of invasive and noxious weeds. As described in **Section 5.10 (Hydrology and Water Quality)**, the proposed Project would not modify any drainage patterns or change the rate and amount of surface runoff. Erosion control measures would be implemented during operations along exposed surfaces potentially subject to soil erosion and runoff in compliance with applicable local, State, and federal permits. Operational activities would be limited to existing access roads and facilities and would therefore minimize the risk of introducing noxious and invasive weeds. Therefore, indirect impacts would be considered less than significant.

d. Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of wildlife nursery sites?

Construction/Demolition and Operation

No Impact. There are no known established wildlife migratory corridors or nursery sites that would be directly impacted during construction/demolition and operation of the proposed Project. The Project site is not located within any Essential Habitat Connectivity Areas or Natural Landscape Blocks as identified in the California Essential Habitat Connectivity Project, or within any Important Bird Areas identified by the National Audubon Society (Caltrans and CDFW 2010; NAS 2023).

The Project site is isolated from connectivity to contiguous blocks of habitat for common and special-status species. Construction/demolition activities may temporarily impede wildlife movement in the immediate area; however, existing barriers, including roads, fencing, rural residential properties, and infrastructure (i.e., Mendocino Substation) currently limit movement through the Project site and surrounding areas. Therefore, impacts would be less than significant.

e. Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Construction/Demolition and Operation

Less Than Significant with Mitigation Incorporated. The Mendocino County General Plan includes policies and action items to protect and preserve the County's natural habitats and wildlife (Mendocino County 2009). Compliance with these policies and action items would be required prior to the County issuance of any construction permits and through-out the duration of construction/demolition and operation activities. This would include protecting stream corridors, riparian habitat, wetlands, and oak woodlands (Policies RM-1, RM-24, and RM-29), preventing habitat fragmentation (RM-25), conserving sensitive habitats (RM-27), and protecting special-status species (RM-28).

County General Plan Policies RM-28 and RM-29 apply to all public or private discretionary projects, requiring the avoidance of or mitigation for impacts to special-status species and their habitats and wetlands. According to the County, the proposed Project is not a discretionary project and is consistent with existing zoning and General Plan designations (Mendocino County, 2022). With implementation of mitigation measures BIO-1 through BIO-8, the proposed Project would be consistent with RM-28 or RM-29 for discretionary projects.

The construction of Power Block 2 is anticipated to require the removal of up to four isolated trees located within the grassland. The County does not have a tree protection or preservation ordinance beyond the Coastal Zone areas of Mendocino County. Therefore, the removal of individual isolated trees within the grassland would not conflict with County ordinances.

As described in CEQA Impact Criteria a through d, the proposed Project would be consistent with the County of Mendocino General Plan through the implementation of MM BIO-1 through MM BIO-7 which would require worker training, preconstruction surveys

for special-status species and nesting birds, biological monitoring, installation of wildlife exclusion fencing, and measures to protect potential jurisdictional waters and oak woodlands. With the implementation of these measures, impacts would be reduced to less than significant.

f. Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Communities Conservation Plan, or other approved local, regional, or state habitat conservation plan?

Construction/Demolition and Operation

No Impact. The Project site is not located within the boundaries of any Habitat Conservation Plan or Natural Communities Conservation Plan, including those listed in Section 4.4 Biological Resources of the Mendocino County General Plan (Mendocino County 2009). Therefore, there would be no impacts.

5.4.3 Mitigation Measures

MM BIO-1: Implement Worker Environmental Awareness Program. A Worker Environmental Awareness Program (WEAP) biological resources module will be conducted for onsite construction/demolition personnel prior to the start of construction/demolition activities. The module will describe key personnel (i.e., Qualified Lead Biologist, Qualified Biological Monitor) roles and responsibilities. The module will explain the measures developed to prevent impacts on special-status species, including nesting birds. The module will also include a description of special-status species and their habitat needs, as well as an explanation of the status of these species and their protection under the Federal Endangered Species Act, California Endangered Species Act, and other statutes. A brochure will be provided with color photos of sensitive species, as well as a discussion of any protective measures. A copy of the program and brochure shall be provided for review and approval to the CEC at least 60 days prior to the start of construction.

The WEAP shall be designed to assure that construction workers are aware of the obligation to protect and preserve biological resources.

The WEAP Program shall also include the following measures to reduce impacts to biological resources:

- Delineation of Project Work Limits: Prior to any ground-disturbing activities Project work limits, including staging and parking areas shall be clearly delineated by staking, flagging, or other clearly identifiable materials.
- Parking: Vehicles and equipment shall be parked on pavement, existing roads, and previously disturbed or developed areas, or work areas as identified in this document.

- Work Areas, Staging Areas: Work, staging, vehicle parking, and equipment parking areas shall be contained within the clearly delineated areas as identified in this document.
- Speed Limit: A maximum speed limit of 10 miles per hour shall be enforced on any unpaved roads or work areas within the Project site. Signage indicating the 10 miles per hour speed limit shall be installed at all ingress points and at locations within the Project site.
- Refueling: No vehicles or equipment shall be refueled within 100 feet of an aquatic feature unless a bermed and lined refueling area is constructed.
- Soil Bonding Agents: Any soil bonding and weighting agents used for dust suppression on unpaved surfaces shall be non-toxic to plants and wildlife.
- Water Sources: All potable and non-potable water sources, such as water buffaloes and water truck tanks, shall be covered or otherwise secured to prevent animals (including birds) from entering.
- Litter and Trash Management: Food scraps, wrappers, food containers, cans, bottles, and other trash from the Project site shall be deposited into closed trash containers. Trash containers shall be removed from the project work areas at the end of each working day unless located in an existing substation, potential staging area, or the switching station site.
- Wildlife Entrapment: Project-related excavations shall be secured to prevent wildlife entry and entrapment. Holes and trenches shall be backfilled, securely covered, or fenced. Excavations that cannot be fully secured shall incorporate appropriate wildlife escape ramps at a slope of no more than a 3:1 ratio, or other means to allow trapped animals to escape. All pipes or other construction materials or supplies will be covered or capped in storage or laydown areas. No pipes or tubing will be left open either temporarily or permanently, except during use or installation. Any pipes, culverts, or other hollow materials will be inspected for wildlife before it is moved, buried, or capped. If an animal is entrapped, a qualified biological monitor shall be notified immediately to remove the animal. If the biological monitor cannot safely remove the animal, local animal control shall be contacted to obtain assistance as soon as possible.
- Erosion Control Materials: Erosion control materials shall be certified weed-free and not contain plastic netting. Plastic netting could entangle wildlife, resulting in injury or death.
- Vehicle and Equipment Cleaning: All vehicles and equipment will be cleaned to remove any weed seeds or plant parts prior to arriving

onsite. Vehicles that contain mud or plant debris will be prohibited from entering work areas and will be sent offsite for cleaning. A log detailing records of vehicle and equipment washing will be kept and maintained onsite by the construction site manager or foreman.

- Pets and Firearms: No pets or firearms shall be permitted at the project site.
- Injured Wildlife: Any injured wildlife observed on the Project site shall be immediately reported to the qualified biologist. The qualified biologist shall be trained in the safe and proper handling and transport of injured wildlife. The qualified biologist shall be available to capture and transport injured wildlife to a local wildlife rehabilitation center or veterinarian as needed. Any injured special-status wildlife species found within or near the Project site shall be reported to CDFW and/or USFWS within one workday.
- Dead Wildlife: Dead animals of non-special-status species found within the Project site shall be reported to the appropriate local animal control agency within 24 hours. A qualified biological monitor shall safely move the carcass out of the road or work area as needed. Dead animals of special-status species found in the Project site shall be reported to CDFW and/or USFWS, and the CEC within one workday and the carcass shall be handled as directed by the regulatory authority. If any contractor or employee inadvertently kills or injures wildlife, or finds one either dead, injured, or entrapped, the contractor shall immediately report the incident to the Environmental Inspector(s) or qualified lead biologist identified in the WEAP. The representative shall contact the USFWS (for federally listed species and migratory birds), CDFW (for all wildlife) and/or the local animal control agency, and the CEC, as appropriate. A biological monitor shall safely move the carcass out of the road or work area if needed and dispose of the animal as directed by the agency. If an animal is entrapped, a biological monitor shall free the animal if feasible, work with construction crews to free it in compliance with safety requirements, or work with animal control, USFWS, or CDFW, and the CEC to resolve the situation.

MM BIO-2: **Conduct Preconstruction Surveys for Special-Status Wildlife**. Not later than seven days prior to start of project construction or demolition activities, a qualified biologist shall conduct surveys for special-status wildlife. The names and credentials of the qualified biologist shall be submitted to the CEC no less than 14 days prior to the surveys for review and approval. Surveys shall include the Project site and a 250-foot buffer where legal access is available. Surveys shall focus on terrestrial species and should include inspections of potential microhabitats where smaller species could occur. Any special status wildlife found within the Project site during surveys shall be allowed to leave on its own volition prior to

the onset of construction. If species of special concern are found within the Project site during surveys and will not leave on its own volition, the species will be relocated to the nearest suitable habitat outside of the Project site. Species of special concern will only be handled by qualified personnel as authorized by CDFW and/or USFWS under an issued state scientific collecting permit (SCP), memorandum of understanding (MOU), or Lake and Streambed Alteration Agreement. Impacts to federally or state-listed species or state-listing candidate species are not authorized. If any State or federally listed, candidate, or proposed species are detected work will be stopped and the applicant shall notify the CEC, CDFW, and or USFWS within 24-hours for further direction.

If present, occupied burrows or denning sites for ringtail, fisher, or American badger that are identified during surveys shall be flagged and vegetation removal or grading activities shall be avoided within 100 feet of the occupied den. CEC shall be notified within 24 hours of any occupied burrows or dens. Natal dens shall be avoided during the whelping/pup rearing season for ringtail (March 1 through June 30), fisher (February 15 through June 30), and American badger (February 15 through July 1) and a minimum 250-foot avoidance buffer established. The avoidance buffer may be adjusted following coordination with the CEC provided the buffer reductions would not result in adverse impacts to the species. Any inactive burrow or cavity that could potentially support American badger identified within the Project site shall be excavated by hand or mechanized equipment under the direct supervision of a qualified biologist and backfilled to prevent use or reuse.

Within 14 days of completion of the surveys, CEC shall be provided with a report describing the findings, including the date, time, and duration of the surveys; identity of the surveyor(s); a list of all common and special-status species observed; locations of any special-status species identified, including any established avoidance buffers; and any actions taken at the direction of CEC, CDFW, and/or USFWS.

MM BIO-3: Conduct Biological Monitoring and Reporting. A qualified biologist and a qualified biological monitor shall be retained to oversee Project activities and to ensure compliance with biological resource mitigation measures and permit conditions.

Resumes of the Biological Monitoring Team shall be submitted to the CEC for approval no less than 14 days prior to the initiation of initial vegetation removal and/or ground-disturbing activities.

The minimum qualifications for those positions are:

- Biologist Qualifications
    - Bachelor's degree in biological sciences, zoology, botany, ecology, or a closely related field

  - Three years of experience in field biology or current certification of a nationally recognized biological society, such as The Ecological Society of America or The Wildlife Society
  - Demonstrated experience with species found in or near the Project area, including habitat, life history, ecology, identification, and implementation of conservation measures
  - Has conducted field surveys for relevant species and is familiar with survey protocols
  - Is knowledgeable of state and federal laws regarding protection of sensitive species

- Biological Monitor Qualifications
  - A resume demonstrating that the proposed Biological Monitor has the appropriate education and experience in biological resources and resource management activities to accomplish the assigned biological resource tasks
  - Is able to recognize species that may be present in the Project area and is familiar with species habitats and behavior

During all initial vegetation removal and ground-disturbing activities, a qualified biological monitor shall be onsite daily to ensure compliance with Project mitigation measures and permit conditions. Upon completion of initial vegetation removal and ground-disturbing activities, the qualified biological monitor shall inspect the Project site at least once weekly until construction activities are completed.

The responsibilities of the qualified biologist shall include, but are not limited to, the following:

- Serving as the primary point of contact for the CEC and regulatory agencies regarding biological resources mitigation and compliance.
- Preparing, conducting and/or overseeing WEAP training (MM BIO-1).
- Overseeing surveys for special-status species and ensuring that reporting requirements and timelines are met.
- Supervising the qualified biological monitor.
- Ensuring that proper biological monitoring coverage is maintained during all required Project activities.
- Monitoring compliance with any project-related applicable jurisdictional water permit(s) (MM BIO-7).
- Immediately notifying the CEC (and no later than the following morning of the incident, or Monday morning in case of a weekend) in writing of dead or injured special-status species or any non-compliance with

biological resource mitigation measures (BIO-1 through BIO-8), including applicable project-related jurisdictional water permit(s) (BIO-7), and any required special-status species handling permits (BIO-2). Also notify the CEC of the circumstances and actions being taken to resolve the problem, as directed by the applicable mitigation measure or in consultation with CEC and CDFW and/or USFWS.

- Conducting or overseeing weekly site inspections upon completion of initial vegetation removal and ground-disturbing activities, and communicating any remedial actions needed (i.e., trash, fencing repairs, etc.) to maintain compliance with biological resource mitigation measures (BIO-1 through BIO-8), including applicable Project-related jurisdictional water permit(s) (BIO-7), and any required special-status species handling permits (BIO-2).
- Providing written Weekly and Monthly Biological Monitoring Reports to the CEC that shall, at a minimum, include a summary of Project activities, biological surveys and monitoring performed during the reporting period, special-status species observed, new active nest observations and active nest updates, any approved adjustments to nesting bird buffers, and non-compliance issues and remedial actions taken (i.e., loose trash, fencing repairs, and placement of sensitive species buffers, etc., as outlined in MM BIO-1, MM BIO-5, MM BIO-4 and MM BIO-6, respectively).

The responsibilities of the qualified biological monitor shall include, but are not limited to, the following:

- During monitoring duties, performing clearance surveys (sweeps) for sensitive biological resources that may be located within or adjacent to work areas prior to crews initiating work activities. If sensitive resources are observed, the biological monitor shall take appropriate actions as defined in biological resource mitigation measures BIO-1 through BIO-8, including applicable project-related jurisdictional water permit(s) (BIO-7), and any required special-status species handling permits (BIO-2). Work activities shall not commence at any work area until the clearance survey has been completed and the biological monitor communicates to the contractor that work may begin.
- Conducting compliance monitoring during Project activities consistent with the timeline identified above.
- Ensuring that work activities are contained within approved disturbance area limits at all times.
- Clearly delineating sensitive biological resources with staking, flagging, or signage, or other appropriate materials that are readily visible and durable. The biological monitors will inform work crews of these areas

and the requirements for avoidance and will inspect these areas at appropriate intervals for compliance with mitigation measures and permit conditions.

- Routinely inspecting wildlife exclusionary fencing to ensure that it remains intact and functional. Any needs for fencing repairs shall be immediately communicated to the responsible party and repairs shall be completed in a timely manner, generally within one workday.
- Routinely inspecting work areas where animals may have become trapped or entangled, including equipment covered with bird deterrent netting (if any) and release any trapped or entangled animals. Inspections should also include high traffic areas, such as access roads and staging areas, to locate animals that are potentially in harm's way and relocate them, if necessary. Handling, relocation, release from entrapment, or other interactions with wildlife shall only occur if authorized by CDFW and/or USFWS and performed consistent with species handling permits outlined in MM BIO-2. The biological monitor shall use handling measures that are safe, practicable, and consistent with mitigation measures and permit conditions to relocate (actively or passively) wildlife out of harm's way. If safety or other considerations prevent the biological monitor from aiding trapped or entangled animals or animals in harm's way, the Applicant or its designee shall consult with CDFW and/or USFWS, a wildlife rehabilitator, or other appropriate party to obtain aid for the animal, consistent with applicable mitigation measures and permit conditions. If consultation with CDFW and/or USFWS is required, the CEC shall be notified within one day of the consultation.
- Maintaining the authority and responsibility to halt any Project activities that are not in compliance with applicable mitigation measures or permit conditions, or will have an unauthorized adverse effect on biological resources.
- At the end of each monitoring day, the biological monitor shall verify that all excavations, open tanks, trenches, pits, or similar wildlife entrapment hazards have been adequately covered or have sufficient escape ramps installed to prevent wildlife entrapment and communicate with work crews to ensure covers or ramps are installed and functioning properly.
- Documenting monitoring activities on each day when monitoring occurs, as performed to include location and description of activities monitored. The biological monitor shall prepare and submit all special-status observations to the CNDDB within 30 days of the observation.

MM BIO-4: Conduct Protocol Surveys for Western Bumble Bee and Implement Avoidance Measures. If Project activities are scheduled to begin or are ongoing during the colony active period (April 1 through September

30), surveys for western bumble bee shall be conducted during the colony active period by a qualified entomologist(s) or biologist(s) familiar with the life history and ecology of western bumble bee.

The names and credentials of the qualified entomologist(s) shall be submitted to the CEC and CDFW no less than 14 days prior to the surveys for review and approval.

Surveys will cover all Project work areas, including staging and parking areas, plus a 50-foot buffer. Surveys will follow non-invasive protocols established by CDFW in "*Survey Considerations for California Endangered Species Act (CESA) Candidate Bumble Bee Species*" or more recent CDFW-approved methods if they become available prior to project implementation (CDFW 2023d).

Survey methods should include a minimum of three on-site surveys spaced two to four weeks apart and should be developed to detect foraging bumble bees and potential nesting sites. If handling is required for identification, it will only be conducted by a person possessing a 2081(a) Memorandum of Understanding (MOU) from CDFW. Otherwise, bumble bees observed during the surveys will be photographed in the open for identification.

If any western bumble bees are detected during surveys, the qualified biologist shall notify CDFW and CEC within 24 hours. If western bumble bee(s) is observed foraging within the Project site, work activities at the location shall pause until the bee moves outside the Project site. If an active western bumble bee nest is identified during the surveys, a 50-foot avoidance buffer will be clearly delineated with staking, flagging, and/or signage and Project activities will be prohibited from the area until it is determined that the nest is no longer active. Impacts to the nest will not occur unless authorized by a 2081(b) Incidental Take Permit issues by CDFW.

Survey results will be submitted to CEC and CDFW prior to the initiation of ground-disturbing activities and will include the following:

- Names of surveyors and, if applicable, names of biologist(s) determining identification.
- Location (latitude and longitude) and extent of surveyed areas with maps.
- Description of conditions during each survey: date, time, temperature, wind speed.
- Detailed habitat assessment including percent cover of floral resources and potential nesting and overwintering habitat.

- Number of surveyors per acre, number of acres surveyed, amount of time of focused surveys.
- List of species observed.
- Foraging habitat surveys: name (at least to genus) of host plants observed and whether bees were observed on them.
- Nesting habitat surveys: type of nest/structure surveyed and if bees were found in them, number of nests found in Project site, photo log of suitable habitat and plants.
- Photo vouchers of bumble bees for identification.
- Confirmation that photo vouchers were submitted and candidate bumble bees were identified, if applicable.

Survey data shall also be submitted to the CNDDB and shall include specifying the type of observation (individual bee/nest), type of vegetation cover, slope, aspect, GPS location, distance to foraging location (if known), and other relevant conditions noted. Negative survey results shall also be reported. Positive observations shall not be documented on publicly available databases.

MM BIO-5: Install and Maintain Wildlife Exclusion Fencing. Silt fencing shall be installed around the perimeter of the work areas as identified in this document to prevent terrestrial wildlife such as Coast Range newt and western pond turtle from entering.

The qualified biological monitor will routinely inspect the fence on each day when monitoring occurs to ensure it remains in functioning condition and that no wildlife are walking along the silt fence line.

If wildlife are observed along the silt fence line, the qualified biological monitor will capture and relocate the animal to suitable habitat away from the fenced work areas. Handling of any special-status wildlife species will only be performed by a qualified biologist with the appropriate permits from the USFWS and CDFW.

MM BIO-6: Conduct Preconstruction Surveys for Nesting Birds and Raptors and Implement Avoidance Measures. If Project activities must occur during the breeding season (February 1 through August 31), a preconstruction survey for nesting birds and raptors shall be conducted by a qualified ornithologist(s) no more than three days prior to initiating project activities.

The names and credentials of the qualified ornithologist(s) shall be submitted to the CEC no less than 14 days prior to the surveys for review and approval.

Surveys shall include the entire Project site and all work areas, including staging and parking areas, plus a 500-foot buffer where legal access is available.

Surveys will be repeated if project activities are suspended or delayed for more than seven days during the breeding season.

The surveys shall focus on all areas within the Project site and buffer area that could potentially support nesting birds and raptors, including vegetation (e.g., trees, shrubs, grasslands), existing infrastructure, and equipment and materials.

If an active nest is detected, a 250-foot (500-foot for raptors) avoidance buffer shall be established and clearly delineated by staking, flagging, and/or signage. Avoidance buffers may be reduced only with the approval of the CEC in consultation with CDFW.

Any active nests and avoidance buffers will be inspected weekly by the qualified ornithologist(s) until the nest is determined to be inactive. If a nest is discovered during construction activities, all work in the area will be immediately halted and/or relocated and an avoidance buffer (as defined above) shall be implemented.

The qualified ornithologist(s) shall submit a copy of the preconstruction nest survey report(s) indicating the results of the survey and any designated buffer zones to the CEC prior to the start of construction activities or the removal of trees or other vegetation. The report(s) shall contain maps showing the location of all nests, species nesting, status of the nest (e.g., incubation of eggs, feeding of young, near fledging), and the buffer size around each nest (including reasoning behind any alterations to the initial buffer size). The report will be provided within 10 days of completing a preconstruction nest survey.

MM BIO-7: **Provide Evidence of Applicable Jurisdictional Waters Permits**. The Project shall comply with all applicable laws and regulations regarding requirements of the California Department of Fish and Wildlife, United States Army Corps of Engineers, and the Regional Water Quality Control Board for aspects of the Project, if any, which fall within those agencies' respective purview, including obtaining any permits required for the construction of the power block access roads, as well as compliance with any additional conditions attached to any required permits and monitoring requirements (if any). Copies of all regulatory waters permits shall be submitted to the CEC prior to ground-disturbing activities in areas supporting jurisdictional waters.

MM BIO-8: **Avoid and Minimize Impacts to Oak Woodlands**. The Project will avoid ground disturbance within the dripline canopy of adjacent oak trees to Power Block 1. If ground-disturbance within the dripline/root zone of

adjacent oak trees cannot be avoided roots greater than one inch in diameter that will be damaged, broken or severed will be pruned. Roots will be cut smoothly to the trunk side of ground disturbance and draped immediately with untreated burlap. The burlap shall be soaked nightly and left in place until the trench is backfilled to original grade. Pruning and sealing of exposed roots shall be accomplished under the supervision of a qualified arborist to minimize root deterioration beyond the soil line.

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5.5 Cultural and Tribal Cultural Resources

This section describes the environmental setting and regulatory background and discusses the impacts associated with the construction, operation, and demolition of the proposed Project with respect to cultural and tribal cultural resources. The information presented below is from Aspen Environmental Group (2023a; Appendix C) unless otherwise referenced.

Cultural and Tribal Cultural Resources	**Potentially Significant Impact**	**Less Than Significant with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
a. Would the project cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	☐	☒	☐	☐
b. Would the project cause a substantial adverse change in the significance of a unique archaeological resource pursuant to §15064.5?	☐	☒	☐	☐
c. Would the project disturb any human remains, including those interred outside of dedicated cemeteries?	☐	☒	☐	☐
d. 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:	☐	☒	☐	☐
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 Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☒	☐	☐

Environmental checklist established by CEQA Guidelines, Appendix G, Cultural Resources, and Tribal Cultural Resources.

5.5.1 Environmental Setting

This section assesses the potential impacts of the proposed Project on cultural and tribal cultural resources. The section considers four broad classes of cultural resources: prehistoric, ethnographic, historic-period, and tribal cultural resources. The next four paragraphs briefly describe these classes of resources along with the definitions of Project area and Project site. Afterward, the Cultural and Tribal Cultural Resources section presents the environmental setting pertinent to these resources. The rest of this section covers:

- *Prehistoric, ethnographic, and historic contexts* - generally describes who lived in the project vicinity, the timing of their occupation, and what uses they made of the area
- *Methods of analysis* - establishes what kinds of physical traces (cultural and tribal cultural resources) past peoples might have left in the project site, given the project vicinity's prehistoric, ethnographic, and historic contexts
- *Results* ensuing from those methods - identifies the specific resources present or expectable in the Project site
- *Regulatory setting* - presents the criteria for identifying *significant* cultural and tribal cultural resources under the California Environmental Quality Act (CEQA) and other applicable authorities, as well as criteria for identifying significant impacts on these resources
- *Impacts* - identifies any impacts on cultural and tribal cultural resources, along with the severity of any such impacts
- *Mitigation measures* - proposes measures to avoid, minimize, rectify, reduce or eliminate, or compensate for identified impacts

Prehistoric archaeological resources are those materials relating to Native American occupation and use of a particular environment. These resources may include sites and deposits, structures, artifacts, rock art, trails, and other traces of Native American activity. In California, the prehistoric period began more than 12,000 years ago and extended through the eighteenth century until A.D. 1769, when Europeans first settled in California.

Ethnographic resources are those materials important to the heritage of a particular ethnic or cultural group, such as Native Americans or African, European, or Asian immigrants. They may include traditional resource collecting areas, ceremonial sites, topographic features, value-imbued landscapes, cemeteries, shrines, or neighborhoods and structures. Ethnographic resources are variations of natural resources and standard cultural resource types. They are subsistence and ceremonial locales and sites, structures, objects, and rural and urban landscapes assigned cultural significance by traditional users. The decision to call resources "ethnographic" depends on whether associated peoples perceive them as traditionally meaningful to their identity as a group and the survival of their lifeways.

Historic-period resources are those materials, archaeological and architectural, usually but not necessarily associated with Euro-American exploration and settlement of an area and the beginning of a written historical record. They may include archaeological deposits, sites, structures, trail and road corridors, artifacts, or other evidence of historic human activity. Under federal and state requirements, historic period cultural resources must be 50 years or older to be considered of potential historic importance. A resource less than 50 years of age may be historically significant if the resource is of exceptional importance. The Office of Historic Preservation (OHP 1995, page 2) endorses recording and evaluating resources 45 years or older to accommodate a five-year lag in the planning process.

Tribal cultural resources are a category of historical resources introduced into CEQA by Assembly Bill 52 (Statutes 2014). Tribal cultural resources are resources that are any of the following: sites, features, places, cultural landscapes, sacred places, or objects that are included in or determined eligible to the California Register of Historical Resources (CRHR) or are included on a local register of historical resources as defined in Public Resources Code, section 5020.1(k). Tribal cultural resources can be prehistoric, ethnographic, or historic.

The analysis of potential impacts of the Project on cultural and tribal cultural resources includes a detailed description of the Project site and surrounding vicinity, collectively referred to as the study area, or the Project area of analysis (PAA). The Project study area refers to the Project Site plus a one parcel band around it and is primarily used when assessing built environment resources.

Prehistoric Context

Paleoindian Period (10,000 to 6,000 cal. BCE [Before Current Era])

The earliest known and documented period of occupation of the North Coast is the Paleoindian Period. This period reflects the hypothesized initial entry of people into North America following migration patterns of herds that were hunted using fluted points. Material and assemblages from this period are reflected from sites such as the Borax Lake site (CA-LAK-36) excavated in 1948 by M.R. Harrington, and possibly the Mostin site which are both located in the Clear Lake basin, about 46 miles southeast of the Project. Through obsidian hydration testing the site may have been initially in use as early as 10,000 BCE and as late as 8,500 BCE. These assemblages appear to contain ovoid flake tools, crescents, thin bladelet flakes, and wide stemmed points where some are fluted points, and square bases.

Lower Archaic Period (6,000 to 3,000 cal. BCE)

This period is known as the Mendocino and Borax Lake aspects of the Borax Lake Pattern. These sites are marked by the presence of wide-stem projectile points as well as manos and millingstones. Excavations carried out by Meighan in 1955 at site CA-MEN-500 uncovered an assemblage of "…large lanceolate, concave base, and side notched

projectile points and the co-occurrence of bowl mortars and pestles with millingstones and manos", (Moratto 1984, page 521).

Middle Archaic Period (3,000 to 1,000 cal. BCE)

This period is known as the Mendocino Pattern which continues into the Upper Archaic. Assemblages that are throughout the region reflect evidence of occupation in the inland areas of Mendocino County. These assemblages include split level *Olivella* beads, large expanding-stem, concave base, lanceolate points, a biface network industry, and bowl mortars and pestles. The diverse assemblage represents a broadened subsistence base.

Upper Archaic Period (1,000 cal. BCE to 500 cal. CE [Current Era])

To the north, the Mendocino Pattern continues where exchange increases in material such as obsidian and contracting stem and lanceolate points, whereas the Berkeley Pattern adaptations are occurring in the southern North Coast Ranges. The Berkeley Pattern can be identified by a strong emphasis on exclusive use of pestles and mortars in the exploitation of acorns, long distance exchange, increased grave wealth, and complex socio-political institutions. There is evidence during this period of the first intensive use of shellfish. Artifact assemblages become more elaborate containing a highly developed bone tool industry, leaf and stemmed projectile points, evidence of basketry in the form of clay impressions, and a relatively high frequency of pestles and mortars. Due to the strong differences in assemblages from the coast and inland it is believed this is evidence of a northward displacement of proto-Yukian populations by Pomo speakers.

Emergent Period (500 cal. CE to 1850 cal. CE)

Two major cultural traditions are represented during this period, the Augustine Pattern to the south and the Gunther Pattern to the north. This period reflects through the assemblages a diversification of subsistence, seasonal population movements, increasing populations, more complex socio-political exchange systems, and a heavy reliance on acorns. This period also sees the adoption of two types of bow and arrows. First was the self-bow that is associated with Mendocino Corner-notched points and medium sized Mendocino Side-notched points. The second type of bow and arrow that became widespread between 900 CE and 1000 CE was the sinew backed bow. Associated with this type of bow are smaller Rattlesnake side-notched points and Gunther barbed points (Moratto 1984). Obsidian is more commonly found in large quantities during this period at many Mendocino sites.

Ethnographic Context

The Pomo have inhabited the Russian River valley since time immemorial, occupying the area between the Sacramento Valley and the Pacific Ocean. They are comprised of seven distinct ethnolinguistic cultures designated simply by cardinal, and intercardinal directions, and are further distinguishable by their village-communities. The Northern Pomo inhabited the area surrounding the Project with their territory extending from the south in Ukiah north to Willits, and from the Pacific Ocean east to the western shore of Clear Lake. The Northern Pomo had coastal temporary camps and food collecting areas, but

generally lived in the interior country. Following the linguistic patterns geographically, it is suggested the Pomo cultures expanded west from their ancestral homeland in the Clear Lake region.

The Redwood Valley is home to the Kacha of the Northern Pomo. Their lands and region of traditional travel route is at the "…extreme head of the Russian River," (Kniffen 1939, page 373). The main village was in, or near, the center of the valley on a river terrace. Their nearest neighbors with whom they interacted most were the Masut, another Northern Pomo tribelet, who occupied the upper Russian River near Redwood Valley, along the Forsythe and Walkers creeks. Both groups would often come together and share space in each other's territories for fishing and gathering. Traditional villages included Bitadewak, Kobida, and Shabakana.

Due to resources being particularly abundant within the region, the Pomo "…population densities tended to be high, and the overall territory claimed by the tribelet might be relatively compact," (Simmons, 1999, page 58). The Pomo ranged in population from 125 to 1,500 living within each triblet, with an estimated 72 tribelets in total, and inhabiting a territory averaging 100 square miles. These tribelets consisted of a central village where a headman or chief lived, and it served as the political and religious center for the smaller surrounding settlements. The village of Kacha was a smaller tribelet estimated to have a population of 125 individuals. The headman was a leader, advisor, and figurehead holding the responsibilities of maintaining order in the community, brokering communication with other groups, as well as overseeing ceremonies and celebrations. Pomo dwellings centered around a ceremonial assembly house where ceremonial dances and rituals took place. The structure was described as a large round structure sunk into the ground with a conical roof. Construction materials included brome grass of wild rye and lined with bark so that they were wind and watertight. Smaller domestic dwellings mimicked this same form and construction as the ceremonial house. Inside the domestic dwellings were storage granaries and pits.

Subsistence practice amongst the Pomo were seasonally dependent. This led to seasonal occupation and the exploitation of varying terrain. In the summer months the Pomo traveled to the coast to collect shellfish and hunt for other sea creatures. The rest of the year they resided in villages along major perennial waterways where plants and wildlife were abundant. Plants, nuts, and seeds were gathered, small game was hunted, while eel and freshwater fish were exploited.

The Pomo traditional practice of handling remains of departed members of the village was through cremation. Following the cremation, purification ceremonies were then performed to ward off the spirit of the deceased. Material culture of the Pomo included lithic tools such as projectile points, ornamental carved stones, and knives made from chert and obsidian. Obsidian was sourced from the Clear Lake area, specifically Borax Lake and Mount Konocti. Ornaments and decorative items were created from an array of shells such as abalone, mussel, and clams. It is speculated that clamshell disk beads may have been a form of currency due to their dispersion through north and central California. The Pomo then and now are known for their intricate basketry. Locally available materials

were used such as brush, bark, and reeds. Shells and feathers are woven into the basket in intricate designs.

Historic Context

Three major periods in California history define overarching periods of territorial control. These periods are commonly defined as the Spanish period from 1769 to 1822, the Mexican period spanning 1822 to 1848, and the American period (1848-present). These periods are loosely defined with many cross-over historical events. The following data incorporates Mendocino County as a region but focuses on the study area as a component part of historic Ukiah and Calpella townships in Mendocino County, which are themselves in Redwood Valley and Ukiah Valley.

Spanish Period: Exploration and Missions 1769-1822

The Spanish Period in California is most commonly marked by the establishment of 21 missions constructed between 1769 and 1822, including Mission San Rafael Arcangel, in Marin County 1817, and San Francisco Solano in Sonoma County 1823 located 97 miles south-southeast, and 77 miles southeast of the Project Site, respectively. Mission establishments were not only intended to convert and obtain a workforce out of indigenous peoples, but also to deter Russian encroachment into California. Although, relatively far, the establishment of the Mission San Rafael and San Francisco Solano had devastating consequences for the multiple Pomo cultures with widespread casualties as a result of slave-like conditions at the Missions, and epidemics.

The first regular direct contact between local indigenous populations and Europeans likely occurred when fur-trapping parties of the Russian American Company regularly plied the coast after 1804. In 1811, Russians from the colony at Fort Ross are reported to have been the first Europeans to have contact with the Pomo Indians and become the first semi-permanent Euro-American residents of Ukiah Valley (Analytical Environmental Services 2011, Page 11). This initial contact resulted in the settlement of Santa Rosa and Napa Valley by Mexican settlers to slow Russian encroachments.

The first recorded Hispanic excursion into Mendocino County was Luis Arguello's 1821 expedition. Although the exact route is unknown, he passed south through the upper Russian River Valley with "fifty-five soldiers, accompanied by Father Blas Ordaz and John Gilroy" (Van Bueren 2017, Page 8).

Mexican Period: 1822 to 1848

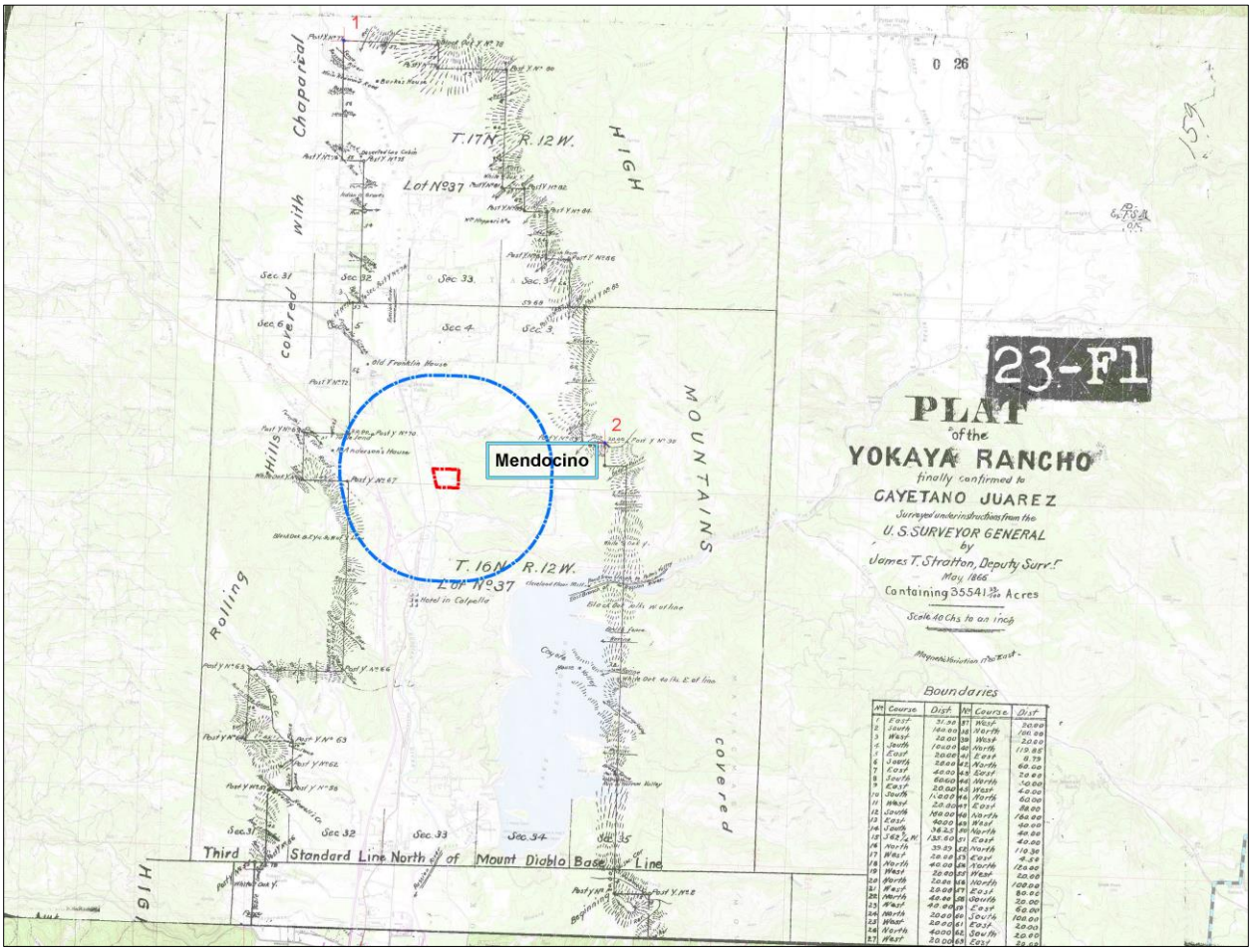
Mexico achieved independence from Spain in 1821 after more than a decade of rebellion and conflict, eventually claiming lands that included the California territory. In 1835—as noted in Carpenter's 1914 History of Mendocino and Lake counties, California—Dr. Vallejo, son of General Vallejo, mentions the fact that in 1835, "Captain Sepulveda Vallejo came up with Spanish troops to what would become Ukiah township to procure Indians to work on adobe houses and forts then being built at Sonoma," and that other subsequent trips were made to "procure children" (Carpenter 1914, Page 70).

The Mexican government secularized the California missions in 1833, quickly changing land ownership patterns across California. During the Mexican Period, vast tracts of land were granted to individuals, including former Mission lands which had reverted to public domain, and vast acreages of other lands. Each grant usually contained both valley and uplands acreage as well as access to a water supply.

The study area is within the boundaries of the Yokaya land grant (Figure 5.5-1) as awarded by Pio Pico to Captain Cayetano Juares on May 24, 1845, and approved by the Departmental Assembly June 3, 1846.

Note: Various histories of Mendocino County also spell the historic Yokaya land grant as "Yokayo," including County of Mendocino official documents. The spelling "Yokaya" is used herein except when quoted.

Figure 5.5-1. Yokaya Land Grant Map



Red polygon demarks Project Site. Blue polygon demarks 1-mile Records Search Buffer.

War between the United States and Mexico broke out in 1846, with American forces subsequently gaining control of Mexican strongholds at Monterey and Los Angeles. Mexico surrendered, the Treaty of Guadalupe Hidalgo was signed in 1848, with Mexico ceding control of California and other areas to the United States. The United States

effectively assumed control of California, thus beginning the American Period. The Gold Rush of 1849 caused a population boom throughout California. The Golden State established statehood in 1850 and the 27 original counties including Mendocino.

American Period: 1848 to Present

The first direct impact that California statehood had influencing the history of the study area was that all Mexican land grants within California quickly fell under review. Confirmation of the Yokaya land grant was rejected by the Board of Land Commissioners on November 7, 1854. This decision was appealed to the District Court of the United States for the Northern District of California, who reversed it on April 17, 1863. An appeal was made to the Supreme Court of the United States, who upheld the decision of the lower court, granting "Yokayo Rancho" to Cayetano Juares. The grant was approximately 35,500 acres in size.

Authorities differ as to the date and name of the first Euro-Americans to permanently settle in what would become Ukiah township or Calpella township including portions of Potter Valley and Redwood Valley. One version is that in 1848, Don Timothy Murphy and James Black sent John Parker to Ukiah valley with horses and cattle. Others assert that Parker was living in the valley as late as, or early as, 1852-53. A different version regarding Calpella township settlement holds that in 1852, Thomas and William Potter, L. Anderson, Al. Strong, Moses C. Briggs, and two "Spaniards" started out on horseback to find the source of the Russian River, finding their way into what is now known as Potter Valley. In the spring of 1853, William Potter and M. C. Briggs took the first wagon into the valley and located permanently on his claim, while the latter put stock on his, and passed back and forth from Sonoma County untill April, 1857, when he took his family there and located permanently. In 1856, Thomas Potter located permanently on his claim, which made Mr. Briggs the third settler in the valley. During 1858, quite a number of families moved in and the valley "settled up very fast" (Palmer 1880, page 443).

The economy of the region surrounding the study area historically centered on animal husbandry involving the raising of cows, sheep, pigs, and turkeys and the agriculture industry including cultivation of hay, wheat, corn, apples, pears, blue plums, Mission grapes, and hops. Viticulture became popular in the region and for export following the development of roads and railroads. The lumber industry also had a regional influence, with the first sawmill built in the county in 1859.

The Northwestern Pacific Railroad extended its line from Cloverdale north to Ukiah in 1889. The railroad promoted the commercial and industrial development of the region. This facilitated the export of local goods such as lumber and agricultural crops including mainly fruit and hops. In 1898, rail construction extended north to Willits through Redwood Valley. Although no longer in use, the historic railroad alignment passed in a north-south direction immediately to the west of the study area.

The first County-maintained road through the study area was East Road (directly west of the Project site), which has been a public highway since 1908, although it existed prior to 1908 before being declared a public highway.

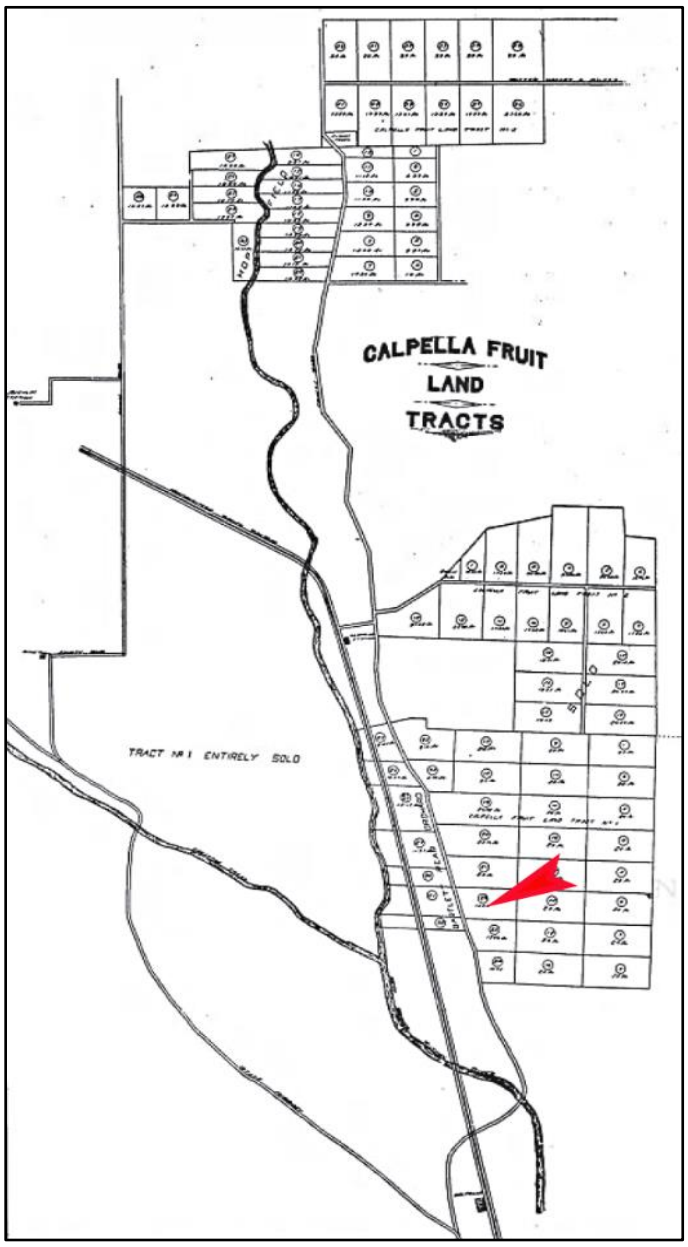
Today, Calpella is a small unincorporated community, a census designated place, and the home of the Mendocino Redwood Company, which is one of the largest landholders of private property in Mendocino County. The Russian River flows north-to-south through Calpella, and Highway 101 passes immediately to the west of Calpella in a north-to-south direction. Redwood Valley, a census designated place, is located to the north of Calpella. On the east side of the Russian River, travel from Calpella northerly to Redwood Valley is along East Road, which cuts through the center of the study area.

The Calpella Tracts

The study area is located within a portion of the Calpella Fruit Land Tract, a subdivision of the Yokaya Rancho, and with the September 8, 1908, *Calpella Fruit Land Tract Subdivision as Part of Lot No. 181 of the Yokayo Rancho, in Mendocino County* (Figure 5.5-2). The first Calpella tracts were established as early as 1877. As recorded in the January 5, 1877, edition of the *Petaluma Weekly Argus*, Edgar M. Barnes sold the "Calpella tracts" to Joel B. Wheaton for $10,000. Several additional sales and transfers took place in the late-Nineteenth Century. As noted in the *Ukiah Daily Journal*, on February 12, 1892, "the Calpella tract has been sold by S and K. Graves et al, to S. T. Dodson. The consideration in the deed is $75,000."

Calpella Tract lands sold quickly and repeatedly, although only three farmsteads with built environment improvements are visible on a 1941 historic aerial within the study area. These three farmsteads are located today at 7100 East Road, 7201 East Road, and 751 Valley View Drive.

Figure 5.5-2. Calpella Fruit Land Tracts Map



Red arrow depicts the Project Site

Construction of Mendocino Substation

Mendocino Substation was built by Pacific Gas and Electric (PG&E) beginning in 1951 and dedicated in June of 1952. To meet increasing demands for electricity in the growing Redwood Empire, PG&E announced construction of various new transmission facilities, including transmission lines and substations, to serve Mendocino, Lake, and Sonoma counties.

The Mendocino Substation was dedicated in early June of 1952, according to the Santa Rosa *Press Democrat*. The *Press Democrat* article notes "The new substation is the terminating point for a new twin circuit 110,000-volt transmission line which in turn is tied into

an inter-connected pool of over 75 generating stations. District manager Mak said demands for service in the Mendocino-Lake area have tripled in the past 5 years."

Methods

The methods employed for the cultural resources analysis include determining PAA; reviewing records and other documents provided by a literature search and other historical sources as needed such as historical aerial photographs, historic maps, and historic newspapers; consultation with California Native American tribes; and historic architectural and archaeological surveys.

Project Area of Analysis

The PAA defines the geographic area in which the proposed Project has the potential to affect cultural or tribal cultural resources. Effects may be immediate, further removed in time, or cumulative. They may be physical, visual, audible, or olfactory in character. The PAA may, or may not, be one uninterrupted expanse. It could include the site of the proposed Project (project site), the routes of requisite transmission lines and water and natural gas pipelines, and other offsite ancillary facilities, in addition to one or several discontiguous areas where the project could arguably affect cultural or tribal cultural resources. The PAA has archaeological, ethnographic, and historic built environment components, as described in the following paragraphs.

The California Energy Commission (CEC) staff defines the archaeological component of the PAA as all areas where the applicant proposes ground disturbance to construct, decommission, and operate the proposed Project. This includes the proposed site grading, construction and installation of the battery energy storage system, staging areas, access roads, perimeter fence, and trenching for electrical conduit lines. The Project description describes estimated excavation depths for the proposed Project elements, such as grading, excavation, and trenching of up to four feet deep. Electrical equipment would be mounted or installed in-place and interconnected to PG&E's electrical distribution system.

For ethnographic resources, the PAA considers sacred sites, tribal cultural resources, traditional cultural properties (places), and larger areas such as ethnographic landscapes that can be vast and encompassing, including view sheds that contribute to the historical significance of such resources. The Native American Heritage Commission (NAHC) assists cultural resources consultants and agency staff in identifying these resources, and consultation with Native Americans and other ethnic or community groups may contribute to defining the PAA. In the case of the proposed Project, the immediate environs consist largely of existing office parks, industrial structures, a channelized creek, and a freeway. Therefore, the ethnographic component of the PAA is treated the same as the archaeological component.

The historic built environment PAA for this project includes buildings and structures within a one parcel band surrounding the project site, referred to as the study area.

Record Search and Literature Review

The literature review for this analysis consisted of a records search at the California Historical Resources Information System (CHRIS), review of the categorical exemption prepared by the applicant's consultant (Meridian 2022), and examination of pertinent literature concerning cultural resources in the northern portion of the Ukiah Valley.

On behalf of CEC, Aspen Environmental Group (Aspen) requested a records search on May 16, 2023, at the Northwest Information Center (NWIC) of the CHRIS. The NWIC is the State of California's official repository of cultural resource records, previous cultural resources studies, and historical information concerning cultural resources for 16 counties, including Mendocino County. The records search area included the project site and a one-mile buffer. In addition to the NWIC's maps of known cultural resources and previous cultural resources studies, the records search included a review of historic maps, aerial photographs and the OHP's Archaeological Determinations of Eligibility.

Aspen also reviewed the National Register of Historic Places (NRHP), California Register of Historical Resources (CRHR), the Office of Historic Preservation Built Environment Resource Directory, Historic Aerials: 1941-Present, Historic USGS Topo Maps: 1920-1975, Historic GLO Plat Maps, County of Mendocino Building Permits and Property Data, County of Mendocino Historic Maps as filed with the Clerk of the Board, Historic Newspapers, Various Histories of Mendocino County, Records Search Data, and Realtor Website Data Available Online for Various Properties.

Tribal Consultation

CEQA requires lead agencies to consult with all California Native American tribes that have traditional and cultural affiliation with the geographic area of a project, and that have previously requested consultation. To invoke an agency's requirement to consult under CEQA, a tribe must first send the lead agency a written request for formal notification of any projects within the geographic area with which they are traditionally and culturally affiliated. (Pub. Resources Code, § 21080.3.1(b).) CEC has not received any requests for formal notification from tribes that have traditional and cultural affiliation with the geographic area of the proposed Project. Therefore, the CEC has no further obligations under CEQA's formal tribal notification or consultation requirements.

However, consistent with the CEC tribal consultation policy (CEC 2021), Aspen, on behalf of CEC, contacted the NAHC on May 17, 2023, to request a search of the Sacred Lands File and a list of California Native American tribes that might be interested in the proposed Project. The NAHC responded on June 13, 2023, and stated the Sacred Lands File search was positive and provided a list of 11 California Native American tribes to contact (Vela 2023), listed below.

- Coyote Valley Band of Pomo Indians
- Guidiville Indian Rancheria
- Hopland Band of Pomo Indians
- Manchester Band of Pomo Indians of the Manchester Rancheria

- Noyo River Indian Community
- Pinoleville Pomo Nation
- Potter Valley Tribe
- Redwood Valley or Little River Band of Pomo Indians
- Robinson Rancheria of Pomo Indians
- Round Valley Reservation/Covelo Indian Community
- Sherwood Valley Rancheria of Pomo

On behalf of CEC, Aspen staff mailed initial consultation letters to these 11 tribes on August 14, 2023 (Aspen Environmental Group 2023b). See the following subsection, "Results," for tribal responses and lead agency follow-up.

Archaeological and Built Environment Survey

On June 27, 2023, an Aspen archaeologist surveyed the following areas for archaeological resources, which corresponds to the staff defined archaeological PAA as the Project site, and proposed linear routes.

Aspen's archaeologist completed an intensive pedestrian survey of the Project site at that time. The survey was completed using 15-meter transects in a north-south direction. Aspen staff examined 100 percent of all exposed ground surface (including rodent disturbances) within the Project site for the presence of historic or prehistoric site indicators. The surveyor used their boot to scrape in areas of low visibility to remove some of the vegetation from the soil surface for a visual inspection.

The historic architectural survey was conducted by Aspen on June 13, 2023, inclusive of the one parcel band around the Project site, the staff defined built environment PAA. The Project site was surveyed on June 27, 2023, along with any remaining built environment features within the PAA. The properties—including buildings and structures—were documented with digital photographs and site records were produced. Additionally, Aspen completed CRHR evaluations.

Typically, to assess the historical significance of a cultural resource, "sufficient time must have passed to obtain a scholarly perspective on the events or individuals associated with the resource." However, the NRHP Criteria for Evaluation also considers properties that have achieved significance within the past 50 years if they are of exceptional importance under Criteria Consideration G. Similarly, resources less than 50 years may be considered for listing in the CRHR if it is demonstrated that sufficient time has passed to understand its historical importance.

Regulatory

Federal

No federal regulations related to cultural and cultural resources apply to the project.

State

California Environmental Quality Act. Various laws apply to the evaluation and treatment of cultural resources. CEQA requires lead agencies to evaluate cultural resources by determining whether they meet several sets of specified criteria that make such resources eligible to the CRHR. Those cultural resources eligible to the CRHR are historical resources. The evaluation then influences the analysis of potential impacts to such historical resources and the mitigation that may be required to reduce any such impacts.

CEQA, and the CEQA Guidelines, define significant cultural resources under two regulatory definitions: historical resources and unique archaeological resources. A historical resource is defined as a "resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources", or "a resource included in a local register of historical resources, as defined in section 5020.1(k) of the Public Resources Code or identified as significant in an historical resource survey meeting the requirements of Section 5024.1(g) of the Public Resources Code," or "any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California, provided the agency's determination is supported by substantial evidence in light of the whole record." (Cal. Code Regs., tit. 14, § 15064.5[a]). Historical resources that are automatically listed in the CRHR include California historical resources listed in or formally determined eligible for the NRHP and California Registered Historical Landmarks from No. 770 onward (Pub. Resources Code, § 5024.1(d)).

Under CEQA, a resource is generally considered historically significant if it meets the criteria for listing in the CRHR. In addition to being at least 50 years old, a resource must meet one or more of the following four criteria (Pub. Resources Code, § 5024.1):

- Criterion 1, is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
- Criterion 2, is associated with the lives of persons important in our past;
- Criterion 3, embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
- Criterion 4, has yielded, or may be likely to yield, information important in prehistory or history.

In addition, historical resources must also possess integrity of location, design, setting, materials, workmanship, feeling, and association (Cal. Code Regs., tit. 14, § 4852(c)).

Even if a resource is not listed or determined to be eligible for listing in the CRHR, CEQA requires the lead agency to make a determination as to whether the resource is a historical resource as defined in Public Resources Code, sections 5020.1(j) or 5024.1.

In addition to historical resources, archaeological artifacts, objects, or sites can meet CEQA's definition of a unique archaeological resource, even if the resource does not qualify as a historical resource (Cal. Code Regs., tit. 14, § 15064.5(c)(3)). Archaeological artifacts, objects, or sites are considered unique archaeological resources if it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that the resource meets any of the following criteria:

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

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

3. Is directly associated with a scientifically recognized important prehistoric or historic event or person. (Pub. Resources Code, § 21083.2[g]).

To determine whether a proposed Project may have a significant effect on the environment, the project's potential to cause a substantial adverse change in the significance of historical or unique archaeological resources was analyzed. The magnitude of an impact depends on:

- The affected historical resource(s);
- The specific historic significances of any potentially impacted historical resource(s);
- How the historical resource(s) significance is manifested physically and perceptually;
- Appraisals of those aspects of any historical resource's integrity that figure importantly in the manifestation of the resource's historical significance; and
- How much the impact will change historical resource integrity appraisals.

Title 14, California Code of Regulations, section 15064.5(b) defines a "substantial adverse change" as the "physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired."

California Native American Tribes, Lead Agency Tribal Consultation Responsibilities, and Tribal Cultural Resources

CEQA provides definitions for California Native American tribes, lead agency responsibilities to consult with California Native American tribes, and tribal cultural resources. A "California Native American tribe" is a "Native American tribe located in California that is on the contact list maintained by the Native American Heritage Commission (NAHC) for the purposes of Chapter 905 of the Statutes of 2004" (Pub. Resources Code, § 21073). Lead agencies implementing CEQA are responsible for consultation with California Native American tribes about tribal cultural resources within specific timeframes, observant of tribal confidentiality, and if tribal cultural resources could be impacted by a CEQA project, are to exhaust the consultation to points of agreement or termination.

Tribal cultural resources are either of the following:

1. Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:
    a. Included or determined to be eligible for inclusion in the CRHR.
    b. Included in a local register of historical resources as defined in the Public Resources Code, section 5020.1(k).
2. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in the Public Resources Code, section 5024.1(c). In applying these criteria, the lead agency shall consider the significance of the resource to a California Native American tribe. (Pub. Resources Code, § 21074[(a]).

A cultural landscape that meets the criteria of Public Resources Code, section 21074(a), is a tribal cultural resource to the extent that the landscape is geographically defined in terms of its size and scope (Pub. Resources Code, § 21074(b)). Historical resources, unique archaeological resources, and non-unique archaeological resources, as defined at Public Resources Code, sections 21084.1, 21083.2(g), and 21083.2(h), may also be tribal cultural resources if they conform to the criteria of Public Resources Code, section 21074(a).

CEQA also states that a project with an impact that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment (Pub. Resources Code, § 21084.2).

Local

Mendocino County Ordinance, Title 22-Land Usage, Chapter 22.12-Archaeological Resources, Division I-General, Sec. 22.12.010 – Purpose and Findings. Establishes that the Board of Supervisors of the County of Mendocino declare and find that within the County of Mendocino there exists areas of great importance for the study of historic and prehistoric human past of the State of California. The board defines resources as "sites" or "archaeological sites" and further finds that:

- Sites are irreplaceable and important to preserving the cultural heritage of the Mendocino County and the region;
- Preservation of sites attracts interest in the county for scientific purposes and visitors;
- Due to factors such as land development, both public and private, as well as unauthorized excavation and collection, the disappearance and destruction of sites is imminent;
- Protection and conservation of sites is highly important; and
- Promotion of public awareness can be sought through providing access to regulations pertaining to mitigation and conservation of sites.

Results

Record Search and Literature Review

The NWIC records search indicates that 43 previous cultural resources studies, or previous projects subject to a cultural study, occurred within one mile of the project site (**Table 5.5-1)**. Of these, three cover all or part of the PAA and are shown in bold in the table below. The NWIC also identified seven previously recorded cultural resources within one mile of the project, none of which are within the project site (**Table 5.5-2**) and no additional previously recorded resources were identified through reviews of any of the national or state registers. Of these resources, two are prehistoric, and are both located on terraces above a water source. One is a scatter of chert debitage, with two tools documented, and the possibility for more chert flakes to be found within 0 to 10 centimeters of the ground surface in wooded areas – presumably based on shallow trowel excavations as noted in the site record, although, no more detail of the site's possible subsurface components is elaborated on. The other prehistoric site contains thermally altered rocks associated with a large concentration of discolored earth, and a pestle fragments, projectile point fragment, and chert flake.

The remaining resources are historic in age and related to travel, and occupation along the Russian River. P-23-003617 is a mid-20th century bridge crossing Forsythe Creek. P-23-003663 is multiple segments of the Northwest Pacific Railroad built to connect San Francisco with Humboldt County in hopes of exploiting the profitable Redwood logging of California's northern counties. The railroad was in operation in the first half of the 20th Century but is now abandoned. P-23-005914 is a single-story, historic house of wood frame construction, with narrow V-rustic siding, and a side gable roof estimated to have been built in 1915. A number of modern changes have occurred to the building and property including large picture windows, sliding aluminum-frame windows, and the addition of a secondary building structure assumed to be used as a garage or guest house. P-23-006194 is an abandoned segment of the former Redwood Valley Road, and associated refuse scatter. The final site (P-23-006195) is a small, low density refuse scatter of cans and glass bottles.

Table 5.5-1. Previous Studies Within One-mile of the Project Site

Report No.	Authors	Year	Report Title	Company	Within Project Site
S-000550	David A. Fredrickson and Thomas M. Origer	1977	The Archaeology of the Lake Mendocino Project Area, Mendocino County, California: A Report of the Lake Mendocino Cultural Resource Study	Anthropology Laboratory, California State College, Sonoma	No
S-000765	Charla M. Meacham	1977	An Archaeological Site Survey of a Truck Passing Lane and Channelization, 01-Men-20 33.8/34.0, 34.6/35.1 01101- 175801	California Department of Transportation	No

Report No.	Authors	Year	Report Title	Company	Within Project Site
S-000937	Janis Offermann	1978	The Redwood Valley County Water District Archaeological Survey.	The Anthropology Laboratory, Sonoma State College	No
S-000937	R.W. Ganse	1978	Redwood Valley Water Treatment Plant Archeological Field Investigation	Tudor Engineering Company	No
S-001146	Barry A. Price	1978	Archaeological Investigation of the Alessio Foppiano Property in Redwood Valley, Mendocino County, California	The Anthropology Laboratory, Sonoma State College	No
S-001422	Janis Offermann	1979	An Archaeological Survey for Caltrans, Along Highway 101, Between PM 30.8 and 36.1, Mendocino County, California	Cultural Resources Facility, Sonoma State University	No
S-001422a	Janis Offermann	1979	Archaeological Survey of a Proposed Highway Improvement Project in Mendocino County, 01-MEN-101 P.M. 30.8/36.1 01101 155901-15591G	Cultural Resources Facility, Sonoma State University	No
S-001422b	Wendy Waldron	1980	Addendum Archaeological Survey of a Proposed Highway Improvement Project in Mendocino County, 01-Men-101 P.M. 30.8/36.1 11101-155901-15591G	California Department of Transportation, District 01	No
S-001422c	Barry Douglas	1986	Second Addendum Archaeological Survey of a Proposed Highway Improvement Project in Mendocino County, 01-MEN-101 P.M. 30.8/36.1, 01 155901	California Department of Transportation	No
S-001422d	unknown	1986	Second Addendum Historic Property Survey Report for the Proposed Construction of a Four-Lane Freeway/ Expressway, Associated Interchange, and Frontage Roads to Replace the Existing Two-Lane Expressway on Route 101 From Post Mile 30.9 to Post Mile 36.1 in Mendocino County, 1-MEN-10-30.9/36.1, 01201 155901	Caltrans District 1	No
S-001422e	John W. Snyder	1986	Supplemental Historic Architectural Survey Report, Forsythe Creek Freeway, 01-MEN-101, P.M. 30.9/36.1	California Department of Transportation	No
S-001678	Genie Coleman	1979	Report of an Archaeological Survey of the Finne Property, Redwood Valley, California.	Unknown	No
S-001811	Donna J. Sheeders	1979	Cultural Resources Field Report, Application 26079, Frank J. Zeller, Jr., 7240 Uva Drive, Redwood Valley, CA 95470	California Department of Water Resources, Division of Water Rights	No

Report No.	Authors	Year	Report Title	Company	Within Project Site
S-002046	Donna J. Sheeders	1980	Cultural Resources Field Report, Application 26110, 6991 North State Street, Ukiah, CA.	California Water Resources Control Board, Division of Water Rights	No
S-002184	John Holson and David A. Fredrickson	1980	An Archaeological Survey of the Coyote Valley Indian Rancheria, Mendocino County, California.	The Cultural Resources Facility, Sonoma State University	No
S-005764	Robert L. Gross	1982	A Preliminary Environmental Assess-ment of the Ross Mayfield Property, Redwood Valley, California – Archaeological Element	Alta California Associates	No
S-013513	Jay M. Flaherty	1992	Cultural Resources Reconnaissance of A.P.N. 163-131-14, in Redwood Valley, Mendocino County, California	Archaeological Resource Service, Inc.	No
S-013738	William E. Soule	1987	Archaeological Survey Report, Application 24425, Lolonis Vineyards, Inc., Mendocino County (California Division of Water Rights)	State Water Re-sources Control Board, Division of Water Rights	No
S-020610	Vicki R. Beard	1998	Cultural Resources Study for the Redwood Valley County Water District, Water System Improvement Project, Mendocino County, California	Tom Origer & Associates	No
S-022736	**unknown**	**2000**	**Final Cultural Resources Inventory Report for Williams Communications, Inc., Fiber Optic Cable System Installation Project, Point Arena to Robbins and Point Arena to Sacramento, California: Volume I**	**Jones & Stokes Associates, Inc.**	**Yes**
S-022736a	**unknown**	**2000**	**Volume II – Project Maps: Final Cultural Resources Inventory Map Atlas for the Williams Communications, Inc. Fiber Optic Cable System Installation Project, Point Arena to Robbins and Point Arena to Sacramento, California**	**Jones & Stokes Associates, Inc.**	**Yes**
S-022736b	**unknown**	**2000**	**Volume III, Technical Appendices: Final Cultural Resources Inventory Report for the Williams Communications, Inc. Fiber Optic Cable System Installation Project, Point Arena to Robbins and Point Arena to Sacramento, California**	**Jones & Stokes Associates, Inc.**	**Yes**

Report No.	Authors	Year	Report Title	Company	Within Project Site
S-023564	Michael R. Bever and John Holson	2000	Cultural Resources Survey of Approximately 13 Acres for the Coyote Valley Rancheria, Mendocino County, California	Pacific Legacy, Inc.	No
S-029019	Trudy Vaughan	2004	Archaeological Reconnaissance for a Proposed 9-Acre Land Acquisition by the Coyote Valley Band of Pomo Indians, Near Redwood Valley, Mendocino County, California	Coyote & Fox Enterprises	No
S-030900	Timothy Keefe	2005	Historic Property Survey Report for the Proposed MEN-20 Roadway Rehab Project on California State Highway 20 at Postmile 33.31/37.90 (KP 53.61/60.99) in Mendocino County, EA 01-297701	Caltrans District 01	No
S-030900	Timothy Keefe	2005	Archaeological Survey Report for the MEN-20 Roadway Rehabilitation Project, State Route 20, Mendocino County, California, 10-MEN-20, KP 53.58/60.98 (PM 33.3/37.9), EA 01-297701	Caltrans	No
S-030900	Rod Parsons	2005	FHWA 050620C Re: Determinations of Eligibility and Finding of Effect for the MEN-20 Roadway Rehabilitation Project, State Route 20, Mendocino County, California	California Department of Transportation	No
S-035119	Mary Maniery, Marshall Millet, and Monica Nolte	2008	Cultural Resources Constraints Study for the Replacement of 24 Poles on the Mendocino-Willits High Voltage Transmission Line, Mendocino County, CA	PAR Environmental Services, Inc	No
S-035184	Alex DeGeorgey	2008	Cultural Resource Survey of APN 165-240-08, 09 & 166-180-07, 08 Approximately 38 Acres in Mendocino County, California	North Coast Resource Management	No
S-036294	Jeff Haney	2009	Historic Property Survey Report 01-MEN-1, 20, 128, 162, 175, 253, 271, K.P./P.M. various, EA 01-464200	California Department of Transportation	No
S-036294	Jeff Haney	2009	Archaeological Survey Report for a Proposed Metal Beam Guadrail Repair/Upgrade Project along State Routes 1, 20, 128, 162, 1755, 253, & 271 in Mendocino County, California; 01-MEN-1, 20, 128, 162, 175, 253, 271, K.P./P.M. various, EA 01-464200	Caltrans District 03	No

Report No.	Authors	Year	Report Title	Company	Within Project Site
S-036471	Melinda Salisbury and Erik Whiteman	2008	A Cultural Resources Investigation of the Lower Forsythe Creek Restoration Project located in Mendocino County, California, California Department of Fish and Game Project # R1-053	Cultural Resources Facility, Center for Indian Community Development, Humboldt State University	No
S-036759	Wayne Bonner and Sarah Williams	2009	Cultural Resources Records Search and Site Visit for T-Mobile West Corporation, a Delaware Corporation, Candidate SF40856B (RVC Tank), 6800 Central Avenue, Redwood Valley, Mendocino County, California	Michael Brandman Associates	No
S-038865	Laura Leach-Palm, Paul Brady, Pat Mikkelsen, Libby Seil, Darla Rice, Bryan Larson, Joseph Freeman, and Julia Costello	2011	Cultural Resources Inventory of Caltrans District 1 Rural Conventional Highways in Del Norte, Humboldt, Mendocino and Lake Counties, Contract No. 01A1056, Expenditure Authorization No. 01-453608	Far Western Anthropological Research Group; JRP Historical Consulting, LLC; Foothill Resources Ltd.	No
S-038865	Jack Meyer, Philip Kaijankoski, and Jeffrey S. Rosenthal	2011	A Geoarchaeological Overview and Assessment of Northwest California: Cultural Resources Inventory of Caltrans District 1, Rural Conventional Highways: Del Norte, Humboldt, Mendocino, and Lake Counties	Far Western Anthropological Research Group, Inc.	No
S-038865	Shelly Tiley and Shannon Tushingham	2011	Volume I: Report and Appendices A-E, Native American Ethnogeography, Traditional Resources, and Contemporary Communities and Concerns: Cultural Resource Inventory of Caltrans District 1, Rural Conventional Highways: Del Norte, Humboldt, Mendocino, and Lake Counties	Tiley Research; Far Western Anthropological Research Group	No
S-039248	**Cindy Arrington**	**2012**	**Cultural Resources Constraints Study for the Mendocino-Willits Wood Pole Replacement Project, Mendocino County, California**	**Parus Consulting**	**Yes**
S-040982		2011	Cultural Resources Study, Coyote Valley Band of Pomo Indians, Pine Crest Fee-to-Trust	Analytical Environmental Services	No
S-050320	Thad M. Van Bueren	2017	Archaeological Survey for the Apperson Minor Subdivision in Redwood Valley, California 930 Lone Pine	N/A	No

Report No.	Authors	Year	Report Title	Company	Within Project Site
			Drive, Redwood Valley, CA (Assessor's Parcel 166-020-23)		
S-050337	Thad M. Van Bueren	2018	Archaeological Survey for the Duggan Minor Subdivision in Redwood Valley, California 1401 Road D, Redwood Valley, CA (Assessor's Parcel 163-082-09)	N/A	No
S-051012	Gina Caretti and Courtney Higgins	2018	Cultural Resources Monitoring for the Redwood Fire, Mendocino County, California	Far Western Anthropological Research Group, Inc.	No
S-053630	Amanda R. Harvey and Beatrice Cox	2019	Cultural Resources Survey Results and Recommendations for the CC-351 (D-1004A) Calpella Arborist Survey, Mendocino County, California (84008633). (letter report)	Garcia and Associates (GANDA)	No
S-054557	**Heath Browning**	**2020**	**PG&E's Land Parcel (APN 166-050-02) Grading Preparation for Public Safety Power Shutoff, Mendocino County, California (letter report)**	**Browning Cultural Resources, Inc.**	**Yes**

Table 5.5-2. Previously Recorded Resources within One-mile of the Project Site

Primary No.	Trinomial No.	Age	Description	Recording Events	Previous CRHR Evaluation
P-23-001269	CA-MEN-001374	Prehistoric	Chert lithic scatter.	1978 (R. Stradford, B. Price, The Anthropology Laboratory, SSC)	Unevaluated
P-23-001588	CA-MEN-001703	Prehistoric	Midden site.	1980 (John Holson, Sonoma State University)	Unevaluated
P-23-003617	N/A	Historic	Forsythe Creek Bridge	2001 (Tracy Bakic, PAR Environmental Services, Inc.)	Ineligible
P-23-003663	CA-MEN-003111H	Historic	Northwestern Pacific Railroad	1995 (Jeffrey A. Hamilton, [none]); 1998 (Frank Lortie, Caltrans); 2000 (J. Nelson, Jones & Stokes); 2010 (Steven Melvin, Joseph Freeman, Flores, Heather Miller, JRP Historical Consulting, LLC);	Eligible

Primary No.	Trinomial No.	Age	Description	Recording Events	Previous CRHR Evaluation
				2010 (Laura Leach-Palm, Far Western); 2015 (Mariko Falke, Nic Grosjean, [none]); 2018 (G. Dalldorf, M. Arsenault, J. Farrington, Pacific Legacy Inc.); 2018 (Karen Raskin, Humboldt State University); 2019 (Beatrice Cox, Garcia and Associates)	
P-23-005914	N/A	Historic	Ramos House	1986 (John W. Snyder, Caltrans)	Ineligible
P-23-006194	CA-MEN-003784H	Historic	Segment of Redwood Valley Road with associated historic refuse deposit.	2018 (G. Dalldorf, M. Arsenault, J. Farrington, Pacific Legacy Inc.)	Unevaluated
P-23-006195	N/A	Historic	Refuse scatter	2018 (G. Dalldorf, M. Arsenault, J. Farrington, Pacific Legacy Inc.)	Unevaluated

Tribal Consultation

Aspen's May 16, 2023, request to the NAHC, on behalf of the CEC, to search its Sacred Lands File returned positive results, indicating that the NAHC has records of Native American cultural resources in the search area.

The CEC's Consultation. The NAHC's June 13, 2023, search of the Sacred Lands File returned positive results, indicating that the NAHC has a record of Native American cultural resources in the search area. Aspen, on behalf of CEC, sent out letters on August 14, 2023, with a brief description of the proposed Project and invited consultation with the 11 California Native American tribes listed by the NAHC. The letter also requested a response within 30 days of receipt of the letter, as indicated by CEC Tribal Consultation Policy. Follow-up emails and/or phones calls were made on September 8, 2023. The CEC did not receive any responses to its consultation letters within the 30-day response timeframe.

Archaeological Survey

The archaeological surveys did not identify archaeological or ethnographic resources in the PAA. Ground visibility was low (0 to 10 percent) due to mowed grasses and tall weeds. To accommodate for the lack of visibility boots scrapes were conducted to assess for larger signs of cultural remnants such as midden or anthrosoils created by human

habitation. Additionally, rodent dens and ant holes were examined as they typically unearth small, buried artifact deposits.

Built Environment Survey

The built environment survey identified a total of three historic roads and 14 historic-era resources within the built environment PAA that are 45+ years in age, two of which fall within the Project site and include the existing PG&E Mendocino Substation and adjacent agricultural field with existing PG&E transmission lines. Aspen evaluated all 17 built environment resources for the CRHR and local guidelines and concluded that none are eligible for the CRHR or listing on a local historical register and are not considered historical resources for the purposes of CEQA.

The above-noted properties are individually described and evaluated in accordance with CRHR guidelines and criterion, details of which can be found in Appendix C.

Archaeological Sensitivity

Geology of the Redwood Valley includes: river-channel deposits of coarse sand and gravel; recent, and unconsolidated alluvium deposits of clay, sand, and gravel; terraces of Pleistocene age ranging from younger to older with the former located lower in elevation, and the latter in higher elevations; continental deposits of poorly sorted silty clay, sandy and gravely silt, and poorly cemented conglomerates, tertiary in age; with Franciscan and Knoxville Formations surrounding the valley, predominantly of sandstone, mudstone, shale, limestone, and chert. The Project site is specifically located wholly within a young, quaternary terrace deposit of unconsolidated silty sand and gravel, silt, and clay underlying stream terraces, with alluvium to the west, and continental deposits to the east. The NWIC record search documents one monitoring report within one-mile of the Project site, which identified cultural material in rodent activity consisting of four chert flakes, suggesting a subsurface cultural deposit. The NWIC also identified two prehistoric resources within one mile of the Project Site, a lithic scatter and a midden site, and one historic refuse scatter. Both prehistoric site records identify artifacts as being noted on the surface. The historic refuse scatter is noted as being on the surface; however, no subsurface testing was conducted so the depth is unknown. Based on the record search information, previous disturbance of the Project Site, and the estimated maximum excavation depth of four feet for the project, the potential for subsurface buried archaeological resources is low to moderate.

5.5.2 Environmental Impacts

a. Would the project cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?

Construction and Demolition

Less than Significant with Mitigation Incorporated. No built environment resources meeting CEQA's criteria for historical resources are in the PAA. No archaeological or ethnographic resources meeting CEQA's criteria for historical resources occupy the

surface of the PAA. Previous research and archaeological monitoring in the project vicinity, indicate that the PAA has a low- to moderate-potential for buried archaeological deposits.

The ground disturbance required for construction and demolition of the proposed Project, specifically trenching to connect the pad-mounted switchgear, would extend into native soils up to approximately four feet below grade mostly in former agricultural fields, or area disturbed during construction of the substation. If unanticipated cultural resources were to be damaged during construction/demolition, it would be considered a significant impact without mitigation.

The proposed mitigation measures (MM) require worker awareness program (**CUL-1**), procedures for the event that prehistoric or historic resources are encountered during excavation or grading of the site (**CUL-2**), and procedures for the event that human remains are discovered (**CUL-3**) to reduce impacts to buried historical resources. It is our conclusion that with implementation of **MM CUL-1** through **MM CUL-3** impacts to buried historical resources would be reduced to a less than significant level.

Operation

No Impact. Ground-disturbing activities are not part of the operational or maintenance profile of the proposed Project. Impacts on historical resources are therefore not expectable during operation and maintenance.

b. Would the project cause a substantial adverse change in the significance of a unique archaeological resource pursuant to §15064.5?

Construction

Less than Significant with Mitigation Incorporated. No archaeological or ethnographic resources meeting CEQA's criteria for unique archaeological resources occupy the surface of the PAA. Previous research and archaeological monitoring in the project vicinity, indicate that the PAA has a low- to moderate-potential for buried archaeological deposits.

The ground disturbance required to construct the proposed Project, specifically trenching for the electrical lines from the power blocks, would extend into native soils up to approximately four feet below grade mostly in former agricultural fields. If unanticipated cultural resources were to be damaged during construction, it would be considered a significant impact without mitigation.

The proposed mitigation measures require worker awareness program (**CUL-1**), procedures for the event that prehistoric or historic resources are encountered during excavation or grading of the site (**CUL-2**), and procedures for the event that human remains are discovered (**CUL-3**) to reduce impacts to buried historical resources. It is our conclusion that with implementation of mitigation measures **CUL-1** through **CUL-3** impacts to buried historical resources would be reduced to a less than significant level.

Operation

No Impact. Ground-disturbing activities are not part of the operational or maintenance profile of the proposed Project. Impacts on unique archaeological resources are therefore not expectable during operation and maintenance.

c. Would the project disturb any human remains, including those interred outside of dedicated cemeteries?

Construction

Less than Significant with Mitigation Incorporated. Neither the record search nor pedestrian survey identified any known cemeteries or human remains within the PAA. Previous research and archaeological monitoring in the project vicinity, indicate that the PAA has a low- to moderate-potential for buried archaeological deposits including the presence of human remains.

The ground disturbance required to construct the proposed Project, specifically trenching for electrical lines to connect the power blocks, would extend into native soils up to approximately four feet below grade mostly in existing agricultural fields. If unanticipated human remains were encountered and damaged during construction, it would be considered a significant impact without mitigation.

The proposed mitigation measures requiring worker awareness program (**CUL-1**), procedures for the event that prehistoric or historic resources are encountered during excavation or grading of the site (**CUL-2**), and procedures for the event that human remains are discovered (**CUL-3**) to reduce impacts to buried historical resources. It is our conclusion that with implementation of mitigation measures **CUL-1** through **CUL-3** impacts on inadvertently discovered human remains would be reduced to a less than significant level.

Operation

No Impact. Ground-disturbing activities are not part of the operational or maintenance profile of the proposed Project. Impacts on human remains are therefore not expected during operation and maintenance of the proposed Project.

d. 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:

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

Construction

No Impact. No responses to CEC Tribal Consultation Letters were received. Based on the research of available resources as detailed above, no Tribal Cultural Resources were identified. As such, there will not be any impacts to Tribal Cultural Resources listed or eligible for listing in the CRHR or other state registers, National Register of Historic Places (NRHP), or local register of historical resources, or resources otherwise identified by the CEC.

Operation

No Impact. Ground-disturbing activities are not part of the operational or maintenance profile of the proposed Project. Impacts on historical resources are therefore not expectable during operation and maintenance.

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 Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Construction

Less than Significant with Mitigation Incorporated. Although there are no known tribal cultural resources on or directly adjacent to the proposed site, ground disturbance associated with the proposed Project could result in the exposure and destruction of buried, as-yet unknown prehistoric archaeological resources that could qualify as Tribal Cultural Resources. If such resources were to be exposed or destroyed, it would be a significant impact. Implementation of MM CUL-1 through MM CUL-3 would reduce impacts on buried, Tribal Cultural Resources to a less than significant level

Operation

No Impact. Ground-disturbing activities are not part of the operational or maintenance profile of the proposed Project. Impacts on historical resources are therefore not expectable during operation and maintenance.

5.5.3 Mitigation Measures

MM CUL-1: Worker Environmental Awareness Program. Prior to the commencement of construction, the applicant shall retain a qualified archaeological specialist to be on-call during construction and to prepare a Worker Environmental Awareness Program (WEAP). The name and credentials of the Secretary of the Interior qualified archaeological specialist shall be submitted to the CEC for review and approval no less than 14 days prior to the commencement of the preparation of the WEAP.

The WEAP shall be designed to assure that construction workers are aware of the obligation to protect and preserve valuable archaeological and Native American resources.

The WEAP training shall be submitted to the CEC at least 60 days prior to the start of construction for review and approval. This program will be provided to all construction workers via a recorded presentation and will include a discussion of applicable laws and penalties under the laws; samples or visual aids of resources that could be encountered in the project site and vicinity; instructions regarding the need to halt work in the vicinity of any potential archaeological and Native American resources encountered; and measures to notify their supervisor, the applicant, and the archaeological specialist.

MM CUL-2: **Unanticipated Discovery.** If archaeological resources are encountered during excavation or grading of the site, all activity within a 50-foot radius of the find shall be stopped, the Director or Director's designee of the Mendocino County Department of Planning and Building Services shall be notified, and a Secretary of the Interior-qualified archaeologist will examine the find.

The Secretary of the Interior-qualified archaeologist will evaluate the find to determine if it meets the definition of a historical, unique archaeological, or Tribal Cultural Resource, and make appropriate recommendations regarding the disposition of such find(s) prior to the continuation of any construction work occurring within the above-referenced 50-foot radius. If the find is determined to potentially be a Tribal Cultural Resource, local Native American tribes will be contacted and included in the decision making regarding the resource. If the find(s) do(es) not meet the definition of a historical, unique archaeological, or Tribal Cultural Resource, no further study or protection is necessary prior to project implementation.

If the find meets the definition of a historical, unique archaeological, or Tribal Cultural Resource, then the Secretary of the Interior-qualified archaeologist shall record the resource, including field notes, measurements, and photography, and document the find using the California Department of Parks and Recreation 523 series forms, and it will be avoided by project activities. If avoidance is not feasible, adverse effects to such resources will be mitigated in accordance with the recommendations of the Secretary of the Interior-qualified archaeologist. Recommendations will include collection, recordation, and analysis of any significant cultural materials.

A report of findings documenting any data recovery shall be submitted to the Director or Director's designee of the Mendocino County Department of Planning and Building Services, Native American Heritage Commission (Tribal Cultural Resources), and the Northwest Information Center.

The Project applicant will ensure that construction personnel do not collect or move any cultural material and will ensure that any fill soils that may be used for construction purposes does not contain any archaeological materials.

MM CUL-3: **Treatment of Human Remains.** If human remains are discovered during excavation or grading of the site or other construction activities, all activity within a 50-foot radius of the find will be stopped. The Mendocino County Coroner shall be notified immediately and will make a determination as to whether the remains are of Native American origin or whether an investigation into the cause of death is required. If the remains are determined to be Native American, the Coroner shall notify the Native American Heritage Commission (NAHC) within 24 hours of the identification. Once the NAHC identifies the most likely descendant(s) (MLD), the descendant(s) will make recommendations regarding the treatment and disposition with appropriate dignity of the Native American human remains (including the treatment of grave goods), which will be implemented in accordance with section 15064.5(e) of the California Code of Regulations, Title 14.

The Secretary of the Interior-qualified archaeologist will recover scientifically valuable information, as appropriate and in accordance with the recommendations of the MLD. A report of findings documenting any data recovery shall be submitted to the Director or Director's designee of the Mendocino County Department of Planning and Building Services and the Northwest Information Center.

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5.6 Energy and Energy Resources

This section describes the environmental setting, regulatory background, and impacts associated with the construction, operation, and demolition of the Project with respect to energy and energy resources.

Energy and Related Infrastructure Would the project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
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?	☐	☐	☐	☒

Environmental checklist established by CEQA Guidelines, Appendix G.

5.6.1 Environmental Setting

The proposed Project would construct and operate a 5-megawatt (MW)/500-megawatt hour (MWh), 100-hour discharge duration, iron-air, Multi-day Energy Storage (MDS) in a front-of-meter configuration. The Mendocino Substation is part of the PG&E power network and a Local Capacity Area Substation. The substation is part of the PG&E North Bay Division serving the North Coast/North Bay (PG&E 2022). The substation has a maximum kilovolt (kV) rating of 110kV to 161kV (CEC 2023a).

As the Mendocino County's electric utility, PG&E owns power generation facilities, has investments in joint ventures that produce electric power, and trades power on the open market. These efforts are directed toward ensuring its retail electricity customers have a highly reliable source of electric power.

The proposed Project includes a partnership between PG&E and Form Energy, who would build and operate the Project. The Project would be co-located on land owned by PG&E. The MDS batteries would charge according to a dispatch optimization algorithm and market forecasts. The algorithm would prioritize charging during periods of excess supply (most likely from renewable generation) or local congestion, and discharge in periods of capacity shortage or excessive demand. The MDS batteries are able to charge and discharge energy over a long duration, giving the system the capability to charge during months when net loads are the lowest (load demands are the lowest), and dispatch over longer periods when net loads are the highest (load demands are the highest). A portion of the full capacity of the batteries can provide daily cycling, while the other portion can be used for weekly or monthly cycling to take advantage of seasonal trends and relieve prolonged grid stress events.

The energy sources that make up the mix of power supplied to PG&E's customers, relative to the 2021 California power mix (the most recent year that data is available), are summarized from utility-specific Power Content Label data gathered by the California Energy Commission as shown in Table 5.6-1.

Table 5.6-1. Sources of Electricity Supplied to PG&E's Customers (2021 Power Content)

Energy Resources	Base Plan	50% Solar Choice	100% Solar Choice	Green Saver	2021 California Power Mix
Eligible Renewable*	**47.7%**	**70.9%**	**93.9%**	**89.9%**	**33.6%**
Biomass & biowaste	4.2%	2.1%	0.0%	0.0%	2.3%
Geothermal	5.2%	2.6%	0.0%	0.0%	4.8%
Eligible hydroelectric	1.8%	0.9%	0.0%	0.0%	1.0%
Solar	25.7%	59.8%	93.9%	89.9%	14.2%
Wind	10.9%	5.5%	0.0%	0.0%	11.4%
Coal	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**3.0%**
Large Hydroelectric	**4.0%**	**2.0%**	**0.0%**	**0.0%**	**9.2%**
Natural Gas	**8.9%**	**7.4%**	**0.0%**	**0.0%**	**37.9%**
Nuclear	**39.3%**	**19.7%**	**0.0%**	**0.0%**	**9.3%**
Other	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.2%**
Unspecified sources of power**	**0.0%**	**0.0%**	**6.1%**	**10.1%**	**6.8%**
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

* The eligible renewable percentage above does not reflect Renewables Portfolio Standard compliance, which is determined using a different methodology.
** "Unspecified sources of power" means electricity from transactions that are not traceable to specific generation sources.
Source: CEC 2023b, 2021 Power Content Label for PG&E.

At the end of 2021, the average annual electricity consumption served to PG&E customers had grown to approximately 78,588 million kilowatt-hours (kWh). Table 5.6-2 shows the baseline electricity consumption by the PG&E loads over the prior five years, separated by customer sectors.

Table 5.6-2. Breakdown of Energy Sectors Served by PG&E (2017-2021)

Sector, Served by PG&E	2017	2018	2019	2020	2021
Ag & Water Pump	5100.395	5831.537	4567.035	6637.588	7446.147
Commercial Building	30752.82	30148.36	30069.12	26246.78	26009.13
Commercial Other	4352.882	4265.599	4423.671	3948.564	3869.291
Industry	10514.52	10518.62	9876.821	9814.344	9958.778
Mining & Construction	1764.903	1593.65	1670.306	1747.635	1764.027
Residential	29138.29	27700.32	27485.17	29833.54	29229.86
Streetlight	321.3022	310.5888	297.7952	290.3829	310.6322
PG&E Total Usage	81945.11	80368.67	78389.93	78518.84	78587.87

Note: Usage expressed in millions of kWh (one million kWh equals one gigawatt-hour or GWh).
Source: CEC 2023c; Electricity Consumption by Entity.

Regulatory

Federal

No federal laws, regulations, or standards related to energy apply to the project.

State

Energy Action Plan and Loading Order. California has mandated and implemented aggressive energy-use reduction programs for electricity and other resources. In 2003, California's first Energy Action Plan (EAP) established a high-level, coherent approach to meeting California's electricity and natural gas needs and set forth the "loading order" to address California's future energy needs. The loading order established that the state, in meeting its energy needs, would invest first in energy efficiency and demand-side resources, followed by renewable resources, and only then in clean conventional electricity supply (CPUC 2008). Since that time, the California Public Utilities Commission (CPUC) and California Energy Commission (CEC) have overseen the plans, policies, and programs for prioritizing the preferred resources, including energy efficiency and renewable energy.

California's Renewables Portfolio Standard. Electric utilities in California must procure a minimum quantity of the electricity sales from eligible renewable energy resources as specified by Renewables Portfolio Standard (RPS) requirements. The RPS targets were updated in 2018 with the passage of the "100 Percent Clean Energy Act of 2018" [Senate Bill 100, De León, Chapter 312, Statutes of 2018) (SB 100)], which establishes the policy that eligible renewable energy resources and zero-carbon resources supply 100 percent of retail sales of electricity to California end-use customers by December 31, 2045. SB 100 also increased the state's RPS target to 44 percent of retail sales by December 31, 2024, 52 percent by December 31, 2027, and to 60 percent by December 31, 2030, and requires all state agencies to incorporate these targets into their relevant planning. SB 100 requires the CPUC and CEC to ensure that implementation of this policy does not cause or contribute to greenhouse gas emissions increases elsewhere in the western grid. The most recent revision to the RPS targets was set forth in Senate Bill 1020 (Laird, Chapter 361, Statutes of 2022), which mandates steps to ensure renewable and zero-carbon sources supply 90 percent of all retail sales of electricity to California end-use customers by December 1, 2035, 95 percent of all retail sales of electricity to California end-use customers by December 31, 2040, 100 percent of all retail sales of electricity to California end-use customers by December 31, 2045, and 100 percent of electricity procured to serve all state agencies by December 31, 2035.

Integrated Resource Planning. An Integrated Resource Plan (IRP) is an electricity system planning document that lays out the energy resource needs, policy goals, physical and operational constraints, and the general priorities or proposed resource choices of an electric utility, including customer-side preferred resources. Senate Bill (SB) 350 (De León, Chapter 547, Statutes of 2015) established the 2030 targets for energy efficiency (EE) and RPS. In addition, SB 350 requires the CPUC to establish an integrated resource planning process to ensure that load-serving entities (LSEs) in the state shape

their future energy portfolios to meet California's clean energy goals in a reliable and cost-effective manner. On November 1, 2022, PG&E and other LSEs filed their 2022 Plans with the CPUC. PG&E's IRP is its plan to meet the CPUC's 2022 IRP objectives and statewide clean energy goals (PG&E 2023).

SB 100 Report. On March 15, 2021, the CEC, CPUC, and California Air Resources Board (ARB) published the first joint agency report examining how the state's electricity system can become carbon free by 2045, as required by SB 100. The joint agency report projects the need for an estimated 40 to 50 gigawatts of energy storage by 2045 to meet the state's goal of a carbon free electricity system. With this projected growth in energy storage deployments, California needs to invest in multiple energy storage solutions and not just one technology. While lithium-ion batteries are very effective there are other technologies that are better suited for long-duration applications. Meeting California's goals will require diverse portfolio of storage technologies, including ones that can discharge over longer durations from 8 to 100 hours, or even longer. (CEC, CPUC, and ARB 2021)

Energy Storage Legislation. Assembly Bill 2514 (Skinner, Chapter 469, Statutes of 2010) (AB 2514), amended by Assembly Bill 2227 (Bradford, Chapter 606, Statutes of 2012), was designed to encourage California to incorporate energy storage into the electricity grid, as codified at Public Utilities Code §§ 2835-2839 and § 9506.

In 2010, the California Legislature, through AB 2514, authorized the CPUC to evaluate and determine energy storage targets for the State Load Serving Entities. In 2013, the CPUC issued Decision (D.)13-10-040 which set an AB 2514 energy storage procurement target of 1,325 MW by 2020. The energy storage procurement policy was formulated with three goals:

1. Grid optimization, including peak reduction, contribution to reliability needs, or deferral of transmission and distribution upgrade investments;
2. Integration of renewable energy; and
3. Greenhouse gas (GHG) reductions in support of the State's targets.

As of August 2018, the three major investor-owned utilities (IOUs)—PG&E, Southern California Edison, and San Diego Gas and Electric— have cumulatively procured, or were seeking approval to procure, almost 1,500 MW of energy storage, exceeding the AB 2514 target of 1,325 MW and satisfying nearly all domain-specific requirements (CEC 2018; CPUC 2023).

State CEQA Guidelines. The California Natural Resources Agency adopted certain amendments to the State CEQA Guidelines effective in 2019, to change how CEQA Lead Agencies consider the environmental impacts of energy use. CEQA Guidelines Section 15126.2(b) and Appendix F require analysis of a project's energy use, in order to assure that energy implications are considered in Project decisions. CEQA requires a discussion of the potential environmental effects of energy resources used by projects, with particular

emphasis on avoiding or reducing the "wasteful, inefficient, and unnecessary consumption of energy" (see Public Resources Code section 21100(b)(3)).

Local

Mendocino County General Plan, Resource Element. The Resource Element of the Mendocino County General Plan contains goals and policies related to energy within the county. The following policies and action item from the Resource Element are relevant to the Project (Mendocino County 2020).

Policy RM-54. Encourage the installation of solar or other renewable energy systems to adequately address year-round need.

Policy RM-60. The County shall work with Pacific Gas and Electric Company and other utility providers to reduce the electrical power system's vulnerability.

Action Item RM-61.2. The County shall explore grant funding opportunities to support renewable backup energy systems, prioritizing battery storage systems wherever possible.

5.6.2 Environmental Impacts

a. Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

The Project requires electricity to charge the MDS batteries which would allow PG&E to store electricity by charging during periods of excess supply or lower electrical demand, and discharge the stored energy to the electrical grid during periods of high electrical demand, or periods of extreme weather or emergencies. Energy storage would improve PG&E's ability to integrate renewable resources efficiently and reliably.

Construction, Commissioning, and Demolition

Less than Significant. Construction, commissioning, and demolition activities associated with the proposed Project would require the consumption of fossil fuel resources, such as diesel fuel and gasoline to power the off-road construction equipment and construction vehicles. Additionally, construction would require the manufacturing and delivery of new equipment and materials, which would require energy use. Once the Project has completed its purpose, prior to the start of demolition activities, it would be decommissioned and the electrical connections to the PG&E substation would be terminated.

The Project is subject to ARB regulations, which limit the idling of equipment and vehicles to no more than five minutes in any one hour. Additionally, ARB regulations ensure that the average emissions performance of the fleet of equipment used for a project meet certain statewide standards (see **Section 5.3, Air Quality** for more information on emissions regulations). The energy used by the proposed Project during construction, commissioning and demolition would not be wasteful, inefficient, or unnecessary in light

of the fact that the Project would be able to store electrical energy that would increase electrical availability and system reliability. No potentially significant environmental impact would occur due to the direct or indirect energy consumption during the construction and demolition of the proposed Project.

Operation

Less than Significant. Operations (including inspection, patrol, and maintenance) of the proposed Project components would also require use of fossil fuel resources for routine upkeep. About 96 work hours by two to three workers would be required for quarterly maintenance of the site. Quarterly maintenance would include water deliveries via a commercial water delivery service. It would also include servicing the MDS battery system and auxiliary enclosures. In addition, preventative maintenance, occurring on a regular, but less frequent basis than quarterly maintenance activities, would include inspections of various components.

The energy being stored by the MDS batteries comes from the mix of renewable and fossil fuel-powered generation resources (i.e., gas-fired generation plants) provided electricity at the time of charging, see Table 5.6-1, which shows that the PG&E 2021 power mix is made up of approximately 47.7 percent renewable resources, and approximately 8.9 percent natural gas. The energy stored by the MDS batteries would be discharged during periods of high demand when renewable sources are unavailable or diminished, making fossil fuel resources most likely to be called upon. As a result, the energy discharged by the MDS batteries would displace or reduce reliance on fossil fuel generation (such as peaking plants) that would otherwise be used during periods of high demand or at night. Instead of using fossil fuel generation in periods of high demand or nighttime, the MDS batteries would provide energy and prevent, or reduce, the need for fossil fuel generation; therefore, displacing or minimizing GHG emissions.

The ratio of discharged to charged energy over the course of one full cycle, or round-trip efficiency, is 35 percent. This round-trip efficiency is inclusive of losses from power conversion and auxiliary loads at full power at standard environmental conditions (15 to 25 degrees Celsius). Iron-air chemistry is extremely stable. The primary loss of 65 percent of the energy at the battery cell level during charging is due to the significant over-potential required to cause the reaction to occur at the needed rate. This additional energy to "push" the reaction causes the iron-air chemistry to have a lower efficiency than other, more expensive battery chemistries. However, the stability of the iron-air reaction means there is no possibility of thermal runaway. At the system level, the primary loss of energy is due to power conversion losses, with smaller losses from auxiliary loads.

The consumption of energy resources (both renewable and non-renewable sources of electricity in the power mix, and petroleum products in vehicles) during the operation and maintenance activities would not constitute a wasteful, inefficient, or unnecessary consumption of energy resources, but is necessary to maintain the long-duration storage project. Similarly, the lower efficiency of the iron-air battery does not mean that it is wasteful, inefficient, or requires unnecessary consumption of energy resources. For

example, gas-fired peaking plants often have a thermal efficiency of 35 percent (Energy Education, 2023).

b. Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Construction, Operation, and Demolition

No Impact. The proposed Project would be interconnected by 880 feet of underground cables connecting the two power blocks to PG&E's existing electrical system at the Mendocino Substation. Several interconnections and/or system upgrades are required for the project to interconnect with PG&E's distribution system. Distribution upgrades include the installation of relays, a transmitter, telecommunication equipment, and a 300-foot primary line extension (12kV) from the tap to the Project's pad-mounted switchgear. For the interconnection facilities, upgrades include installing a receiver, meter, disconnect switch, and Supervisory Control and Data Acquisition recloser. No additional expansion or upgrades of the substation are anticipated. The proposed Project would increase the reliability and flexibility of PG&E's electrical grid and, thus, would result in a beneficial impact.

Long-duration energy storage provides benefits to utilities by efficiently integrating increased amounts of renewable energy resources (when abundantly available and oversupplied) into the electrical transmission and distribution grid in a manner that can avoid or reduce the use of fossil fuel resources during peak or nighttime hours, thus minimizing GHG emissions by displacing the need to use fossil fuel sources. The Project would be consistent with the requirements of AB 2514. Although the three major IOUs (including PG&E) have exceeded the AB 2514 target of 1,325 MW of energy storage, many more megawatts of energy storage need to be integrated into the grid to meet SB 100 and SB 1020 renewable energy and zero-carbon targets, and as explained in the SB 100 Joint Agency Report.

PG&E's IRP includes its plan to meet the CPUC's 2022 IRP objectives and statewide clean energy goals. The proposed Project would contribute to PG&E's efforts to achieve the benefits of energy storage on the electrical grid. The proposed Project would not conflict with any state or local plan for prioritizing renewable energy or energy efficiency but would contribute to fulfilling these plans. This impact would be beneficial, and no mitigation is required.

5.6.3 Mitigation Measures

None required.

5.6.4 References

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5.7 Geology and Soils

This section describes the environmental setting, regulatory background, and impacts associated with the construction, operation, and demolition of the Project with respect to geology and soils.

Geology and Soils Would the project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
a. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☐	☒
ii. Strong seismic ground shaking?	☐	☐	☒	☐
iii. Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv. Landslides?	☐	☐	☐	☒
b. Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c. Be located on geologic units or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	☐	☒	☐
d. Be located on expansive soil, as defined in Section 1803.5.3 of the California Building Code (2010), creating substantial direct or indirect risks to life or property?*	☐	☐	☒	☐
e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒
f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐

Environmental checklist established by CEQA Guidelines, Appendix G, Geology and Soils. *Geology and Soils question (d) reflects the current 2022 California Building Code (CBC), effective January 1, 2023, which is based on the International Building Code (2021).

5.7.1 Environmental Setting

Geology

The proposed Project site is located within Redwood Valley within the Mendocino Range. The Mendocino Range is part of the Coast Ranges Geomorphic Province of California and extends approximately 215 miles from the San Francisco Bay to Humboldt Bay. The bulk of the Mendocino Range is made up of Franciscan basement rock overlain by Cretaceous sedimentary rocks. Redwood Valley is underlain by Quaternary sedimentary deposits and Franciscan Complex bedrock. Geologic units underlying the Project site consist of alluvial fan deposits, older alluvial deposits, and Ukiah formation, as described below (CGS 2021).

Undivided alluvial fan deposits (Holocene to latest Pleistocene). The undivided alluvial fan deposits consist of unconsolidated to weakly cemented, poorly sorted, gravel, sand, and silt. These deposits are chiefly from distributary streamflow and debris flows emanating from drainages off mountain fronts and recently active channels incised through older fan deposits. This unit is mapped where fan morphology suggests young or active depositions (CGS 2021). This unit underlies portions of the Power Block 1 site.

Older alluvial deposits (early Holocene to late Pleistocene). Older alluvial deposits consist of slightly consolidated, weakly to moderately cemented gravelly sand and silt deposited in stream and flood plain settings. This unit also locally includes alluvial fan deposits where not mapped separately. Deposits have been uplifted and preserved in terraces above recently active flood plains, typically about 40 to 50 feet above the active channel. The surfaces are dissected to varied degrees, with a moderately developed soil profile preserved locally (CGS 2021). This unit underlies a small portion of the Power Block 1 site and the entirety of the Power Block 2 site.

Ukiah formation (early Pleistocene to Pliocene). Pebble- to cobble-conglomerate, with interbedded silty sandstone, and clayey siltstone. Deposits are well consolidated, generally moderately indurated, with occasional well cemented sections and scattered calcareous concretions up to approximately two feet in maximum dimension. Clasts are mostly sub-rounded to well-rounded; some areas within the unit include scattered boulders to several feet in maximum dimension. The material appears entirely derived from the Franciscan Complex, and is dominated by clasts of sandstone, with lesser metavolcanic rock, chert, and vein quartz. Bedding in the unit is generally flat-lying or gently tilted, except near the Maacama Fault where it steepens (CGS 2021). This unit underlies a portion of the Power Block 1 site and may be present shallowly beneath the undivided alluvial fan and older alluvial deposits at the site.

Slope Stability

Important factors that affect the slope stability of an area include the steepness of the slope, the relative strength of the underlying rock material, and the thickness and cohesion of the overlying colluvium. The steeper the slope and/or the less strong the rock, the more likely the area is susceptible to landslides. The steeper the slope and the thicker the colluvium, the more likely the area is susceptible to debris flows. Another

indication of unstable slopes is the presence of old or recent landslides or debris flows. Landslides in Mendocino County have been a major part of the natural erosion process for tens of thousands of years. The rainy wet winters and relatively dry summers, the mountainous terrain, and commonly weak bedrock conditions all contribute to the development of landslides (Mendocino County 2020).

The Project site is gently sloping to the west-southwest with elevations ranging from approximately 748 to 713 feet above mean-sea level (MSL). The Mendocino County General Plan shows the Redwood Valley area as having generally no to low landslide susceptibility, with moderate to high susceptibility along the valley edge and on localized slopes within the valley (Mendocino County 2020). In the general Project area, landslides have been mapped on slopes underlain by Ukiah formation; however, no existing landslides are mapped at or adjacent to the Project site (CGS 2021). Therefore, due to the flat to gently sloping topography, there is little potential for slope failure at the Project site.

Soils

The soils underlying the site reflect the underlying rock type, the extent of weathering of the rock, the degree of slope, and the degree of human modification. Potential hazards/ impacts from soils include erosion, shrink-swell (expansive soils), and corrosion. The National Resource Conservation Service (NRCS) Soil Web Survey was reviewed to identify soil units and characteristics underlying the Project site (NRCS 2023). Only one soil unit was identified underlying the Project site, the Pinole gravely loam, with two to eight percent slopes. This soil is well drained and formed on terraces in alluvium derived from sedimentary rocks (NRCS 2023).

Potential soil erosion hazards vary depending on the use, conditions, and textures of the soils. The properties of soil that influence erosion by rainfall and runoff affect the infiltration capacity of a soil, as well as the resistance of a soil to detachment and being carried away by falling or flowing water. Soils on steeper slopes would be more susceptible to erosion due to the effects of increased surface flow (runoff) on slopes where there is little time for water to infiltrate before runoff occurs. Soils containing high percentages of fine sands and silt and that are low in density are generally the most erodible. As the clay and organic matter content of soils increases, the potential for erosion decreases. Clays act as a binder to soil particles, thus reducing the potential for erosion. Erosion potential, as identified by the NRCS, of the Pinole gravely loam is low for wind and low to moderate for water.

Expansive soils are characterized by their ability to undergo significant volume change (shrink and swell) due to variation in soil moisture content. Changes in soil moisture could result from a number of factors, including rainfall, landscape irrigation, utility leakage, and/or perched groundwater. Expansive soils are typically very fine grained with a high to very high percentage of clay. Soils with moderate to high shrink-swell potential would be classified as expansive soils. The expansive potential of the Pinole gravely loam ranges from low to moderate (NRCS 2023).

Subsidence

Land subsidence is a gradual settling or sudden sinking of the ground surface due to removal or displacement of subsurface earth materials. In California, subsidence is typically caused by human withdrawal of fluids such as groundwater or oil. As the fluid is withdrawn, the pore-fluid pressure in the sediments decreases allowing the weight of the overlying sediment to permanently compact or compress the sedimentary units. Land subsidence can occur in valleys containing aquifer systems that are, in part, made up of fine-grained sediments and that have undergone extensive groundwater development. The effect of subsidence is most pronounced in younger, unconsolidated sediments. Land subsidence is generally characterized by a broad zone of deformation where differential settlements are small. No subsidence has been documented in Mendocino County (USGS 2023a).

Seismicity

The Project site is in a seismically active area of northern California. Mendocino County is in an active earthquake area with five known faults or fault zones that traverse the county and are considered potentially active or active (Mendocino County 2020). The type and magnitude of seismic hazards affecting the site is dependent on the distance to active faults, the intensity and the magnitude of a seismic event, distance from the event, and geologic conditions underlying and surrounding the area.

There are several active and potentially active faults within 50 miles of the Project that have been identified as potential seismic sources by the United States Geological Survey (USGS) (USGS 2023b; USGS and CGS 2023), as summarized below in Table 5.7-1.

Table 5.7-1. Active and Potentially Active Faults in the Project Vicinity

Name	Closest Distance to Project (miles)[1]	Estimated Maximum Earthquake Magnitude[2]	Fault Type and Dip Direction[4]
Maacama-Garberville	1.8	7.4	Right Lateral Strike Slip, 90°
Bartlett Springs	18.6	7.3	Right Lateral Strike Slip, 90°
Collayomi	25.3	6.7	Right Lateral Strike Slip, 90°
San Andreas – includes various rupture combinations of the Offshore, North Coast, Peninsula, and Santa Cruz segments	31.6	7.4-7.9[3]	Right Lateral Strike Slip, 90°
Hunting Creek-Berryessa	43.2	7.1	Right Lateral Strike Slip, 90°
Great Valley 2	48.9	6.5	Thrust, 15°W
Great Valley 1	49.1	6.8	Thrust, 15°W

[1] Fault distances obtained from United States Geological Survey (USGS) 2008 National Seismic Hazard Maps – Fault Parameters website (USGS 2023c) and USGS Quaternary fault data (USGS and CGS 2023).
[2] Maximum Earthquake Magnitude – the maximum earthquake that appears capable of occurring under the presently known tectonic framework, magnitude listed is "Ellsworth-B" magnitude from the USGS 2008 National Seismic Hazard Maps – Fault Parameters website (USGS 2023c).
[3] Magnitude varies by rupture strategy, one or several segments of the fault rupturing in the same event.
[4] Fault parameters from the 2008 National Seismic Hazard Maps – Fault Parameters website (USGS 2023c).

The closest fault to the Project, the Maacama fault zone, is a north-northwest trending right lateral strike slip fault that is part of the San Andreas fault system and accommodates a large percentage of the plate boundary slip in the area. The Maacama fault is approximately 100 miles long, stretching between Santa Rosa and Laytonville, and consists of multiple fault segments. This fault has been determined to be active and is within an Alquist-Priolo Earthquake Fault Zone, as designated by the California Geologic Survey (CGS) for most of its length (CGS 2023a).

Fault Rupture

Fault rupture is the surface displacement that occurs when movement on a fault deep within the earth breaks through to the surface. Fault rupture and displacement almost always follow pre-existing faults, which are zones of weakness; however, not all earthquakes result in surface rupture (i.e., earthquakes that occur on blind thrusts do not result in surface fault rupture). Rupture may occur suddenly during an earthquake or slowly in the form of fault creep. In addition to damage caused by ground shaking from an earthquake, fault rupture is damaging to buildings and other structures due to the differential displacement and deformation of the ground surface that occurs from the fault offset leading to damage or collapse of structures across this zone.

The site is not crossed by any known active faults (USGS 2023a) and is not located within or across an Alquist-Priolo Earthquake Fault Zone as shown on the CGS Earthquake Zones of Required Investigation website (CGS 2023a). The closest known active fault to the site is the Alquist-Priolo zoned Maacama fault, located approximately 1.8 miles west of the Project.

Ground Shaking

The area is subject to ground shaking associated with earthquakes on faults of the San Andreas fault system. Several factors influence how ground motion interacts with structures, making the hazard of ground shaking hard to predict. What is normally felt during an earthquake are the vibrations caused by the seismic waves propagating through the earth's crust. These waves can vibrate in any direction and at many different frequencies, depending on the frequency content of the earthquake, its rupture mechanism, the distance from the seismic epicenter, and the path and material through which the waves are propagating.

Earthquake ground shaking potential is estimated to be very high based on the California Geological Survey published map of "Earthquake Shaking Potential for California" (CGS 2023b). The United States Geological Survey (USGS) National Seismic Hazard Map indicates that the Project is within an area of potential shaking of 120 to 160 percent g (gravity), which indicates very strong to severe ground shaking in the event of large local earthquakes (USGS 2014). Although no earthquakes of larger than M6.0 have occurred within 50 miles of the Project since 1900, 19 earthquakes greater than M4.5, and 1250 earthquakes between M3.0 and M4.5 have occurred within 50 miles of the Project, with numerous earthquakes along the nearby Maacama fault zone (USGS 2023c). Ground

shaking due to nearby and distant earthquakes should be anticipated during the life of the Project.

Liquefaction

Liquefaction occurs when loose, water-saturated sediments lose strength and fail during strong ground shaking; it is further defined by the CGS as the transformation of granular material from a solid state into a liquefied state as a result of increased pore-water pressure. Liquefaction usually occurs in areas with young, saturated unconsolidated sediments with groundwater levels of 50 feet or less. Excess water pressure is vented upward through fissures and soil cracks and can also result in a water-soil slurry flowing onto the ground surface. Lateral spreading is a potential hazard associated with liquefaction where extensional ground cracking and settlement occur as a response to lateral movement of liquefiable sediments and typically occurs adjacent to steep free face slopes or incised channels (PMC 2008). The Mendocino County General Plan Update Draft EIR (PMC 2008) identifies the Redwood Valley as containing potentially liquefiable soils. The area has not been mapped for liquefaction susceptibility by the CGS Seismic Hazards Program (CGS 2023a).

Seismic Slope Instability

Other forms of seismically induced ground failures that may affect the proposed Project area include ground cracking, and seismically induced landslides. Areas that are most susceptible to earthquake-induced landslides are steep slopes in poorly cemented or highly fractured rocks, areas underlain by loose, weak soils, and areas on or adjacent to existing landslide deposits. Landslides triggered by earthquakes have been a significant cause of earthquake damage; however, the Mendocino County General Plan shows the Redwood Valley area as having generally no-to-low landslide susceptibility (Mendocino County 2020). Although landslides have been mapped on slopes underlain by Ukiah formation north of the Project along drainage slopes, no existing landslides are mapped at or near the Project site (CGS 2021). Therefore, due to the flat to gently sloping topography, there is little potential for seismically triggered slope failure at the Project site.

Paleontological Resources

Paleontological resources—or fossils—are the remains of ancient plants and animals that can provide scientifically significant information about the history of life on earth. Paleontological resources are non-renewable because they are the remains of prehistoric animal and plant life. Paleontological potential is defined as the potential for a geologic unit to produce scientifically significant fossils. This sensitivity is determined by rock type, history of the geologic unit in producing significant fossils, and fossil localities that are recorded from that unit. Paleontological sensitivity is assigned based on fossil data collected from the entire geologic unit, not just at a specific site. Geologic units of Holocene age are generally considered to have low paleontological sensitivity, because biological remains younger than 10,000 years are not usually considered fossils.

The Project site is primarily located on previously disturbed and graded agricultural areas underlain by Holocene to Pleistocene sedimentary deposits, with a small area of Pleisto-

cene to Pliocene deposits (CGS 2021; Google Earth 2023). A search of the University of California Museum of Paleontology (UCMP) locality database identified just over 280 fossil localities in Mendocino County, with ages ranging from Pleistocene to Cretaceous, 5 of which are Pleistocene localities, and 12 are Pliocene localities. However, no localities are identified as specifically in the Redwood Valley or Ukiah Valley areas, nor for the Ukiah formation (UCMP 2023a). A site-specific record search by UCMP revealed no fossil finds at the Project site nor surrounding area (UCMP 2023b).

It is unlikely that any significant in-place fossil will be disturbed by the limited project grading in the portions of the Project that have been previously disturbed by agricultural activities; these areas have low paleontologic sensitivity as any fossils in the near surface have likely been moved out of place and damaged. The undivided alluvial fan deposits are too young to contain scientifically significant paleontological resources and are, therefore, considered to have low paleontological sensitivity. Undisturbed areas of older alluvium and Ukiah formation at the surface and underlying disturbed or younger alluvial deposits, however, may contain fossils of scientific significance and are of unknown paleontologic sensitivity.

Regulatory

Federal

Federal Emergency Management Agency (FEMA). The Federal Emergency Management Agency (FEMA) is responsible for providing aid in the event of an earthquake that results in significant damage. The National Earthquake Hazards Reduction Program is a nationwide program designed to reduce the risk to lives and property resulting from earthquakes in the United States. It is managed as a collaborative effort between FEMA, the National Institute of Hazards and Technology, the National Science Foundation, and the USGS.

Clean Water Act. The Clean Water Act (CWA) (33 U.S. Code § 1251 *et seq*.), formerly the Federal Water Pollution Control Act of 1972, was enacted with the intent of restoring and maintaining the chemical, physical, and biological integrity of waters of the U.S. The CWA requires states to set standards to protect, maintain, and restore water quality through the regulation of point-source and certain non-point-source discharges to surface water. Section 402 of the CWA establishes the National Pollutant Discharge Elimination System (NPDES) permit program to regulate point-source discharges of pollutants into waters of the U.S. Discharges or construction activities that disturb one or more acres are regulated under the NPDES stormwater program and are required to obtain coverage under a NPDES Construction General Permit. The Construction General Permit establishes limits and other requirements, such as the implementation of a Storm Water Pollution Prevention Plan (SWPPP), which would further specify best management practices (BMPs) and other measures designed to avoid or eliminate pollution discharges in waters of the U.S. The NPDES Program is a federal program that has been delegated to the State of California for implementation through the State Water Resources Control Board (SWRCB) and the nine Regional Water Quality Control Boards. Although the Project would not be

required to obtain a NPDES permit, as there are no waters of the U.S. on or near the Project site, the Applicant has committed to preparing at SWPPP or SWPPP-equivalent document for the Project.

State

California Building Code. The California Building Code (CBC) Title 24 provides building codes and standards for design and construction of structures in California. The CBC is based on the International Building Code (IBC) but has been modified for California conditions. The CBC contains requirements pertaining to multiple activities such as: excavation, site demolition, foundations and retaining walls, grading activities including drainage and erosion control, and construction of pipelines alongside existing structures. The proposed Project is subject to the applicable sections of the CBC. The Mendocino County Building Department is responsible for implementing the CBC for the Project. The Project would comply with applicable seismic design and construction criteria of the most recent CBC standards.

Chapter 16 of the CBC contains specific requirements for seismic safety. Chapter 18 of the CBC regulates excavation, foundations, and retaining walls. Chapter 33 of the CBC contains specific requirements pertaining to site demolition, excavation, and construction to protect people and property from hazards associated with excavation cave-ins and falling debris or construction materials. Chapter 70 of the CBC regulates grading activities, including drainage and erosion. Construction activities are subject to occupational safety standards for excavation, shoring, and trenching, as specified in the State of California Division of Occupational Safety and Health (commonly called Cal/OSHA) regulations (Title 8 of the CCR) and in Section A33 of the CBC. The CBC is selectively adopted by local jurisdictions, based on local conditions.

California Fire Code. Chapter 12, Section 1206 of the 2019 California Fire Code (CFC) provides provisions related to the installation, operation, and maintenance of Electrical Energy Storage Systems. Subsection 1206.2.4 – Seismic and Structural Design states that "Stationary storage battery systems shall comply with the seismic design requirements in Chapter 16 of the California Building Code and shall not exceed the floor-loading limitation of the building."

Alquist-Priolo Earthquake Fault Zoning Act. The Alquist-Priolo Earthquake Fault Zoning Act of 1972, Public Resources Code sections 2621–2630 (formerly the Special Studies Zoning Act) regulates development and construction of buildings intended for human occupancy to avoid the hazard of surface fault rupture. This Act groups faults into categories of active, potentially active, and inactive. Historic and Holocene age faults are considered active, Late Quaternary and Quaternary age faults are considered potentially active, and pre-Quaternary age faults are considered inactive. These classifications are qualified by the conditions that a fault must be shown to be "sufficiently active" and "well defined" by detailed site-specific geologic explorations to determine whether building setbacks should be established. (Note that since only those potentially active faults that have a relatively high potential for ground rupture are identified as fault zones, not all

potentially active faults are zoned under the Alquist-Priolo Earthquake Fault Zone, as designated by the State of California.)

The Seismic Hazards Mapping Act. The Seismic Hazards Mapping Act addresses seismic hazards such as strong ground shaking, soil liquefaction, and earthquake-related landslides. This act requires the State of California to identify and map areas that are at risk for these (and related) hazards. Cities and counties are also required to regulate development in the mapped seismic hazard zones. The primary method of regulating construction in these areas is through the permit process, and a permit cannot be issued until a geological investigation is completed.

California Public Resources Code, Sections 5097.5 and 30244. A person shall not knowingly and willfully excavate upon, or remove, destroy, injure, or deface, any historic or prehistoric ruins, burial grounds, archaeological or vertebrate paleontological site, including fossilized footprints, inscriptions made by human agency, rock art, or any other archaeological, paleontological or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over the lands. The code includes rules for legal punishment and restitution. Where development would adversely impact archaeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required.

Local

Mendocino County Building Code. Title 18 of the Mendocino County Code of Ordinances (Building Regulations) adopts and modifies several California Codes, including the California Building Code, the California Electrical Code, and California Fire Code. Title 18 also includes local regulations related to construction permits (Chapter 18.08) and excavation and grading (Chapter 18.70). Chapter 18.08 (Construction Permits) requires building permits to be obtained from the County for erection, construction, enlargement, alteration, repair, movement, improvement, occupation, removing, converting, or demolishing any building or structure in the unincorporated area of the County. Chapter 18.70 (Excavation and Grading) includes grading regulations and requirements for grading permits and regulations pertaining to cut and fill unless otherwise superseded by an engineering report and engineered grading plan; grading projects in excess of five thousand (5,000) cubic yards are required to have an engineered grading plan prepared by a civil engineer.

Title 16 of the County building code includes regulations related to Stormwater Runoff Pollution Prevention Procedures (Chapter 16.30) including regulations for implementation and adoption of best management practices to reduce the potential for pollutants to enter storm drain systems or waters of the U.S.

Mendocino County General Plan, Development and Resource Management Elements. The Development Element contains goals and policies to reduce potential risk related to geologic and seismic hazards, and to reduce potential adverse impacts (damage or destruction) to paleontological resources within the County. The Resource Management Element contains goals and policies to reduce impacts to soil resources within the

County. The following geologic and seismic hazards, paleontological resources, and soils resources goals and policies from the Development and Resource Management Elements are relevant to the Project.

Goal DE-24 (Safety). To reduce, to the extent possible, the risk and exposure of life, property, and the environment, to hazardous conditions and events such as earthquakes, landslides, wildfires, floods, inundation, energy emergencies, and toxic releases.

Goal DE-27 (Geologic Conditions). To locate and design development in a manner that avoids, or is compatible with, the risk posed by geologic and seismic hazards.

Goal RM-12 (Soil Resources). Protection, enhancement, and management of the soil resources of Mendocino County.

Policy DE-116. Paleontological resources studies shall be conducted at the County's discretion for all project applications. The studies should identify paleontological resources in a project area and provide mitigation measures for any resources in a project area that cannot be avoided.

- If, during the course of implementing County-approved projects any paleontological resources (fossils) are discovered, all work shall be halted immediately within 50 feet of the discovery, the County Planning and Building Services Department shall be immediately notified, and a qualified paleontologist shall be retained to determine the significance of the discovery.
- The County and project applicant shall consider the mitigation recommendations of the qualified paleontologist for any unanticipated discoveries. The County and project applicant shall consult and agree upon implementation of a measure or measures that they deem feasible and appropriate. Such measures may include avoidance, preservation in place, excavation, documentation, curation, data recovery, or other appropriate measures. The project applicant will implement the agreed upon mitigation measures necessary for the protection of paleontological resources.

Policy DE-252. All new buildings and structures shall comply with the uniform construction codes and other regulations adopted by the County and State to minimize geologic hazards.

> Action Item DE-252.1. Where appropriate, require geologic, seismic, and soil engineering information to evaluate, locate, and design development, especially critical and high occupancy structures, to minimize seismic and other geologic hazards.

Policy RM-64. Development shall be located, designed, constructed, and managed as follows to protect soil resources and minimize soil loss and erosion:

- Slopes over 15 percent: Limit land uses, densities, intensities and disturbances, vegetation removal, and hydrologic modifications on slopes exceeding 15 percent.

- Slopes 20 percent or more: In addition to standards for slopes over 15 percent, establish slope stability requirements for areas with, or directly adjacent to, slopes of 20 percent or greater within geologic units susceptible to slope failure and areas of mapped landslides.
- Slopes 30 percent or more: In addition to standards for slopes over 20 percent, discourage road and building site construction in areas that exceed 30 percent slopes or cross slopes.

Policy RM-62. Promote soil conservation practices by public and private landowners and managers.

Policy RM-65. Discourage development and conversion from rangeland to intensive agriculture in areas of known landslides or slopes where weak geologic materials are susceptible to failure.

5.7.2 Environmental Impacts

a. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

Construction, Operation, and Demolition

No Impact. The Project site is not traversed by, nor immediately adjacent to, any known active or Alquist-Priolo Earthquake Fault zoned faults. Therefore, there would be no impacts related to surface fault rupture at the Project site during construction, operation or demolition of the Project.

ii. Strong seismic ground shaking?

Construction, Operation, and Demolition

Less than Significant. Although no known active or potentially active faults underlie the area, seismically induced ground shaking along the active faults in the region could occur. The Project site has very high potential for earthquake shaking and potential for very strong to severe ground shaking (CGS 2023b; USGS 2014). Seismically induced ground shaking could result in damage to Project structures, which could result in adverse effects if not designed and engineered appropriately.

Construction workers will be onsite during the six- to nine-month construction and demolition periods, as well as the additional 10 week commissioning period, and would follow all local, State, and federal safety regulations. The facility would be remotely operated, and therefore, there would be no onsite workers or occupied structures as part of the

Project operations. Maintenance workers would only be onsite periodically to conduct routine and preventative maintenance and repair activities.

Potential impacts to the Project structures related to seismically induced ground shaking would be reduced through compliance with federal, State, and local regulations and standards, and established engineering procedures. A geotechnical investigation will be prepared for the Project and would include recommendations regarding geotechnical and engineering design. Project structures would be designed in accordance with geotechnical recommendations and the County of Mendocino Building and Fire Codes, based on the most recent CBC and CFC. The regulatory requirements put in place prior to final Project design and construction would minimize any potential impacts related to secondary seismic effects during construction, and operation and maintenance activities. Compliance with existing regulatory requirements and implementation of geotechnical design recommendations in the Project's final engineering design would reduce impacts of seismically induced ground shaking to less than significant.

iii. Seismic-related ground failure, including liquefaction?

Construction, Operation, and Demolition

Less than Significant. The Mendocino County General Plan Update Draft EIR notes that Redwood Valley contains potentially liquefiable sediments. A geotechnical investigation will be conducted for the proposed Project and will include recommendations for design to reduce any liquefaction impacts identified beneath Project structures. Additionally, the Project facilities and structures would be designed in compliance with State and local regulations and standards, and established engineering procedures. The Project site is flat to gently sloping with no significant free face slopes and therefore would not be subject to seismically induced lateral spreading. The impact of seismic-related ground failure including liquefaction that would result in substantial adverse effects is less than significant.

iv. Landslides?

Construction, Operation, and Demolition

No Impact. The Project is located on flat to gently sloping alluvial fans and would not be subject to construction triggered or naturally occurring landslides. Therefore, there is no potential impact to the proposed Project related to landslides during construction, operation and maintenance, or demolition.

b. Would the project result in substantial soil erosion or the loss of topsoil?

Construction and Demolition

Less than Significant. Due to the flat to gently sloping topography of the Project site, limited grading would occur. However, removal of vegetation, and excavation and grading for foundations, trenches, access roads, fences, sound wall, and equipment could loosen soil and accelerate erosion. Erosion potential of the soils throughout the Project site due

to wind is low and low to moderate for water. Although, the soil is rated low for wind erosion and low to moderate for water erosion (sheet and rill erosion), erosion by wind and water could occur in areas where the soil is loosened by construction and demolition activities.

Soil disturbance within the Project site would be greater than one acre; therefore, current regulations require that the proposed Project prepare and submit a project- specific Storm Water Pollution Prevention Plan (SWPPP). The site-specific SWPPP that will be prepared by the applicant will include development and implementation of Best Management Practices (BMPs) to identify and control erosion. Compliance with the project-specific SWPPP would reduce the potential for construction and demolition triggered erosion to less than significant.

Operation

Less than Significant. No ground disturbing activities would occur during Project operation and site access roads would be compacted and graveled, therefore, soil erosion from Project operation and maintenance activities would be less than significant.

c. Would the project be located on geologic units 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?

Construction, Operation, and Demolition

Less than Significant. As discussed above in Item (a)(iii) regarding liquefaction, the proposed Project would be constructed in an area with potentially liquefiable sediments and earthquake induced liquefaction could damage project structures. However, as noted previously, implementation of geotechnical recommendations to reduce liquefaction impacts and compliance with applicable local and State design regulations and engineering standards reduces any impacts from liquefiable soils to less than significant.

Additionally, as discussed above in Item (a)(iv) Landslides, there would be no impact from landslides as the proposed Project is located on and traverses flat to gently sloping terrain and would not be subject to landslides. The Project is not located in an area with known historic subsidence, and the Project will not construct any new groundwater extraction wells and would not contribute to subsidence. Thus, there would be no impact from subsidence.

d. Would the project be located on expansive soil, as defined in Section 1803.5.3 of the California Building Code (2022), creating substantial direct or indirect risks to life or property?

Construction, Operation, and Demolition

Less than Significant. Mapping by the NRCS indicates that the Project site is underlain by Pinole gravely loam, which has low to moderate expansion potential. Expansive soils could

impact the integrity and stability of foundations for the MDS battery systems and ancillary equipment, damaging the structures and potentially injuring workers. However, implementation of geotechnical design recommendations and compliance with local and State design requirements would reduce potential impacts from expansive soils to less than significant.

e. Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of waste water?

Construction, Operation, and Demolition

No Impact. During construction, the Project would use porta potties for construction workers, which would be serviced by licensed facilities. The porta potties would remain for use by the periodic PG&E workers and the occasional Form Energy maintenance workers. Because there would be no on-site staff, the proposed Project would not include any components requiring septic tanks or alternative wastewater systems. Therefore, there would be no impact.

f. Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Construction and Demolition

Less than Significant with Mitigation. The site is located on a gently sloping alluvial fan, there are no unique geologic features on the Project site. The proposed Project is anticipated to disturb the ground surface for excavation and grading. Most of the Project site surface has been disturbed by previous activities. No previous paleontological finds have been made at or near the site. Although it is unlikely that the limited Project excavation and grading would exceed the depths of previous disturbance, there is a chance that Project ground disturbance could potentially encounter undisturbed Pleistocene or older sediments that may contain unique paleontological resources or sites. The possibility that previously unknown paleontological resources could be discovered and damaged or destroyed during Project ground disturbance would potentially constitute a significant impact absent mitigation. Implementation of mitigation measures (MM) PR-1 and PR-2 would evaluate and protect unanticipated discoveries of unique paleontological resources or unique geologic features; thereby, reducing this potential impact to a less than significant level.

Operation

No Impact. No ground disturbance is anticipated during project operation, therefore there would be no impacts to paleontological resources or unique geological features.

5.7.3 Mitigation Measures

MM PR-1 **Worker Training and Management of Paleontological Resources.** A paleontologist must be retained who meets the professional paleontologist qualifications (Society of Vertebrate Paleontology's Standard Procedures, 2010) and has demonstrated experience in carrying paleontological projects to completion. The name and credentials of the paleontologist shall be submitted to the CEC for review and approval no less than 14 days prior to the commencement of the preparation of the Paleontological Worker Environmental Awareness Program (WEAP).

The qualified professional paleontologist shall prepare a WEAP and training shall be provided for all workers who will be onsite during excavations. The WEAP shall show what local Pleistocene and Pliocene fossils look like in general, where they may appear in the Project, and how to proceed should material suspected to be a fossil is encountered. The WEAP shall be submitted to the CEC for review and approval 60 days prior to the commencement of ground disturbing activities.

PR-2: **Paleontological Resources Management Plan.** The qualified paleontologist must develop and implement a Paleontological Resources Management Plan (PRMP) for the Project area that meets the standards set forth by the Society of Vertebrate Paleontology (2010). This PRMP shall be submitted to the CEC for review and 60 days prior to commencement of Project construction activities. The PRMP, at a minimum, shall include the following information:

- A monitoring plan for ground disturbing activities that provides the monitor(s) with the authority to temporarily halt or divert equipment. The Paleontologist shall determine a suitable monitoring schedule based on construction activities and anticipated depth of ground disturbance for sediments of unknown sensitivity. Monitors must have demonstrated sufficient paleontological training and field experience to have acceptable knowledge and experience of fossil identification, salvage and collection methods, paleontological techniques, and stratigraphy.
- Identification of personnel with authority and responsibility to temporarily halt or divert grading equipment to allow for recovery of unexpected fossils discovered during grading or excavation.
- A recovery plan for significant fossils that provides for the treatment of specimens to the point of identification and permanent preservation, including washing of sediments to recover small invertebrates and vertebrates, analysis and reporting, and final curation location.

5.7.4 References

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5.8 Greenhouse Gas Emissions

This section describes the environmental setting, regulatory background, and impacts associated with the construction, operation, and demolition of the Project with respect to greenhouse gas (GHG) emissions, and indirect, "non-stationary source" emissions from Project operation.

Greenhouse Gas Emissions **Would the project:**	**Potentially Significant Impact**	**Less Than Significant with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

Environmental checklist established by CEQA Guidelines, Appendix G, greenhouse gas emissions.

5.8.1 Environmental Setting

Physical Setting and Effects of GHG Emissions. The global climate depends on the presence of naturally occurring greenhouse gases (GHG) to provide what is commonly known as the "greenhouse effect" that allows heat radiated from the Earth's surface to warm the atmosphere. The greenhouse effect is driven mainly by water vapor, aerosols, carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), and other constituents. Globally, the presence of GHG affects temperatures, precipitation, sea levels, ocean currents, wind patterns, and storm activity.

Human activity directly contributes to emissions of six primary anthropogenic GHGs: CO2, CH4, N2O, hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF6). The standard definition of anthropogenic GHG includes these six substances under the 1997 Kyoto Protocol (UNFCCC 1998). The most important and widely occurring anthropogenic GHG is CO2, primarily from the use of fossil fuels as a source of energy.

Changing temperatures, precipitation, sea levels, ocean currents, wind patterns and storm activity provide indicators and evidence of the effects of climate change. For the period 1950 onward, relatively comprehensive data sets of observations are available. Research by California's Office of Environmental Health Hazard Assessment (OEHHA) reports certain climate change indicators by categorizing the effects as: changes in California's climate; impacts to physical systems including oceans, lakes, rivers, and snowpack; and impacts to biological systems including humans, vegetation, and wildlife. The primary observed changes in California's climate include increased annual average air temperatures, more-frequent extremely hot days and nights, and increased severity of drought. Impacts to physical systems affected by warming temperatures and changing

precipitation patterns show decreasing snowmelt runoff, shrinking glaciers, and rising sea levels. Impacts to terrestrial, marine, and freshwater biological systems, with resulting changes in habitat, agriculture, and food supply are occurring in conjunction with the potential to impact human well-being (OEHHA 2022).

GHG-Emissions Trends. California first formalized a strategy to achieve GHG reductions in 2008, when California produced approximately 484 million metric tons of CO_2 equivalent (MMTCO2e) according to the official Air Resources Board (ARB) inventory (ARB 2021). The economy-wide emissions have been declining in recent years, and California emitted approximately 369 MMTCO2e in 2020 (ARB 2022a). Globally, an estimated 33,000 MMTCO2e were added to the atmosphere through the combustion of fossil fuels in 2021, of which the United States accounted for approximately 14 percent. From approximately 1750 to 2021, concentrations of CO_2 have increased globally by 48.1 percent (EPA 2023). In this global context, California emits less than one percent of the global anthropogenic GHG.

Regulatory

State

California Global Warming Solutions Act of 2006. The California Global Warming Solutions Act of 2006 (Assembly Bill [AB] 32) required that California's greenhouse gas (GHG) emissions be reduced to 1990 levels by 2020. The reduction is being accomplished through an enforceable statewide cap on global warming emissions beginning in 2012. AB 32 directs the ARB to develop regulations and a mandatory reporting system to track and monitor global warming emissions levels (AB 32, Chapter 488, Statutes of 2006). AB 32 requires ARB to update the Scoping Plan at least every five years. Accordingly, the ARB released a 2022 Scoping Plan Update in November 2022 (ARB 2022b).

In passing AB 32, the California Legislature found that:

> Global warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California. The potential adverse impacts of global warming include the exacerbation of air quality problems, a reduction in the quality and supply of water to the state from the Sierra snowpack, a rise in sea levels resulting in the displacement of thousands of coastal businesses and residences, damage to marine ecosystems and the natural environment, and an increase in the incidences of infectious diseases, asthma, and other human health-related problems.

Other major Executive Orders, legislation, and regulations adopted for the purpose of reducing GHG emissions support the implementation of AB 32 and California's climate goals, and update the target, as described below.

California Governor's Executive Order B-30--15 and Senate Bill 32. Executive Order B-30--15 (April 2015) establishes a California greenhouse gas reduction target of 40 percent below 1990 levels by 2030. One purpose of this interim target of this executive order is to ensure California meets its target of reducing greenhouse gas emissions to 80 percent below 1990 levels by 2050. This executive order also specifically addresses the need for climate adaptation and directs state agencies to update the California Climate Adaptation Strategy to identify how climate change will affect California infrastructure and industry and what actions the state can take to reduce the risks posed by climate change. Senate Bill (SB) 32 of 2016 codifies this GHG emissions target to 40 percent below the 1990 level by 2030.

Clean Energy and Pollution Reduction Act of 2015. California's state policy objectives on long-term energy planning were updated with SB 350 legislation that was signed into law on October 7, 2015. The requirements include demonstrating through integrated resource planning how each energy service provider will continue to expand the use of renewable energy supplies in the mix of electricity delivered to end-use customers. With SB 350 California expanded the specific set of objectives to be achieved by 2030, with the following:

- To increase the Renewable Portfolio Standard (RPS) from 33 percent to 50 percent for the procurement of California's electricity from renewable sources; and
- To double the energy efficiency savings in electricity and natural gas end uses by retail customers.

California Governor's Executive Order B-55-18 and Senate Bill 100. Beyond 2030, Executive Order B-55-18 establishes a statewide goal for California to achieve carbon neutrality by 2045. In September 2018, SB 100—which revised and extended California's Renewables Portfolio Standard program—was signed into law. SB 100 accelerated the RPS targets and established the goals of 50 percent renewable energy resources by 2026 and 60 percent renewable energy resources by 2030. These RPS targets are codified according to compliance periods in Public Utilities Code Section 399.30, as follows: 33 percent by December 31, 2020; 44 percent by December 31, 2024; 52 percent by December 31, 2027; and 60 percent by December 31, 2030. SB 100 also sets a target for California to achieve a GHG-free electricity supply for 100 percent of retail sales of electricity to California end-use customers by December 31, 2045. The 2022 Scoping Plan Update assesses progress towards achieving the updated 2030 targets, while laying out a path to achieve the SB 100 target of carbon neutrality no later than 2045 (ARB 2022b).

Local

Mendocino County Development Element. The policies in this element are meant to create a more resilient community that is prepared for, responsive to, and recoverable from hazards created or made worse by climate change.

Mendocino County Multijurisdictional Hazard Mitigation Plan. As part of the Mendocino County MJHMP Update, a Climate Adaptation Vulnerability Assessment (CAVA) was prepared for the County and its residents to help them adapt to potential harm caused by climate change hazards. The CAVA analyzed both the unincorporated county areas and the cities of Fort Bragg, Point Arena, Ukiah, and Willits, which enables these jurisdictions to identify and take action to address potential conditions exacerbated by climate change. The CAVA also helps Mendocino County establish goals, policies, and programs that will be integrated into the safety element to make Mendocino County more resilient.

5.8.2 Environmental Impacts

The California Emissions Estimator Model (CalEEMod) was used to quantify potential GHG emissions associated with both construction and operation of the proposed project. The model quantifies direct emissions from construction and operation activities (including vehicle use), as well as indirect emissions, such as GHG emissions from energy use, solid waste disposal, vegetation planting and/or removal, and water use.

a. Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Construction/Demolition

Less than Significant. The proposed construction activities include mobilizing construction equipment, crews, and materials, excavating, and installing concrete foundations and equipment. These activities during construction would cause GHG emissions due to fuels used by the construction vehicles and equipment. Diesel and gasoline-powered construction equipment would include trucks for materials and crews, and the following types of equipment: grader, bulldozer, front-end loader, excavator, and a crane. Equipment and motor vehicles would directly emit CO2, CH4, and N2O due to fuel use and combustion, and motor vehicle fuel combustion emissions in terms of CO2e are approximately 95 percent CO2, and CH4 and N2O emissions occur at rates of less than 1 percent of the mass of combustion CO2 emissions. Emissions associated with commissioning passenger vehicle trips would be much lower than calculated construction emissions.

The resulting one-time aggregate quantity of GHG emitted during the six- to nine-month period of construction and similar period of demolition would be approximately 970 MTCO2e (Appendix A, Air Quality and GHG Emissions), based on use of the California Emissions Estimator Model (CalEEMod; v.2020.4.0). This equates to roughly 194 MTCO2e per year if averaged over the five-year life of the project. The MCAQMD has not adopted construction-related thresholds for GHG. Therefore, only operational-related significance thresholds are presented in this section. These project-level emissions would cease at the conclusion of construction and demolition and would be well below the threshold level of 1,100 MTCO2e per year that applies to projects other than stationary sources (MCAQMD 2010). Therefore, the impacts would be less than significant.

Operation

Less than Significant. Operation of the MDS battery system would not directly cause or create GHG emissions while charging and discharging. The energy that the MDS battery system would be storing is drawn from the electricity supply during times of surplus generation. It is likely that the MDS batteries would be charged mid-day, during excess solar renewable energy generation, when energy is the cheapest, and would be discharged during periods when energy is scarcer, more expensive, and when there would be little to no renewable energy generation. By storing energy at times of excess renewable generation and discharging when conventional natural gas-fired power plants would otherwise be dispatched, the battery system would provide a combustion-free source of stored energy during times when natural gas-fired power plants would cause higher GHG emissions. The MDS battery system has a round-trip efficiency of 35 percent; this means that 0.35 megawatt hours (MWh) would be discharged for every 1 MWh delivered by the local utility (PG&E) during charging.

Table 5.8-1 compares the GHG emissions intensities of the electric utility supply from PG&E that would be stored during charging against typical estimated emission factors for natural gas-fired power plants likely to be dispatched when energy is scarce. Because of the round-trip efficiency of the MDS battery system, discharging the full storage capacity of 500 MWh requires PG&E to supply approximately 1,429 MWh during charging.

Table 5.8-1. Comparison of GHG Emissions Intensities

Source of Electricity	GHG Emissions Intensity of Supply (MTCO2e/MWh)	Emissions to Fully Charge Battery, including Round-Trip Losses (MTCO2e)	Emissions of Producing 500 MWh from Natural Gas Resources (MTCO2e)
PG&E Electrical Utility Emission Factor	0.093	133	---
Natural Gas-Fired Combined-Cycle Power Plant	0.385	---	192
Natural Gas-Fired Advanced Combustion Turbine Power Plant	0.524	---	262

Sources: PG&E electrical utility emission factor (CAPCOA 2021); natural gas power plant emissions factors (CEC 2019).

The comparison of electricity supplies in Table 5.8-1 shows that the emissions related to fully charging the MDS battery system (133 MTCO2e) from the grid, including round-trip losses, would be less than the typical emissions that would otherwise be emitted by a natural gas-fired power plant producing the equivalent 500 MWh of supply (192 to 262 MTCO2e). Although there is energy loss during the charging and discharging cycles, the MDS battery system would have the overall beneficial effect of displacing GHG from energy generation.

Upon completion of construction, operation of the Project would not result in a notable incremental increase in GHG emissions from operation and maintenance activities, since operation would be remote, and there would be minimal maintenance. During operation, the quantity of GHG emitted directly by vehicles and equipment supporting the MDS battery system would be less than 1 MTCO2e per year (see Appendix A). These operational emissions would comply with, and be less than, MCAQMD's adopted project-level threshold of significance, which is annual emissions of less than 1,100 MTCO2e per year (MCAQMD 2010). Because the project would cause direct emissions at levels less than the applicable threshold and provide overall beneficial effects of displacing GHG from natural gas-fired power plants used for energy generation, this impact would be less than significant.

b. Would the project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Construction, Operation, and Demolition/Decommissioning

Less than Significant. California's regulatory setting for GHG emissions (see Section 5.8.1) ensures that most of the existing and foreseeable GHG sources in the electric power sector are subject to one or more programs aimed at reducing GHG. The 2022 Scoping Plan Update (ARB 2022b) provides an outline of actions to reduce California's GHG emissions. The scoping plan requires ARB and other state agencies to adopt regulations and other initiatives to reduce GHG emissions.

Mendocino County has not yet prepared and adopted a greenhouse gas reduction plan for the unincorporated areas of the county. (MCAQMD 2013.) However, the project is not anticipated to emit a significant amount of GHG emissions, which as described above, will be well below the project-level threshold of significance, which is annual emissions of less than 1,100 MTCO2e per year (MCAQMD 2010).

The proposed Project would generate limited quantities of direct GHG emissions from the construction, operation and maintenance, and demolition activities. The mix of power serving the end-use customers would not change as a result of the proposed Project. The proposed Project would improve the infrastructure used in delivery of PG&E's energy supply and would not affect PG&E's ability to supply renewable energy. By installing long-duration battery energy storage, the Project would improve PG&E's reliability and flexibility in delivery of electricity in compliance with California's RPS requirements. As described above, the MDS battery system would likely be charged mid-day, when there would be excess solar energy generation, and would be discharged to the grid at night, when the energy supply is reliant on fossil fuel generation, thereby displacing the need for GHG-emitting energy sources. Increasing the use of renewable generation in conjunction with energy storage is important to the overall objective of decarbonizing the electricity sector (ARB 2022b). Moreover, the proposed project would not conflict with local, MCAQMD, State, or federal regulations pertaining to GHG emissions.

Therefore, this impact would be less than significant.

5.8.3 Mitigation Measures

None required.

5.8.4 References

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5.9 Hazards and Hazardous Materials

This section describes the environmental setting, regulatory background, and impacts associated with the construction, operation, and demolition/decommissioning of the Project with respect to hazards and hazardous materials.

Hazards and Hazardous Materials Would the project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☒	☐	☐
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?	☐	☒	☐	☐
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☐	☒
f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☒	☐	☐
g. Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	☒	☐	☐

Environmental checklist established by CEQA Guidelines, Appendix G, Hazards and Hazardous Materials.

5.9.1 Environmental Setting

The Project site is located in Redwood Valley, a census-designated place in Mendocino County, California, located 9 miles (14 km) north of Ukiah. The population was 1,843 at the 2020 census.

Historically, the Project site has been used for agricultural uses, including a vineyard. No built environment and/or architectural improvements existed at the Project site in 1941 according to a historic aerial photo. The Mendocino Substation was built beginning in 1951 and was dedicated in June of 1952. In 2020, PG&E developed an equipment laydown and storage facility on land acquired from the historic vineyard and ranch to the north located at 751 Valley View Drive. This facility includes parking, equipment storage, and fencing. All building improvements on this property are less than four years old. All improvements are designed in a utilitarian style.

A Phase I Environmental Site Assessment (ESA) with a limited exploratory Phase II assessment was reviewed (Levine-Fricke 2002) and was found to be incomplete and lacking in specific information. It assessed only the land immediately north of the existing substation fence-line, which includes the area where Power Block 1 would be located. The area where an 880-foot cable trench would be located, and land in the southwest corner of the existing substation parcel where Power Block 2 would be located, has not been the subject of any known ESA. The Phase I ESA for the area that includes the proposed north power block found no PCBs above the Practical Quantitation Limit (PQL). Total Petroleum Hydrocarbons (as TPH-diesel, TPH-mineral oil, and TPH motor oil) were also analyzed in multiple spoil samples at three locations and found in one sample as TPH-motor oil at 44 mg/kg, less than any U.S. Environmental Protection Agency (US EPA) or California Environmental Protection Agency (CalEPA) health-based or reportable limit for an industrial site. No further site characterization was conducted. Metals and pesticides were not analyzed or reported.

To provide a better understanding of the Project site, a Phase II Site Characterization was conducted on October 2, 2023, by Risk Science Associates (see **Appendix D**). A Sampling and Analysis Plan (SAP; **Appendix D**) was prepared, analytes included were TPH (diesel and oil), pesticides and herbicides, metals, PCBs, and pH. In the samples collected and analyzed, metals which are naturally occurring in all soils were found to be below the natural background levels or range of concentrations expected for this area of California (USGS 1013; Napa County 2018). Additionally, one pesticide was detected in one sample. One sample was found to contain a very low level of Chlordane, a chlorinated pesticide used for agriculture in the United States until the US EPA banned all uses of Chlordane in 1983 except to control termites. In 1988, US EPA banned even that use. The level of Chlordane found at sample location SB-01 at about 3 to 6 inches soil depth (near the north fence-line of the proposed Power Block 1) was 4.31 micrograms per kilogram of soil, which is more than 81 times less than the most health-protective residential soil removal level of 350 micrograms per kilogram listed by the US EPA Regional Management Removal Levels [RMML] (US EPA 2023a) and 17,865 times less than the US EPA Regional Soil Screening Level for industrial use sites (US EPA 2023b). Aside from these naturally occurring metals and single pesticide, none of the samples were found to contain any of the remaining analytes listed in Appendix D above the analytical Reporting Limit (RL).

Airports

The nearest airport is Ukiah Municipal Airport, approximately 8 air-miles to the south. It is a public airport with no tower and one 44,000-foot-long runway (N-S). The Project does not fall within this airport's safety zone and therefore would not trigger a Federal Aviation Administration (FAA) review.

Schools

The nearest school to the Project is Coyote Valley School, located approximately 2,600 feet (about ½ mile) west-northwest from the Project site. Three other schools are located more than one mile north of the Project site.

Certified Unified Program Agency (CUPA)

The CUPA responsible for ensuring the implementation of state hazardous materials and hazardous waste laws, is Mendocino County Environmental Health Hazardous Materials Program located in Ukiah, California (Mendocino County 2023). This agency will review and approve the submittal of a Hazardous Material Management (Business) Plan and the Emergency Response and Emergency Action Plan prepared and submitted by Form Energy prior to the deployment of the multi-day energy storage (MDS) units.

Wildfire Hazards

The California Department of Forestry and Fire Protection (CAL FIRE) identifies and maps areas of significant fire hazards based on fuels, terrain, and other relevant factors. The maps identify this information as a series of Fire Hazard Severity Zones (FHSZ), which are progressively ranked in severity as un-zoned, moderate, high, and very high. State responsibility areas (SRA) are locations where the State of California is responsible for wildland fire protection. Local responsibility areas (LRA) are locations where the responding agency is the local county or city.

The entire Project site is located within the SRA. The portion of the Project site on which Power Block 1 would be built is currently classified by CAL FIRE as Very High Fire Hazard Severity. The location of Power Block 2 is classified as High Fire Hazard Severity. The FHSZ classification north of the Project site is Moderate, and south and east of the project is Very High. West of the Project site is an LRA with Moderate Fire Hazard Severity immediately adjacent to the Project and Unzoned Fire Hazard Severity further west. (CAL FIRE 2023). The Mendocino County Evacuation Plan (Mendocino County 2020) established the area in which the site is located as Zone 2N primarily for wildfire evacuation. East Road is an evacuation road subject to reverse flow and access control.

Emergency Response

The local fire department is the Redwood Valley - Calpella Fire Department with a station located 1.1 miles from the Project site. This station has approximately five full-time staff and about 16 volunteer line fire fighters, 12 vehicles including five engines, and two water tenders, and is equipped to provide rescue, EMT, and hazardous materials first response

(Robinson 2023). Back-up fire suppression would be provided by mutual aid from Ukiah, Hopland, Potter Valley, and CAL FIRE units. Hazardous materials spills backup would be provided by the Mendocino County Environmental Health, Hazardous Materials Program.

5.9.2 Regulatory Background

Hazardous substances are defined by federal and state regulations that aim to protect public health and the environment. Hazardous materials have certain chemical, physical, or infectious properties that cause them to be considered hazardous. Hazardous substances are defined in the federal Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) section 101(14), and also in Title 22, California Code of Regulations (CCR), section 66260.10 and California Health & Safety Code, section 25501, which defines a "hazardous material" as:

> "a material listed in paragraph (2) that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment, or a material specified in an ordinance adopted pursuant to paragraph (3)."

For this analysis, soil that is excavated from a site containing hazardous materials would be considered to be a hazardous waste if it exceeded specific Title 22, CCR criteria, criteria defined in CERCLA, or other relevant federal regulations. (See Definition of Hazardous Waste, tit. 22, CCR § 66261.3.) Remediation (cleanup and safe removal/disposal) of hazardous wastes found at a site is required if excavation of these materials occurs; remediation may also be required if certain other activities occur. Even if soils or groundwater at a contaminated site do not have the characteristics required to be defined as hazardous wastes, remediation of the site may be required by regulatory agencies with jurisdictional authority. Cleanup requirements are determined on a case-by-case basis by the agency taking lead jurisdiction.

Federal

Resource Conservation and Recovery Act. The federal Toxic Substances Control Act (1976) and the Resource Conservation and Recovery Act of 1976 (RCRA) established a program administered by the US EPA for the regulation of the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA was amended in 1984 by the Hazardous and Solid Waste Act, which affirmed and extended the "cradle-to-grave" system of regulating hazardous wastes. The use of certain techniques for the disposal of some hazardous wastes was specifically prohibited by the Hazardous and Solid Waste Act.

Comprehensive Environmental Response, Compensation, and Liability Act. Congress enacted CERCLA (the "Superfund" program) on December 11, 1980. This law provides broad federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment. CERCLA

established requirements concerning closed and abandoned hazardous waste sites; provides for liability of persons responsible for releases of hazardous waste at these sites; and establishes a trust fund to provide for cleanup when no responsible party could be identified. CERCLA also enables the revision of the National Contingency Plan. The National Contingency Plan provides the guidelines and procedures needed to respond to releases and threatened releases of hazardous substances, pollutants, and/or contaminants. The National Contingency Plan also establishes the National Priorities List. CERCLA was amended by the Superfund Amendments and Reauthorization Act on October 17, 1986.

Department of Transportation. The U.S. Department of Transportation is the primary federal agency responsible for regulating the proper handling and storage of hazardous materials during transportation (49 Code of Federal Regulations §§ 171-177 and 350-399).

State

Senate Bill 38 (2023, Laird, Chapter 377). On October 7, 2023, Governor Newsom signed Senate Bill 38 which amends the Public Utilities Code and requires each battery energy storage facility located in California to have an emergency response and emergency action plan for the premises of the facility. The owner or operator of each facility must coordinate with local emergency management agencies, unified program agencies, and local first response agencies, and submit the plan to the county and city if applicable where the facility is located.

California Environmental Protection Agency (CalEPA). CalEPA was created in 1991. Its creation unified California's environmental authority in a single cabinet-level agency and brought the California Air Resources Board, State Water Resources Control Board, Regional Water Quality Control Boards, Integrated Waste Management Board, Department of Toxic Substances Control (DTSC), Office of Environmental Health Hazard Assessment, and Department of Pesticide Regulation under one agency. These agencies were placed within the CalEPA "umbrella" for the protection of human health and the environment and to ensure the coordinated deployment of state resources. Their mission is to restore, protect, and enhance the environment, to ensure public health, environmental quality, and economic vitality.

The California Hazardous Waste Control Law. The California Hazardous Waste Control Law is administered by CalEPA to regulate hazardous wastes. Health and Safety Code section 25501 requires the proper handling of hazardous wastes, hazardous materials, and section (m) requires that a Hazardous Materials Business Plan (HMBP) be prepared and submitted to the local CUPA and fire departments that identify the hazardous materials at a business site and listing the amounts, concentrations, toxicity, reactivity, and fire potential, among other things.

Department of Toxic Substances Control. DTSC is a department within CalEPA and is the primary agency in California that regulates hazardous waste, cleans-up existing

contamination, and looks for ways to reduce the hazardous waste produced in California. DTSC regulates hazardous waste in California primarily under the authority of RCRA and the California Health and Safety Code. Other laws that affect hazardous waste are specific to handling, storage, transportation, disposal, treatment, reduction, cleanup, and emergency planning. It also determines the human and ecological risks posed by the spilling of hazardous materials and hazardous wastes.

California Occupational Safety and Health Administration (CalOSHA). CalOSHA is the primary agency responsible for worker safety related to the handling and use of chemicals in the workplace. CalOSHA standards are generally more stringent than federal regulations. The employer is required to monitor worker exposure to listed hazardous substances and notify workers of exposure (8 CCR 337-340) and protect workers from safety and health risks. Two major sections of CalOSHA regulations are the Construction Safety Orders (8 CCR 1500-1962) and the General Industry Safety Orders (8 CCR 3200-6184). The regulations specify requirements for employee training, availability of safety equipment, accident-prevention programs, and hazardous substance exposure warnings.

Department of California Highway Patrol. Department of California Highway Patrol is the primary agency responsible for enforcing the regulations related to the transport of hazardous materials on California roads and highway (13 CCR 1160-1167).

Fire Hazard Severity Zones (Pub. Resources Code, Sections 4201 4204). The purpose of establishing FHSZs is to provide for the classification of lands within SRAs in accordance with the severity of fire hazard present and identify measures to be taken to retard the rate of spreading and to reduce the potential intensity of uncontrolled fires that threaten to destroy resources, life, or property.

Local

Mendocino County. Duty to Report Unauthorized Releases and Threatened Releases (Ord No. 3653 and 3909). "The handler or any employee, authorized representative, agent or designee of a handler of any hazardous material shall, upon discovery immediately report any release or threatened release of a hazardous material to the local Fire Department, the [County's] Department of Public Health, Division of Environmental Health (Administering Agency for Chapter 6.95 of the California Health and Safety Code), and the Governor's Office of Emergency Services Warning Center. Compliance with this section does not release handlers from other reports required by State and Federal law. The County Administrator shall be notified of significant releases which may have a significant effect on County resources."

Mendocino County Multi-Jurisdictional Hazard Mitigation Plan. This multi-jurisdictional plan includes a risk assessment that identifies the natural hazards and risks that can impact a community based on historical experience, estimate the potential frequency and magnitude of disasters, identify areas of particular vulnerability, and assess potential losses to life and property. The plan also includes developed mitigation goals

and objectives as part of a strategy for mitigating hazard-related losses (Mendocino County 2021).

5.9.3 Environmental Impacts

a. Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Construction and Demolition/Decommissioning

Less than Significant Impact. During construction, the electrolyte solution used in the batteries, containing potassium hydroxide, would be transported only once to the site in tanker trucks that meet the U.S. Department of Transportation (DOT) safety regulations. The transportation route after leaving US-101 does not include passing by any schools, hospitals, or nursing homes. Therefore, the transportation route during construction/ demolition would not pose a significant risk to the public. Aside from the electrolyte, only a minimal amount of hazardous material (i.e., petroleum products) would be used during construction/demolition. No solvents would need to be used/stored on the site. All vehicles for transport, grading, and trenching would be re-fueled off-site; no on-site fuel depot would be used. No chemical weed control would be used. Only water or approved dust suppressants (calcium, magnesium and sodium chloride dry salts or brines) would be used. Therefore, impacts would be less than significant.

Operation

Less than Significant with Mitigation Incorporated. The only hazardous material used on-site during operations would be contained within the MDS units and consist of a battery electrolyte containing 25 to 35 percent potassium hydroxide. It is well known that all chemical reaction batteries use an electrolyte that creates a small amount of heat during the reaction while producing electricity, and upon recharging. The MDS batteries that would be used for this Project are no different. Thus, each module would have exhaust fans to remove heat from inside the module.

It is also well known that very small amounts of hydrogen gas are inadvertently released during this same chemical reaction (ACS Applied Energy Materials 2022). This is very similar to that produced by an automobile lead-acid battery when charging. Though the risk of fire or explosion is low, staff has proposed the implementation of mitigation measure (MM) HAZ-1 to further reduce this low risk. MM HAZ-1 would require the installation of hydrogen gas detectors and an exhaust fan in each MDS enclosure. The detectors would ensure that the fan would exhaust the enclosure to keep the hydrogen gas levels below the lower explosive limit (LEL) of 4%. If the exhaust fan were to fail, then the MDS units would shut down. Therefore, the implementation of MM HAZ-1 would reduce the risk of fire or explosion from hydrogen to a less than significant impact.

In addition, MM HAZ-2 requires that a thorough testing of the MDS units assessing the possibility of a thermal runaway reaction as per industry standard UL9540A would be

taken. UL Solutions, formerly known as Underwriters Laboratory, researches safety and development of standards that are mainly concerned with the risk from fires and electric shocks (UL Solutions 2023). The Federal Occupational Safety and Health Administration (OSHA) and Cal OSHA both require that almost all electrical devices and cables in workplaces meet the relevant UL standards. UL9540A is used to suggest mitigations to prevent flammable gases released during fire, battery overcharging, and other abnormal operating conditions within the energy storage system from creating an explosion. Results from the UL 9540A Test Method are used to address battery installation instructions, ventilation requirements, effectiveness of proposed fire protection systems, and fire service response strategy and tactics. The Project Owner has stated that the UL9540A testing will be conducted on a similarly designed unit located in another state no later than January 2025, well before installation of the units at this project site, thus allowing for any necessary revisions to safety measures. The units will not be operational until UL9540A testing demonstrates that they will operate within UL standards. Additionally, the electrolyte would be stationary and contained within the battery cells. The battery enclosures serve as secondary containment for the electrolyte within the housed batteries by providing space at the bottom for collection of any leaked electrolyte, up to a maximum of 10% of the total amount of electrolyte in any one unit. A leak detection system is included in each enclosure and thus any leaks would then be immediately pumped out. The units are also equipped with an automatic water re-fill system to replace evaporated water from the cells. All units are enclosed to prevent the entrance of rainwater. Therefore, no electrolyte would be released during operation of the system.

Workers would wear appropriate personal protective equipment (PPE), be trained to handle electrolyte and the working solution, be equipped with spill cleanup kits, and be trained in proper spill response in the event that a spill occurred during electrolyte fill.

Therefore, impacts would be less than significant with mitigation.

b. Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Construction and Demolition/Decommissioning

Less than Significant Impact. As described in the response to question **a**, only a minimal number of hazardous materials would be used during construction and demolition/ decommissioning. The electrolyte would be transported to the site in tanker trucks that meet DOT safety regulations and after five years would be removed by pumping out into a similar tanker truck. The modules will be removed to an out-of-state location for inspection and maintenance and the concrete pads demolished and removed. Therefore, bringing materials to/from the site would not pose a significant risk to the public during transportation.

Operation

Less than Significant with Mitigation Incorporated. The Project would not create a significant hazard to the public or environment due to an accidental release of a hazardous material. The only hazardous material proposed to be used on-site would be the electrolyte containing potassium hydroxide. It would exist only inside the battery modules. MM HAZ-1 and MM HAZ-2 would be implemented to limit the risk of upset and accident associated with the battery modules and electrolyte material contained within. Additionally, implementation of MM HAZ-3 would ensure that both energy storage power blocks would shut down in the event of an encroaching wildland fire. Therefore, impacts would be less than significant with mitigation.

c. Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Construction, Demolition/Decommissioning, and Operation

No Impact. The nearest school to the Project is Coyote Valley School, located approximately 2,600 feet (about ½ mile) west-northwest from the Project site. In addition, there are no hazardous materials that would be emitted from the site at rates capable of creating offsite impacts. Therefore, there would be no impact from construction, operations, or demolition.

d. Would the project be located on a site that 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?

Construction and Demolition/Decommissioning

No impact. According to a review of the EnviroStor and other databases, the Project site is not listed on the hazardous materials sites compiled pursuant to Government Code section 65962.5 (DTSC 2023). Furthermore, the present owner of the site states that it has no record or knowledge of any spill of hazardous materials or wastes occurred or were stored in the site. A Phase 1 ESA found only a low level of motor oil in the soil in the area north of the substation fence line where Power Block 1 would be located and no substances analyzed in a Phase 2 Site Assessment would pose a significant health impact to on-site workers or the off-site public.

Operation

No Impact. Operation and maintenance activities would not involve excavation activities and would therefore have no impact.

e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use

airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?

Construction, Demolition/Decommissioning, and Operation

No Impact. Because the Project site is located approximately 12 air-miles to the north of the only airport in the area, the Project is not located within an airport land use plan or safety zone.

f. Would the project impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan?

Construction and Demolition/Decommissioning

Less than Significant with Mitigation Incorporated. A review of the Mendocino County Multi-jurisdictional Hazard Mitigation Plan (January 2021) and the Mendocino County Evacuation Plan (July 2020) finds that the Project would be located within Evacuation Zone 2N primarily for wildfire evacuation (Mendocino County 2021, Mendocino County 2020). East Road is an evacuation road subject to reverse flow and access control. During Project construction/demolition, traffic levels would experience a minimal increase that is not expected to degrade traffic performance significantly. Short-duration lane closures of roadway lanes could be required during construction/demolition to accommodate delivery and haul away of oversize equipment such as the MDS enclosures and other equipment. However, implementation of MM TRANS-1 would ensure that oversized truck deliveries would be spaced out to allow time for trucks to enter and exit the Project site without causing congestion. Therefore, the Project would not result in inadequate emergency vehicle movements or impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan. Impacts would be less than significant with mitigation.

Operation

No Impact. The facility would be operated and monitored remotely, with staff onsite for quarterly maintenance; about 96 work hours would be required per quarter for maintenance. Therefore, there would be very few vehicle trips for maintenance and response to potential alerts generated by the monitoring systems. There would be no impact on an adopted emergency response plan or emergency evacuation route.

g. Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?

Construction/Demolition/Decommissioning

Less than Significant. During initial construction activities, the Project site would be removed of all vegetation and maintained as such throughout construction. During demolition/decommissioning, similar precautions will be taken. This would reduce the risk of wildfire from vehicles and construction or demolition/decommissioning tools/equipment. Therefore, impacts would be less than significant.

Operation and Maintenance

Less than Significant with Mitigation Incorporated. As discussed previously in question a, MM HAZ-1 and MM HAZ-2 would be implemented to reduce the risk of fire from the battery modules. Additionally, the MDS have exhaust fans to reduce heat within the modules as well as monitoring, detection, and alarms at a management system onsite.

The site would have a vegetation-reduced perimeter and in the event of a wildland fire encroaching up to that safety perimeter, and the thermal flux from a fire becomes a hazard, the entire system will be shutdown, as described in MM HAZ-3. Therefore, impacts associated with wildland fires would be less than significant with mitigation.

5.9.4 Mitigation Measures

Mitigation measures implemented would include the following:

MM HAZ-1 **Installation of Hydrogen Gas Detectors** The Project applicant shall install hydrogen gas detectors and an exhaust fan so that the level of hydrogen is kept below the lower explosive limit (LEL) of hydrogen (4% v/v; https://safe.engineering.asu.edu/hydrogen-gas) in the gas ducts and enclosure main volume. If the exhaust fan fails, then the MDS units shall shut down immediately. At least 30 days prior to the start of construction, the plans and specifications for the hydrogen detection and exhaust system shall be submitted to the Mendocino County Planning and Building Department for review and approval and to the CEC for review and comment. A letter from the Project applicant confirming the successful review of the hydrogen detection and exhaust system shall be sent to the CEC.

MM HAZ-2 **UL9540A Testing of MDS Battery Enclosures** The Project applicant shall submit a letter to the Mendocino Planning and Building Department and to the CEC 60 days prior to the start of construction. This letter shall affirm that the battery energy storage system meets the criteria of the UL9540A Test Method conducted by UL Solutions, or another certified OSHA Nationally Recognized Testing Laboratory (NRTL) organization.

MM HAZ-3 **Prepare an Emergency Response and Emergency Action Plan.** Sixty days prior to the start of construction, the Project applicant shall develop and submit electronically an Emergency Response and Emergency Action Plan for the Project to the California Environmental Reporting System (CERS; the statewide web-based system that supports the electronic exchange of required information among businesses, local governments, CalEPA, and the U.S. EPA), with a copy sent to the CEC for review and comment within 30 days of receipt. This Plan shall be consistent with the requirements of Public Utilities Code section 761.3 as amended effective January 1, 2024. The Project applicant shall develop

the plan in coordination with the Mendocino County Environmental Health CUPA and include among other things the designation of a local agency with the authority to order the Project to shut down due to events such as wildland fire. This Plan shall be reviewed and approved by the Mendocino County CUPA.

5.9.5 References

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5.10 Hydrology and Water Quality

This section describes the environmental setting, regulatory background, and impacts associated with the construction, operation, and demolition of the Project with respect to hydrology and water quality.

Hydrology and Water Quality Would the project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
a. Violate water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☐	☒	☐
b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☒	☐
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or through the addition of impervious surfaces in a manner which would:	☐	☐	☒	☐
i. result in substantial erosion or siltation, on- or offsite;	☐	☐	☒	☐
ii. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	☐	☐	☒	☐
iii. create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff; or	☐	☐	☒	☐
iv. impede or redirect flood flows?	☐	☐	☒	☐
d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☐	☒
e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☐	☒

Environmental checklist established by CEQA Guidelines, Appendix G, hydrology and water quality.

5.10.1 Environmental Setting

Surface Water

The proposed Project is located near the northern end of the Russian River Watershed which encompasses approximately 1500 square miles of forests, agricultural lands, and urban areas within Sonoma and Mendocino counties. The Russian River provides the water supply for approximately 500,000 people in Mendocino, Sonoma, and Marin counties. The Russian River is approximately 110 miles long and flows generally southward from its headwaters near Redwood and Potter valleys, to Mirabel Park, where the direction of flow changes to generally westward as it crosses part of the Coast Range (NCRWQCB 2023a).

Surface water features in the Project vicinity include the Russian River and Forsythe Creek to the west, Lake Mendocino and an unnamed creek to the south, and Salt Hollow Creek to the north (USGS 2023). Numerous unnamed tributaries to the Russian River are located along the main Russian River drainage further to the north and south of the Project. Lake Mendocino stores imported Eel River water and East Fork Russian River water. No drainage or water features are located on the proposed Project site; the closest water features to the proposed Project site are an unnamed intermittent stream with a water impoundment located approximately 300 to 600 feet south, the Russian River located approximately 1500 feet west, and Salt Hollow Creek located approximately 1600 feet north (USGS 2023).

Surface runoff in the watershed is derived almost entirely from rainfall and, thus, stream flow responds directly to the rainfall pattern with high stream flows dropping quickly without sustaining rainfall (Mendocino County 2020a). During the dry summer months, stream flow must be supplied from groundwater seepage, channel storage, reservoir storage, diversions, natural springs, and artesian wells. Surface water in Mendocino County is used for a variety of agricultural, urban, and industrial activities. The State Water Resources Control Board (SWRCB) Division of Water Rights has declared the Russian River tributaries fully appropriated from April 1 through December 14 and has developed various strategies to deal with diversions in the mainstem and tributaries (NCRWQCB 2023a).

The proposed Project site is located within the boundaries of the Redwood Valley County Water District (RVCWD) (Mendocino LAFC 2016). In 2016, the RVCWD delivered approximately 750 acre-feet per year (AFY) for residential and commercial uses, and 1,450 AFY for agricultural purposes, for a combined annual demand of 2,200 AFY. RVCWD water supply consists of a permit to divert up to 4,900 AFY directly from Lake Mendocino between November 1 and April 30 of each year when flows and storage meet specific criteria. During dry years when the RVCWD water permit is unusable, and during spring and summer, water supplies are diverted from the Mendocino County Russian River Flood Control and Water Conservation Improvement District (RRFC) (Mendocino LAFC 2016). The RRFC encompasses almost all of the Ukiah Valley, except small portions of Millview County Water District and Willow County Water District. RRFC's water right license

authorizes it to divert 7,960 AFY for domestic, municipal, irrigation and recreational purposes within the RRFC service area. This water is diverted and sold as raw water to public water systems for municipal use and to private agricultural entities, which use it for irrigation and frost protection purposes. Most surplus water goes to Redwood Valley County Water District (Ukiah Valley Basin GSA 2021).

Surface Water Quality

The Project area is under the jurisdiction of the North Coast Regional Water Quality Control Board (NCRWQCB, or Board). The Water Quality Control Plan for the North Coast Region (Basin Plan) establishes water quality objectives, including narrative and numerical standards, to protect the beneficial uses of surface and ground waters in the region (NCRWQCB 2018). The Basin Plan describes the implementation plans and other control measures designed to ensure compliance with statewide plans and policies, and documents comprehensive water quality planning.

The NCRWQCB defines beneficial uses for all surface and groundwater within the Board's Study Area which is defined as the jurisdictional areas of the NCRWQCB. It includes all basins including Lower Klamath Lake and Lost River Basins draining into the Pacific Ocean from the California-Oregon state line southerly to the southerly boundary of the watershed of the Estero de San Antonio and Stemple Creek in Marin and Sonoma counties. Beneficial uses of the waters of the state that may be protected against water quality degradation include, but are not necessarily limited to, domestic, municipal, agricultural, and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves (NCRWQCB 2018). Beneficial uses are protected or enhanced through water quality objectives outlined in the Basin Plan and as required by federal and state regulations (NCRWQCB 2018). In addition to water quality objectives, the Basin Plan defines total maximum daily load (TMDL) requirements to protect water quality from non-point source pollution.

The NCRWQCB's regulations include point source discharge (e.g., wastewater) prohibitions for the Russian River Watershed. Discharges are prohibited during the period of May 15 through September 30, limitations are set for between October 1 and May 14 of a maximum discharge rate of one percent of the receiving stream's flow as set forth in NPDES permits. In addition, any discharge of municipal waste during October 1 through May 14 shall be of advanced treated wastewater in accordance with effluent limitations contained in NPDES permits for each affected discharger. A long-standing effort by the Water Board to improve reliability and treatment levels of discharges has resulted in substantial improvements in the water quality of the Russian River and its tributaries.

Section 303(d) of the Clean Water Act requires the identification of waterbodies that do not meet, or are not expected to meet, water quality standards (33 United States Code §1313(d)). These impaired waterbodies are prioritized in the 303(d) list and the development of a TMDL is required. A TMDL is a written plan that describes how an impaired water body will meet water quality standards; a TMDL contains a measurable

feature to describe attainment of the water quality standard(s), a description of required actions to remove the impairment, and an allocation of responsibility among dischargers for actions or water quality conditions for which each discharger is responsible. TMDLs have been developed within the Study Area for the entire Russian River watershed which is impaired for sediment and temperature as well as pathogen, mercury, phosphorus, and dissolved oxygen impairments identified in waterbodies throughout the watershed (NCRWQCB 2023b).

Flooding

Encroachment on floodplains, such as structures and fill, reduces flood-carrying capacity, increases flood heights and velocities, and can increase flood hazards in areas beyond the encroachment itself. Flooding can be a major problem in almost any part of Mendocino County. In the inland areas of Mendocino County where the proposed Project is located, flooding typically occurs due to overbank flooding from excessive rainfall (Mendocino County 2020b). Localized flooding may occur outside of recognized drainage channels or floodplains due to a combination of locally heavy precipitation, increased surface runoff, and inadequate facilities for drainage and stormwater conveyance. Such events frequently occur in flat areas and urbanized areas with large impermeable surfaces.

In general, major floods in Mendocino County have resulted from extended periods of winter rainfall produced by winter storms from the Pacific Ocean (Mendocino County 2020b). Based on previous occurrences, Mendocino County can expect a serious flood event to occur every three to four years and during strong El Niño years (every seven to eight years). In recent years, areas affected by wildfires have also experienced flooding where vegetation has been removed and soils have become less permeable. These conditions generally exacerbate flood risk. The county's numerous rivers and streams present potential flooding and inundation hazards (Mendocino County 2020b).

FEMA has defined flood hazard zones with varying levels of flood risk on community Flood Insurance Rate Maps (FIRMs). To provide a national standard without regional discrimination, the one percent annual chance (100-year) flood has been adopted by FEMA as the base flood for floodplain management purposes. The 0.2 percent annual chance (500 year) flood is employed to indicate additional areas of flood hazard in the community. The National Flood Hazard Layer (NFHL) Viewer, which presents a compilation of effective FIRM databases and Letters of Map Changes, was reviewed for the Project area to identify flood zones at the proposed Project site. The proposed Project site is not located within, nor immediately adjacent to, any FEMA-identified flood hazard zones; it is in an area designated as having minimal flood hazard (FEMA 2023). The closest identified flood hazard zones (100-year and 500-year zones) are approximately 850 to 900 feet west of the proposed Project, located along the Russian River (FEMA 2023).

Dam failures are potentially the worst flood events. A dam failure is usually the result of neglect, poor design, or structural damage caused by a major event such as an earthquake. Two dams are near the Project area, the Coyote Valley Dam on Lake Mendocino

and the Lolonas Vineyards Reservoir dam. The Coyote Valley Dam at Lake Mendocino is overseen by the Army Corps of Engineers and does not have a dam breach inundation map; however, it is located on the East Fork of the Russian River and significantly downstream (approximately 3.3 miles south) of the proposed Project and, therefore, a dam failure would not cause flooding at the proposed Project site. The Lolonas Vineyards Reservoir dam, approximately 0.8-mile northeast of the proposed Project, is located in the Salt Hollow Creek drainage and the dam breach inundation map for it indicates that a breach of this dam would not affect the proposed Project site (DSOD 2023).

Groundwater

The proposed Project is located within the Ukiah Valley groundwater basin (Basin), which underlies the Ukiah Valley and the Redwood Valley, and the tributaries located in them (Ukiah Valley Basin GSA 2021). The Basin encompasses a surface area of 37,500 acres (59 square miles) and is 22 miles long and 4.6 miles wide at its widest section near the city of Ukiah. The Basin is bounded on all sides by the Coastal Ranges, primarily the Mendocino Range. The Russian River, and its tributaries, along with Lake Mendocino are the major surface water features within the Basin and the Russian River runs through the entire length of the Basin. Redwood Valley overlies the northern portion of the Basin.

The Basin is bounded on its sides by the Franciscan Formation of the Mendocino range and the bottom of the Basin is defined by the contact with the Franciscan Formation; greatest depth of the Basin in the Project area is estimated at approximately 1950 feet (Ukiah Valley Basin GSA 2021). The unconsolidated to loosely consolidated valley fill, which constitutes the Basin, consists of three formations: Quaternary (Recent) Alluvium, Pleistocene Terrace Deposits, and Pliocene/Pleistocene Continental Basin Deposits (Ukiah Valley Basin GSA 2021). In the Project area two principal aquifers have been identified: Aquifer I in Quaternary alluvium, and Aquifer II in the lower permeability Terrace Deposits and Continental Basin Deposits (Plio-Pleistocene sedimentary units). The greatest amount of available groundwater and flow is estimated to occur in the narrow and shallow band of unconsolidated sand and gravel along the Russian River (Ukiah Valley Basin GSA 2021).

Because the groundwater table in parts of the Basin can be relatively shallow, portions of the Basin with shallow aquifers are overlain by stream channels that are classified as interconnected surface water, primarily along the Russian River itself and its main tributaries. Interconnected surface water is linked hydraulically to the underlying groundwater aquifer (Ukiah Valley Basin GSA 2021).

There are no adjudicated subareas within the Basin and no alternative plans have been submitted for any part of the Basin (Ukiah Valley Basin GSA 2021). The Basin was categorized as a medium priority groundwater basin by the California Department of Water Resources under the Sustainable Groundwater Management Act (SGMA); a Groundwater Sustainability Agency—the Ukiah Valley Groundwater Sustainability Agency—oversees the groundwater basin and has prepared a Groundwater Sustainability Plan (GSP). The Basin was prioritized as medium prioritization due to factors related to its population, projected growth, irrigated acreage, number of supply wells, and reliance

on groundwater, however, it did not receive its priority due to overdraft, subsidence, water quality degradation, or any other factors relevant to adverse impacts on local habitat and local stream flows (Ukiah Valley Basin GSA 2021).

The GSP includes projects and management actions for the Ukiah Valley with the following objectives related to sustainable management criteria: to achieve the thresholds and objectives for the interconnected surface water sustainability indicator; to provide sufficient capacity for conjunctive use of groundwater and surface water to prevent water shortages during periods of low surface water availability; and to prevent the lowering of groundwater levels to protect wells from outages, preserve groundwater-dependent ecosystems, and avoid additional stresses on interconnected surface waters and their habitat (Ukiah Valley Basin GSA 2021). The projects and management actions in the GSP reflect a range of options to achieve the goals of the GSP and will be completed through an integrative and collaborative approach with other agencies, organizations, landowners, and beneficial users.

Groundwater supply is the secondary source of supply for most of the Basin and largely augments the surface water supply. Groundwater elevations in the Basin have been relatively stable over the past 30 years while showing small seasonal fluctuations (Ukiah Valley Basin GSA, 2021). Groundwater in the Basin generally flows southerly and towards the Russian River. Recent groundwater level measurements continue to show the stable conditions in the Basin for all aquifers. In the Redwood Valley region, groundwater depths in Aquifer I, based on very limited data, range from 4 to 11 feet below ground surface (bgs) with seasonal fluctuations of approximately 3 to 4 feet, and groundwater depth in Aquifer II vary from between 7 feet bgs to 140 feet bgs depending on the location of the well, with average seasonal fluctuations of approximately 8 feet (Ukiah Valley Basin GSA 2021).

Available storage in the principal aquifers has been estimated in existing literature to be between 60,000 to 120,000 acre-feet per year (Ukiah Valley Basin GSA 2021). A hydrologic model for the Basin was used to estimate the historical change in storage of the Basin for water years 1992 to 2018. The model showed that during this period storage in the Basin changed following water year types and precipitation patterns, decreasing during dry periods and increasing during above normal to wet periods. However, the changes to storage were determined to not be significant as the estimated cumulative storage change did not reach or exceed 1,500 acre-feet during this period (Ukiah Valley Basin GSA 2021). The Basin has not experienced a significant reduction in storage historically. Decreases in available water in storage due to prolonged dry periods were counterbalanced during wet periods (Ukiah Valley Basin GSA 2021).

Groundwater Quality

The Basin is regulated under the NCRWQCB and relevant water quality objectives (WQOs) and beneficial uses are contained in the Water Quality Control Plan for the North Coast Region (Basin Plan). For waters designated as having a Municipal and Domestic Supply beneficial use, the Basin Plan specifies that chemical constituents are not to exceed the

Primary and Secondary Maximum Contaminant Levels (MCLs) established in Title 22 of the California Code of Regulations (CCR) (Title 22) (Ukiah Valley Basin GSA 2021).

Groundwater in the Basin is generally of good quality and has relatively consistent water quality characteristics that meet local needs for municipal, domestic, and agricultural uses. Ongoing monitoring programs show that some constituents, including boron, iron, and manganese locally exceed water quality standards in parts of the Basin (Ukiah Valley Basin GSA 2021). These local areas of higher concentrations are primarily in the central and southern portions of the Basin. A locality with high specific conductivity has been identified in the northern portion of the Basin, just north of Lake Mendocino (Ukiah Valley Basin GSA 2021). High specific conductivity in groundwater can be due to the dissolution of rock and organic material and uptake of water by plants as well as anthropogenic activities including the application of fertilizers, discharges of wastewater, and discharges from septic systems or industrial facilities. High specific conductivity can be problematic as it can have adverse effects on plant growth and drinking water quality.

Regulatory

Federal

Clean Water Act (CWA). Formerly the Federal Water Pollution Control Act of 1972, the CWA was enacted with the intent of restoring and maintaining the chemical, physical, and biological integrity of the waters of the United States. The CWA authorizes the US Environmental Protection Agency (USEPA) to implement federal water pollution control programs such as setting water quality standards for contaminants in surface water, establishing wastewater and effluent discharge limits for various industry categories, and imposing requirements for controlling point and nonpoint source pollution. At the federal level, the CWA is administered by the USEPA and US Army Corps of Engineers (USACE). However, the CWA gives states the primary responsibility for protecting and restoring surface water quality. At the state and regional levels, the Act is administered and enforced by the SWRCB and the nine RWQCBs. The Project site is located within the North Coast Region, over which area the North Coast Region WQCB has primary responsibility for the protection of water quality.

Section 303 of the federal CWA (as well as the Porter-Cologne Water Quality Control Act, discussed further below) requires that states adopt water quality standards. Water quality standards consist of designated beneficial uses, numeric and narrative water quality criteria (also referred to as "water quality objectives" under state law) that protect beneficial uses, as well as the state and federal antidegradation policies. Each RWQCB has a Water Quality Control Plan (Basin Plan) that designates beneficial uses, establishes water quality objectives to protect the beneficial uses, and contains implementation programs and policies to achieve those objectives for all waters addressed through the Basin Plan.

Section 402 of the CWA provides that the discharge of pollutants to Waters of the United States from any point source is unlawful unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. NPDES permits contain

industry-specific, technology-based limits and may include additional water quality-based limits, and pollutant-monitoring requirements. An NPDES permit may include discharge limits based on federal or state water quality criteria or standards. Amendments to the CWA added a framework for regulating municipal and industrial stormwater discharges, as well as stormwater discharges from construction sites. In California, the SWRCB and the nine RWQCBs have been delegated permitting authority for discharges regulated by NPDES permits.

Section 404 of the CWA authorizes the USACE to regulate the discharge of dredged or fill material to the waters of the U.S. and adjacent wetlands. Filling of waters of the U.S. must be avoided where possible, and minimized and mitigated where avoidance is not possible. Permits are issued by the USACE.

Section 401 of the CWA requires that any applicant for a federal license or permit to conduct an activity that may result in a discharge into waters of the U.S. obtain a certification from the State in which the discharge originates that the discharge will comply with the applicable provisions of CWA Sections 301, 302, 303, 306, and 307. This certification ensures that the proposed activity complies with state water quality standards.

National Flood Insurance Act/Flood Disaster Protection Act. The National Flood Insurance Act of 1968 made flood insurance available for the first time. The Flood Disaster Protection Act of 1973 made the purchase of flood insurance mandatory for the protection of property located in Special Flood Hazard Areas. These laws led to mapping of regulatory floodplains and to local management of floodplain areas according to federal guidelines that include prohibiting or restricting development in flood hazard zones.

State

State Sustainable Groundwater Management Act. The 2014 SGMA requires local public agencies and Groundwater Sustainability Agencies (GSAs) in high- and medium-priority basins to develop and implement GSPs or alternatives to GSPs. GSPs are detailed road maps for how groundwater basins will be managed to reach long-term sustainability. The Ukiah Valley groundwater basin has been designated as a medium priority basin and the Ukiah Valley Groundwater Sustainability Agency prepared the Ukiah Valley GSP in 2021.

SWRCB Stormwater Program Construction General Permit. The Construction General Permit, issued pursuant to the federal CWA, regulates stormwater runoff from construction sites of one acre or more in size. The permit is a statewide, general order issued by the SWRCB and implemented and enforced by the RWQCBs. For all new qualifying projects, applicants must electronically file permit registration documents using the Stormwater Multiple Application and Report Tracking System (SMARTS), and must include a Notice of Intent (NOI), risk assessment, site map, and Storm Water Pollution Prevention Plan (SWPPP) to be covered by the Construction General Permit prior to beginning construction. The risk assessment and SWPPP must be prepared by a State-qualified SWPPP Developer.

The Construction General Permit requires the preparation and implementation of a SWPPP, which must be prepared before construction begins. At a minimum, a SWPPP includes the following:

- A description of construction materials, practices, and equipment storage;
- A list of pollutants likely to contact stormwater and site-specific erosion and sedimentation control practices;
- A list of provisions to eliminate or reduce discharge of materials to stormwater;
- Best management practices (BMPs) for fuel and equipment storage;
- Non-stormwater management measures such as installing specific discharge controls during activities such as paving operations, and vehicle and equipment washing and fueling; and
- A commitment that equipment, materials, and workers will be available for rapid response to spills and/or emergencies. All corrective maintenance or BMPs will be performed as soon as possible, depending upon worker safety.

California Porter-Cologne Water Quality Control Act. The Porter-Cologne Water Quality Control Act (Porter-Cologne Act, Water Code §13000 et seq.) establishes the SWRCB and each RWQCB as the principal state agencies with primary responsibility to coordinate and control water quality in California, in accordance with Section 303 of the CWA. The SWRCB establishes statewide policy for water quality control and provides oversight of the RWQCBs' operations. The RWQCBs have jurisdiction over specific geographic areas that are defined by watersheds. In addition to other regulatory responsibilities, the RWQCBs have the authority to conduct, order, and oversee investigation and cleanup where discharges, or threatened discharges, of waste to waters of the State could cause pollution or nuisance, including impacts to public health and the environment. Waters of the State is defined by the Porter-Cologne Water Quality Control Act as "any surface water or groundwater, including saline waters, within the boundaries of the State."

Actions that involve, or are expected to involve, discharge of waste to waters of the State (other than into a community sewer system) may be subject to Waste Discharge Requirements (WDRs) under the Porter-Cologne Act. The Act requires anyone proposing to discharge waste that could affect the quality of the waters of the State to submit an application to the appropriate RWQCB. The RWQCB staff will review the application and determine whether to propose adoption of WDRs to regulate the discharge, prohibit the discharge, or waive the WDRs. The Porter-Cologne Act also provides a variety of civil and criminal enforcement tools.

Sources of Drinking Water Policy (Resolution No. 8863). This policy designates all groundwater and surface waters of the States as potential sources of drinking water, worthy of protection for current or future beneficial uses, except where: (a) the total dissolved solids are greater than 3,000 milligrams per liter, (b) the well yield is less than

200 gallons per day (gpd) from a single well, (c) the water is a geothermal resource, or in a water conveyance facility, or (d) the water cannot reasonably be treated for domestic use using either best management practices or best economically achievable treatment practices (RWQCB 2019).

Local

Mendocino County Municipal Code. Chapter 16.30 – Stormwater Runoff Pollution Prevention Procedure, seeks to protect and enhance the water quality of watercourses, water bodies, and wetlands by reducing pollutants in stormwater discharges to the maximum extent practicable and by prohibiting non-stormwater discharges to the storm drainage system. This Ordinance is consistent with the requirements of the Clean Water Act, State Porter-Cologne Act, State NPDES permits, and statutes and regulations that amend or supplement those Acts or permits. The code includes, but is not limited to, regulations to prohibit illicit discharges, to reduce pollutants (including sediments) in stormwater, to remediate any discharge of pollutants, requirements for notification of spills, and empowers the County to conduct inspections and monitoring.

Chapter 18.70 – Excavation and Grading, sets forth rules and regulations to control excavation, grading and earthwork construction, including fills and embankments; establishes the administrative procedures for issuance of permits; and provides for approval of the plans and inspection of grading construction. This chapter includes regulations related to drainage and erosion control on graded slopes.

Mendocino County General Plan, Development and Resource Management Elements. The Development Element contains goals and policies to reduce potential risk related to flooding and inundation within the County. The Resource Management Element contains goals and policies to reduce impacts to water resources within the County, including watersheds, groundwater, water supply, and water quality. The following flooding and inundation, and water resources goals and policies from the Development and Resource Management Elements are relevant to the Project.

Goal DE-17 (Drainage): To protect residents and businesses from hazards caused by flooding.

Goal DE-18 (Flooding/Inundation): To protect life and property while also protecting and managing natural drainage ways, floodplains, and flood retention basins.

Goal DE-19 (Flooding/Inundation): To maintain flood carrying capacity in harmony with environmental, recreational, and open space objectives.

Goal RM-1 (Watersheds): Land uses, development patterns, and practices that facilitate functional and healthy watershed ecosystems.

Goal RM-2 (Water Supply): Protection, enhancement, and management of the water resources of Mendocino County.

Goal RM-3 (Water Quality): Land use development and management practices that protect or enhance water quality.

Policy DE-196: Development of residential, commercial, or industrial uses shall be supported by water supply and wastewater treatment systems adequate to serve the long-term needs of the intended density, intensity, and use.

Policy DE-197: Land use plans and development shall minimize impacts to the quality or quantity of drinking water supplies.

Policy DE-200: Emphasize land use compatibility and onsite floodwater retention to prevent or manage flooding.

Policy RM-3: Work cooperatively with property owners, agencies, and organizations to develop and support programs that maintain the integrity of stream systems for flood control, aquatic habitat, and water supply.

Policy RM-13: Local water resources should be reserved for in-county use.

Policy RM-14: Existing water uses shall have priority over new water uses.

Policy RM-15: Maximize the use of existing water supplies while proceeding with the development of new water supplies.

Policy RM-17: No development shall be allowed by the County beyond proof of the capability of the available water supply.

Policy RM-20: Require integration of stormwater best management practices, potentially including those that mimic natural hydrology, into all aspects of development and community design, including streets and parking lots, homes and buildings, parks, and public landscaping.

Policy RM-23: The County shall work with other responsible regulatory agencies to prevent the discharge or threatened discharge of sediment from any activity in amounts harmful to beneficial uses of the water.

5.10.2 Environmental Impacts

a. Would the project violate water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

Construction/Demolition

Less than Significant. Construction of the Project does not include extensive grading and ground disturbing activities, but would require excavation and grading for access roads, laydown areas, parking, foundations, sounds walls, and associated infrastructure.

Disturbance of soil during construction could result in soil erosion and lowered water quality through increased turbidity and sediment deposition into local streams.

Additionally, minimal quantities of hazardous wastes will be generated over the course of construction and will be disposed of at a properly permitted and licensed treatment and/or disposal facility.

Construction activities would include the use of heavy machinery and equipment such as bulldozers, backhoes, excavators, compaction equipment, and water trucks. The use of this construction equipment could result in the accidental release or spill of hazardous materials, including hydraulic oil, fuel, grease, lubricants, coolant, and other petroleum-based products. If leaked or spilled, these hazardous materials could contaminate a near-by waterbody either directly or indirectly through subsequent transport by stormwater runoff. Groundwater quality impacts could occur during construction if contaminated or hazardous materials used during construction were to be released and allowed to migrate to the groundwater table.

The potential for the proposed Project to result in contamination of a nearby waterbody or underlying groundwater by hazardous materials is minimal due to the short construction period of six to nine months, the small amount of construction equipment and associated hazardous materials to be used in construction of the proposed Project, and generally flat topography. The proposed Project would disturb approximately four acres in total and appropriate hazardous materials control and erosion control measures (including obtaining a NPDES permit and implementing a SWPPP) would be used throughout construction to comply with Clean Water Act NPDES requirements. The Applicant will comply with all applicable rules and regulations pertaining to transport, storage, and use of hazardous materials, which, would further reduce the potential for water quality contamination through the accidental release or spill of hazardous materials. Compliance with applicable permits, rules, and regulations would ensure this impact would be less than significant. The same requirements would apply to the demolition process, with impacts that would be less than construction.

Operation

Less than Significant. Potential threats to surface water or groundwater quality during operation and maintenance activities include potential increases in erosion and associated sediment loads to adjacent or downstream washes, and accidental spills of electrolyte during the initial filling of the batteries or of hydrocarbon fuels, greases, and other materials associated with equipment and vehicle use. Commissioning and maintenance teams would wear appropriate PPE, be trained to handle electrolyte, be equipped with spill cleanup kits, and be trained in proper spill response in the event that a spill occurs during electrolyte fill. The Applicant will comply with all applicable rules and regulations pertaining to transport, storage, and use of hazardous materials, which, would further reduce the potential for water quality contamination through the accidental release or spill of hazardous materials. Erosion control measures would be implemented for exposed surfaces potentially subject to soil erosion in compliance with applicable with local, State,

and federal permits and regulations to reduce erosion and transport of soil particles or turbid water from the site. Compliance with applicable permits, rules, and regulations would ensure this impact would be less than significant.

b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

Construction/Demolition

Less than Significant. Water for construction use is expected to be required for the entire anticipated six- to nine-month construction period. The estimated total water requirement for construction is approximately 3.5 acre-feet, and about 2.3 acre-feet for demolition. Construction/demoltion water would be used primarily for dust control and soil compaction, with minor amounts for concrete production and other purposes. Water for construction will likely be purchased from a local commercial water purveyor with existing water rights/allocations. Most local water purveyors in the proposed Project area rely on surface water sources, which are fully appropriated, from the Russian River, Eel River, and their tributaries. In the event water is not available from a local purveyor due to surface water curtailments or other supply issues, water for construction would be obtained and trucked to the proposed Project from regional water purveyors or obtained from local groundwater sources. Water use for project demolition would be similar.

Impervious structures on the Project site would be limited to foundations for the MDS Enclosures, auxiliary structures, water tanks, and sound walls. The ground surrounding the structures would remain permeable to groundwater recharge.

Although most water in the Project area is sourced from surface water sources, wells tapping local groundwater resources are present in the Basin. If the proposed Project is unable to obtain water from local surface water purveyors, groundwater sources may be used. The Basin shows stable groundwater levels, with seasonal fluctuations, over the last 30 years and based on modeling does not appear to be in a deficit or decreased storage condition (Ukiah Valley Basin GSA 2021). The short-term use of groundwater for construction/demolition would be unlikely to significantly reduce groundwater supplies. In the event groundwater resources were used for construction activities and purchased from an existing water purveyor, the purveyor would be subject to and have to comply with the Ukiah Valley Groundwater GSP regulations and requirements and local water regulations. Therefore, the proposed Project construction/demolition would have a less than significant impact related to decreasing groundwater supplies, interfering with groundwater recharge, or impeding sustainable groundwater management of the Basin.

Operation

Less than Significant. The proposed Project will use water to replenish electrolyte levels within the batteries. Water truck deliveries from a commercial water delivery service of approximately five water truck deliveries per month would occur and the water would be stored in two onsite 10,000-gallon tanks. Annually, this would equal approximately

60 water truck deliveries. Assuming an average sized water truck with a volume of approximately 5,000 gallons, this would equal approximately 300,000 gallons/year or 0.92 AFY. As noted above, most of the water supply in the Project area is from surface water sources, however, groundwater serves as secondary source with wells located in the Basin. As noted above for construction, water would likely be sourced from a local or regional commercial purveyor; the Basin shows stable groundwater levels, with seasonal fluctuations, over the last 30 years; and based on modeling does not appear to be in a deficit or decreased storage condition (Ukiah Valley Basin GSA 2021). The relatively small annual water requirement for operational activities would be unlikely to affect the Basin. If groundwater resources were purchased from an existing water purveyor and used for operational water supplies, the purveyor would be subject to and have to comply with the Ukiah Valley Groundwater GSP and local water regulations. Therefore, the proposed Project operation would have a less than significant impact related to decreasing groundwater supplies, interfering with groundwater recharge, or impeding sustainable groundwater management of the Basin.

c. Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or through the addition of impervious surfaces in a manner which would:

i. Result in substantial erosion or siltation, on- or offsite;

Construction/Demolition

Less than Significant. The proposed Project is located on a flat to gently sloping agricultural area. Minor grading and excavation for access roads, laydown and parking areas, MDS Enclosures, sound walls, and auxiliary structure foundations, and for pipelines and electrical conduit will occur during proposed Project construction that would loosen soil and potentially cause erosion or siltation. However, the Applicant would perform the following measures, as required by the Mendocino County Air Quality Management District, that would reduce erosion and sedimentation:

- A water truck will be used for dust control purposes. To minimize wind driven dust from the Project site, all clearing, grading, and significant ground disturbing activities will be stopped during periods where the wind speed exceeds 15 miles per hour (averaged over one hour). Water will be the primary means of dust control and suppression, but dust palliatives may also be used as needed. Water will be provided by a commercial bulk water delivery service.
- All visibly dry disturbed soil and road surfaces shall be watered to minimize fugitive dust emissions.
- All vehicles traveling over unpaved areas (including graveled roads) shall travel at speeds at or below 10 miles per hour. Signs identifying the maximum speed limit shall be placed at all site entrances during construction.

- Earth or other material tracked onto neighboring paved roads shall be removed promptly.
- Approved chemical soil stabilizers shall be applied to exposed earth surfaces in inactive construction areas and exposed stockpiles (i.e., sand, gravel, dirt).
- Access of unauthorized vehicles onto the construction site during non-working hours shall be prohibited.
- A daily log shall be kept of fugitive dust control activities.

Additionally, the proposed Project will be required to complete a SWPPP which will require best management practices to prevent and control erosion and siltation during construction and demolition. The proposed Project would comply with all applicable permits and regulations to reduce erosion and transport of soil particles or turbid water on- or offsite. All conditions of existing local and State water quality regulatory agency permits would be adhered to as well. Impacts related to erosion or siltation during construction and demolition would be less than significant.

Operation

Less than Significant. The proposed Project site would have minimal grading and the access roads would be compacted. The ground surrounding the MDS Enclosures and auxiliary structures would remain permeable, and sound walls shall be engineered in such a manner as not to impede stormwater flows. Therefore, the proposed Project is not expected to cause additional runoff. The proposed Project would not modify any drainage patterns or change absorption rates, or the rate and amount of surface runoff. Erosion control measures would be implemented for exposed surfaces potentially subject to soil erosion in compliance with applicable with local, State, and federal permits and regulations to reduce erosion and transport of soil particles or turbid water from the site. Impacts related to on- or offsite erosion or siltation during project operation and maintenance would be less than significant.

ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;

Construction and Operation

Less than Significant. The proposed Project is located on a flat to gently sloping agricultural area. Minor grading and earthwork would be required as part of construction activities. However, the minor grading would not result in the substantial increase in the rate or amount of surface runoff that would result in flooding on- or off-site. The Project would not modify any drainage patterns or change absorption rates, or the rate and amount of surface runoff. Therefore, any impacts would be less than significant.

iii. Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff; or

Construction and Operation

Less Than Significant. The proposed Project site is primarily flat to gently sloping and will require only minimal grading for access roads and to complete site leveling for parking and laydown areas, MDS Enclosures, sound walls, and auxiliary structures. However, the minor grading would not create or contribute runoff water, leading to the exceedance of the capacity of existing or planned stormwater drainage systems. In addition, the minor grading would not lead to an additional source of polluted runoff. Overall, impacts would be less than significant.

iv. Impede or redirect flood flows?

Construction and Operation

Less than Significant. As noted previously, only minimal site leveling and grading will occur on the proposed Project site. The proposed Project site is not within a FEMA-designated flood zone and no significant natural drainages cross the site. Access roads to the power blocks will cross existing manmade drainage swales; however, where access roads cross these drainage swales culverts would be installed, and water flows would not be impeded or redirected. The proposed Project does not include construction of any new drainage or diversion structures. Impervious structures would be limited to the foundations for the MDS Enclosures, sound walls, auxiliary structures, and water tanks. The proposed Project would, therefore, have a less than significant impact related to impeding or redirecting flood flows.

d. Would the project in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

Construction and Operation

No Impact. The proposed Project is not located within a flood hazard zone, a tsunami hazard zone, nor a dam inundation area. The likelihood of a seiche affecting the proposed Project site is negligible due to the distance from the closest body of water capable of producing a seiche, Lake Mendocino is located approximately 1.4 miles south of the proposed Project, and the intervening hills and highway. Therefore, there is no impact from risk release of pollutants due to flood hazard, tsunami, or seiche zones and subsequent Project inundation.

e. Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Construction and Operation

No Impact. The Ukiah Valley groundwater basin has been identified by SGMA as a medium priority basin and a GSP for the Basin has been prepared. The GSP includes projects and management plans to promote long-term resiliency and help maintain the Basin's conditions in the future. Additionally, the Water Quality Control Plan for the North Coast Region (NCRWQCB 2018) lists existing beneficial uses in the Project area as including municipal, agricultural, and industrial uses; use of water for the proposed Project would be an industrial beneficial use. The proposed Project does not include any features, such as a new well, surface water diversion, or discharge line, which would conflict with or obstruct implementation of the North Coast Region Water Quality Control Plan or the Ukiah Valley GSP. There is no impact from construction or operation and maintenance of the proposed Project associated with, conflicting with, or obstructing, a water quality control plan or sustainable groundwater management plan.

5.10.3 Mitigation Measures

None required.

5.10.4 References

DSOD 2023 – Department of Safety of Dams (DSOD). Dam Breach Inundation Map Web Publisher. Available online at: https://fmds.water.ca.gov/webgis/?appid=dam_prototype_v2. Accessed on: August 2023.

FEMA 2023 – Federal Emergency Management Agency (FEMA). FEMA's National Flood Hazard Layer (NFHL) Viewer. Available online at: https://hazards-fema.maps.arcgis.com/apps/webappviewer/index.html?id=8b0adb51996444d4879338b5529aa9cd. Accessed on: July 2023.

Mendocino County 2020a – Mendocino County General Plan, Resource Management Element Update. Available online at: https://www.mendocinocounty.org/home/showpublisheddocument/54487/638055061981600000. Accessed on: July 2023.

Mendocino County 2020b - Mendocino County General Plan, Development Element Update. Available online at: https://www.mendocinocounty.org/home/showpublisheddocument/54479/638055061911270000. Accessed on: July 2023.

Mendocino LAFC 2016 – Mendocino Local Agency Formation Commission (Mendocino LAFC). Redwood Valley County Water District Sphere of Influence Update, Adopted February 2016. Available online at: https://www.mendolafco.org/files/8f56c4d2d/Redwood+Valley+CWD+SOI+Update+Adopted+2-1-15+w+Reso.pdf. Accessed on: July 2023.

NCRWQCB 2023a – North Coast Regional Water Quality Control Board (NCRWQCB). Watershed Info, Russian River. Available online at: https://www.waterboards.ca.gov/northcoast/water_issues/programs/watershed_info/russian_river/. Accessed on: July 2023.

NCRWQCB 2023b – North Coast Regional Water Quality Control Board (NCRWQCB). Russian River Watershed Total Maximum Daily Loads (TMDLS). Available online at: https://www.waterboards.ca.gov/northcoast/water_issues/programs/tmdls/russian_river/#i. Accessed on: August 2, 2023.

NCRWQCB 2018 - North Coast Regional Water Quality Control Board (NCRWQCB). Water Quality Control Plan for the North Coast Region, dated June 2018. Available online at: https://www.waterboards.ca.gov/northcoast/water_issues/programs/basin_plan/190204/Final%20Basin%20Plan_20180620_lmb.pdf. Accessed on: July 2023.

Ukiah Valley Basin GSA 2021 – Ukiah Valley Groundwater Sustainability Agency (Ukiah Valley Basin GSA). Ukiah Valley Groundwater Sustainability Plan. Available online at: https://ukiahvalleygroundwater.org/wp-content/uploads/2023/01/GSP.pdf. Accessed on: July 2023.

USGS 2023 – United States Geological Survey (USGS). National Hydrography Dataset Plus High Resolution GIS Map Server. Available online at: https://hydro.nationalmap.gov/arcgis/rest/services/NHDPlus_HR/MapServer. Accessed on: August 2023.

5.11 Land Use and Planning

This section describes the environmental setting, regulatory background, and impacts associated with the construction, operation, and demolition of the Project with respect to land use and planning.

Land Use and Planning 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:	**Potentially Significant Impact**	**Less Than Significant with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
a. Physically divide an established community?	☐	☐	☐	☒
b. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒

Environmental checklist established by CEQA Guidelines, Appendix G, Land Use and Planning.

5.11.1 Environmental Setting

The Project would be located in Redwood Valley, a census-designated place in Mendocino County with a population of 1,843 at the 2020 Census. The Project site is located in a rural residential area along East Road less than a mile east of U.S. Route 101. The proposed Project's two power blocks and infrastructure would be installed on portions of two adjacent parcels that are owned by Pacific Gas & Electric (PG&E) and include the existing Mendocino Substation and an associated equipment and materials storage area. Surrounding land uses include undeveloped areas, rural residences and outbuildings, and agricultural land. The Project site has a General Plan land use designation of Public Services and is zoned Public Facilities (P-F) (Mendocino County 2009 and 2023a). The parcel to the north of the Project, adjacent to Power Block 1, is zoned Rural Residential, RR5. The parcels to the west of the Project (on the west side of East Road), near Power Block 2, are zoned RR2.

Regulatory

Federal

No federal regulations related to land use and planning apply to the Project.

State

No state regulations related to land use and planning apply to the Project.

Local

Mendocino County Inland Zoning Code (Division I of Title 20). The Mendocino County Inland Zoning Code is applicable to all properties within the unincorporated area of the County, exclusive of those areas known as the Coastal Zone. Under Mendocino

County's Zoning Code, both PG&E parcels are zoned P-F. This zoning district is intended to create and preserve those properties that are properly used for, or are proposed to be used for, public purposes or for specified public utility purposes. Permitted uses under the category Civic Use Types in the P-F zone include Major Impact Services and Utilities. Typical uses are "power generating facilities, sewage disposal facilities, septage disposal facilities and sites, sanitary landfills and water treatment plants, and radio, telephone and other commercial communication transmission towers and antennas." There is no minimum lot size in the P-F zoning district, and the maximum building height is 50 feet. No minimum yard requirements apply "except that any side or rear yard contiguous to any district other than commercial or industrial shall have a minimum side and/or rear setback as established for the contiguous district" (Mendocino County 2023b).

Mendocino County Title 18 Building Regulations Section 18.35.020

(A) Persons applying for a permit from the County for new construction, building additions or alterations, or demolition shall comply with the requirements of this Section and all required components of the California Green Building Standards Code, 24 CCR, Part 11, known as CALGreen, as amended, if its project is covered by the scope of CALGreen. If the requirements of CALGreen are more stringent than the requirements of this Section, the CALGreen requirements shall apply.

Mendocino County General Plan, Development Element. The following policies in the Mendocino County General Plan, Development Element, are applicable to the proposed Project (Mendocino County 2009):

Policy DE-21. Land Use Category: PS-Public Services

Intent: The Public Services classification is intended to be applied to lands presently being used for major public service facilities and to lands appropriately reserved for expansion of, or construction of, new public serving facilities.

General Uses: Sanitary landfills, cemeteries, airports, corporation yards, electric generating plants, power substations and other support facilities, schools, hospitals, civic centers, fairgrounds, utility installations, caretaker's dwelling unit.

Policy DE-35. Encourage compact development patterns, infill, redevelopment, and reuse in community areas to protect natural resources and maximize the efficient use of infrastructure and services.

- Land use and development standards shall encourage intensive uses, infill, and reuse projects within community areas.
- Encourage and facilitate mixed-use development in appropriate zoning designations.
- Maintain compact development patterns and limit sprawl by directing commercial, residential, and community use into community areas.

Policy DE-214. The County will seek to reduce the impacts of above-ground utilities. Standards and policies to reduce impacts include:

- Promoting the underground installation of utilities to reduce visual impacts to significant scenic resources.
- Locating utility systems in established corridors where possible.
- Ensuring that above-ground utilities are located and designed to minimize visual impact and clutter.
- Avoiding vegetation removal, new road construction, and silhouettes against the sky.
- Pursuing the undergrounding of utility lines in new development and in the downtown core of community areas.

5.11.2 Environmental Impacts

a. Would the project physically divide an established community?

Construction, Operation, and Demolition

No Impact. Project construction and operation activities would occur fully onsite and would not involve construction of infrastructure that could physically divide an established community. Construction, operation, maintenance, and demolition would occur on portions of two adjacent PG&E-owned parcels (APN 166--050-02-00 and APN 166-050-03-00) that include an existing substation and materials storage area. The proposed Project is consistent with the existing electrical utility facilities on the site. No properties in the surrounding area would be divided or otherwise changed by the Project. There would be no impact.

b. Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

Construction, Operation, and Demolition

No Impact. Construction and operation activities would occur on undeveloped portions of two parcels owned by PG&E, which include an existing substation. The battery modules would be connected to the substation and would provide additional grid reliability and support. The Project is a permitted use within the Public Facilities zoning district. Demolition would comply with Section 18.35.020 of Title 18 Building Regulations. For these reasons, Project construction, operation, and demolition would not conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. No impact would occur.

General Plan

The Project is consistent with the Mendocino County General Plan. The Project site's General Plan land use designation is PS-Public Services, as shown on the County's parcel search database. As stated in the description for Policy DE-21, the PS designation is intended to be used for major public service facilities and to ensure lands are appropriately reserved for expansion of, or construction of, new public serving facilities (Mendocino County 2009). The proposed Project is a long-duration battery energy storage facility that would connect to the existing Mendocino Substation and is, therefore, consistent with the description of uses allowed in the Public Services General Plan designation.

The Project is also consistent with Policy DE-35, which promotes infill projects to protect the use of natural resources. The Project would be constructed on vacant portions of two parcels owned by PG&E, directly adjacent to the existing Mendocino Substation and the supporting storage/maintenance yard. Therefore, this is an infill project that would make use of unused land around a substation.

The Project would also be consistent with Policy DE-214, which seeks to reduce impacts from aboveground utility infrastructure. The Project would underground the 880-foot medium voltage line connecting the power blocks to the pad-mounted switchgear. A 12--kV interconnection line would be built aboveground to connect to the existing aboveground distribution lines along East Road. This line would be built within the existing utility corridor, per Policy DE-214. Additionally, there would be no adverse visual impacts from aboveground utility infrastructure (see section **5.1, Aesthetics**). No impact would occur. (See section **5.4, Biological Resources** for an analysis of the potential effects of the Project on vegetation.)

Zoning Ordinance

The project location is zoned Public Facilities (P-F) and is subject to the Mendocino County Inland Zoning Code (Division 1 of Title 20) (Mendocino County 2023b). The intent of the P-F zoning district is to create and preserve those properties that are properly used for, or are proposed to be used for, public purposes or for specified public utility purposes. The proposed Project is a permitted use as a Major Impact Services and Utilities facility. There is not a minimum lot area or minimum front yard size for projects in the P-F zoning district. Section 20.108.035 of the Zoning Code requires a minimum side and rear setback if the project is contiguous to any district aside from commercial and industrial. The parcels on which the project would be located are surrounded by Rural Residential (RR) zoning; RR setback distances are dependent on the size of the parcel. The parcel to the north of the Project, adjacent to Power Block 1, is zoned RR5, indicating a 5-acre minimum and requiring a 30-foot setback for front, rear, and side yards. The parcels to the west of the Project (on the west side of East Road), near Power Block 2, are zoned RR2, indicating a 2-acre minimum and requiring a 20-foot setback for front, rear, and side yards. As shown in **Figure 4-3 Site Plan** in section **4, Project Description**, the power

blocks would have a minimum 30-foot setback from the edge of the PG&E parcels. The Zoning Code establishes a maximum building height of 50 feet in the P-F zoning district. The Zoning Code defines the height of a building as the "vertical distance from the average ground level of the building to the highest point of the roof ridge or parapet wall" (Mendocino County 2023b). No proposed Project facilities would exceed 50 feet in height, and no buildings with roofs are proposed (see section **4, Project Description**). Requirements for permitted uses in the P-F zoning district would be satisfied; therefore, the Project complies with the Zoning Code. No impact would occur.

5.11.3 Mitigation Measures

None required.

5.11.4 References

Mendocino County 2009 – Mendocino County Department of Planning and Building Services. Mendocino County General Plan: Development Element. Adopted August 2009, revised 2021. Figure 3-16 Land Use Policy Map, p. 3-71; pp. 3-81 and 3-85. Accessed on June 6, 2023. Available online at: https://www.mendocinocounty.org/government/planning-building-services/plans/mendocino-county-general-plan

Mendocino County 2023a – Mendocino County Department of Planning and Building Services. 2023. *Zoning Web Map*. Accessed on June 21, 2023. Available online at: https://www.mendocinocounty.org/government/planning-building-services/zoning-web-map

Mendocino County 2023b – County of Mendocino Title 20 Zoning Ordinance. Inland Zoning Code Division I. Chapter 20.008 Definitions, section 20.008.002; Chapter 20.020 Civic Use Types, section 20.020.075; and Chapter 20.108 P-F Public Facilities District. Current through July 2023. Accessed on August 28, 2023. Available online at: https://library.municode.com/ca/mendocino_county/codes/code_of_ordinances?nodeId=MECOCO_TIT20ZOOR_DIVIMECOZOCO_CH20.008DE

5.12 Minerals

This section describes the environmental setting, regulatory background, and impacts associated with the construction, operation, and demolition of the Project with respect to mineral resources. Analysis of impacts is limited to Project components where ground disturbance would occur, and operation of new facilities would limit access to mineral resources.

Minerals Would the project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State?	☐	☐	☒	☐
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?	☐	☐	☐	☒

Environmental checklist established by CEQA Guidelines, Appendix G, Minerals.

5.12.1 Environmental Setting

Information on mineral resources was compiled from published literature and maps. Impacts to mineral resources from Project construction/demolition and operational activities were evaluated qualitatively based on the area occupied by the Project, site conditions, expected construction practices, anticipated materials used, and the locations and duration of Project construction, operational, and demolition activities.

The Project site is located within Redwood Valley, an unincorporated census-designated place in Mendocino County. No Surface Mining and Reclamation Act (SMARA) classification has occurred in or surrounding the Project area. Additionally, there is no Mineral Resource Zone (MRZ) classification for the Project area. According to the Mendocino County General Plan, Resource Management Element, the most predominant minerals found in Mendocino County are aggregate resources, primarily sand and gravel (Mendocino County 2020).

Regulatory

Federal

No federal regulations related to mineral resources apply to the Project.

State

Surface Mining and Reclamation Act. The California Surface Mining and Reclamation Act of 1975 (SMARA) requires that the State Geologist classify land into MRZ or Scientific

Zones according to the known or inferred mineral potential of the land (Pub. Resources Code, §§ 2710-2796).

MRZs are defined as the following (DOC 2022):

- MRZ-1: Areas where available geologic information indicates that little likelihood exists for the presence of significant mineral resources.
- MRZ-2: Areas where adequate information indicates that mineral deposits are present, or where it is judged that a high likelihood for their presence exists. This zone shall be applied to known mineral deposits or where well-developed lines of reasoning, based upon economic-geologic principles and adequate data, demonstrate that the likelihood for occurrence of significant mineral deposits is high.
- MRZ-3: Areas containing mineral occurrences of undetermined mineral resource significance.
- MRZ-4: Areas where available information is inadequate for assignment to any other MRZ category.

Scientific Zones are defined as: Areas containing unique or rare occurrence of rocks, minerals, or fossils that are of outstanding scientific significance shall be classified in this zone.

Local

Mendocino County General Plan, Resource Management Element. The Resource Management Element contains goals and policies to reduce impacts to mineral resources within the County. The following policy is presented in the Mendocino County General Plan, Resource Management Element (Mendocino County 2020).

Policy RM-69. Restrict development that conflicts with the extraction of essential mineral deposits when maps become available from the State Geologist under the California Surface Mining and Reclamation Act.

5.12.2 Environmental Impacts

a. Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State?

Construction, Operation, and Demolition

Less than Significant. Based on the Mendocino County General Plan, there is a potential for aggregate to exist within the Project Area. Any aggregate located underneath the Project footprint would be inaccessible throughout the six- to nine-month construction period and five-year operational period. Upon demolition of the Project, access would be restored. Thus, impacts would be less than significant.

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

Construction, Operation, and Demolition

No Impact. The Project site does not contain any known or designated mineral resource recovery sites, nor are there mineral resource recovery sites located within 0.25 mile of the Project area (DOC 2023; and DOC 2019). Therefore, the Project would not result in the loss of availability of a locally important mineral resource recovery site.

5.12.3 Mitigation Measures

None required.

5.12.4 References

DOC 2022 – California Department of Conservation (DOC). Special Report 253 - Mineral Land Classification: Portland Cement Concrete Aggregate in the Western Ventura County and Simi Production-Consumption Regions. Available at: https://www.conservation.ca.gov/cgs/minerals/mineral-land-classification-smara#guidelines-and-petition. Accessed on August 10, 2023.

DOC 2023 – California Department of Conservation (DOC). Well Finder. Available at: https://maps.conservation.ca.gov/doggr/wellfinder/. Accessed on July 26, 2023.

DOC 2016 – California Department of Conservation (DOC) Division of Mine Reclamation. Mines Online. Available at: https://maps.conservation.ca.gov/mol/index.html. Accessed on July 26, 2023.

Mendocino County 2020 – Mendocino County. Mendocino County General Plan: Resource Management Element. Adopted August 2009, updated 2020. Available at: https://www.mendocinocounty.org/home/showpublisheddocument/54487/638055061981600000. Accessed on June 6, 2023.

5.13 Noise

This section describes the environmental setting, regulatory background, and discusses impacts associated with the construction, operation, and demolition of the Project with respect to noise and vibration.

Noise	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	☐	☒	☐	☐
b. Would the project result in generation of excessive groundborne vibration or ground-borne noise levels?	☐	☐	☒	☐
c. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

Environmental checklist established by CEQA Guidelines, Appendix G, Noise.

5.13.1 Environmental Setting

Existing Conditions

Community Noise. To describe environmental noise and to assess Project impacts on areas that are sensitive to community noise, a measurement scale that simulates human perception is used. The A-weighted scale of frequency sensitivity accounts for the sensitivity of the human ear, which is less sensitive to low frequencies, and correlates well with human perceptions of the annoying aspects of noise. The A-weighted decibel scale (dBA) is cited in most noise criteria. Decibels are logarithmic units that can be used to conveniently compare wide ranges of sound intensities.

Community noise levels can be highly variable from day-to-day as well as between day and night. For simplicity, sound levels are usually best represented by an equivalent level over a given time period (Leq) or by an average level occurring over a 24-hour day-night period (Ldn). The Leq, or equivalent sound level, is a single value (in dBA) for any desired duration, which includes all of the time-varying sound energy in the measurement period, usually one hour. The L_{50} is the median noise level that is exceeded 50 percent of the time during any measuring interval. The Ldn, or day-night average sound level, is equal to the 24-hour A-weighted equivalent sound level with a 10-decibel penalty applied to

nighttime sounds occurring between 10:00 p.m. and 7:00 a.m. The Community Noise Equivalent Level (CNEL) is the average equivalent A-weighted sound level during a 24-hour day, obtained after addition of five decibels to sound levels in the evening from 7:00 p.m. to 10:00 p.m. and after addition of 10 decibels to sound levels in the night from 10:00 p.m. to 7:00 a.m. To easily estimate the day-night level caused by any noise source emitting steadily and continuously over 24-hours, the Ldn is 6.4 dBA higher than the source's Leq. For example, if the expected continuous noise level from equipment is 50.0 dBA Leq for every hour, the day-night noise level would be 56.4 dBA Ldn.

Community noise levels are usually closely related to the intensity of human activity. Noise levels are generally considered low when below 45 dBA, moderate in the 45 to 60 dBA range, and high above 60 dBA. In wilderness areas, the Ldn noise levels can be below 35 dBA. In small towns or wooded and lightly used residential areas, the Ldn is more likely to be around 50 or 60 dBA. Levels around 75 dBA are more common in busy urban areas, and levels up to 85 dBA occur near major freeways and airports. Although people often accept the higher levels associated with very noisy urban residential and residential-commercial zones, they are considered to be adverse to public health.

Surrounding land uses dictate what noise levels would be considered acceptable or unacceptable. Lower levels are expected in rural or suburban areas than what would be expected for commercial or industrial zones. Nighttime ambient levels in urban environments are about seven decibels lower than the corresponding daytime levels. In rural areas away from roads and other human activity, the day-to-night difference can be considerably less. Areas with full-time human occupation and residency are often considered incompatible with substantial nighttime noise because of the likelihood of disrupting sleep. Noise levels above 45 dBA at night can result in the onset of sleep interference. At 70 dBA, sleep interference effects become considerable (U.S. EPA, 1974).

Noise Environment in the Project Area. The Project area has a general plan land use designation of "Public Service" and is zoned as "Public Facility." The principal arterial roads, such as U.S. 101, SR 20, and East Road, near the Project site, cause traffic noise. The environmental noise assessment measured the ambient noise levels in the vicinity of residential land uses along East Road at two sites, LT-1, and LT-3, and along Valley View Drive including LT-5 and LT-6. Noise levels at LT-1 and LT-3 were dominated by traffic noise, with both sites showing average L_{50} noise levels during the daytime of 54 dB and nighttime hours of 46 dB. The average ambient L_{50} noise levels at the residential land uses along East Road exceed the noise level standards of 50 dB during the daytime and 40 dB during the nighttime and would thus become the maximum allowable noise level at the residential land uses. Average ambient L_{50} noise levels at two sites, LT-5 and LT-6 in the vicinity of residential property lines off Valley View Drive, both show average L_{50} noise levels during the daytime of 45 dB and nighttime hours of 44 dB. Because the nighttime noise level of 44 dB exceeds the nighttime standard of 40 dB, it becomes the maximum nighttime allowable noise level at the residential land uses. (Mendocino County 2005) The Project is located approximately 8 miles from the nearest airport and is not within an airport noise contour.

Noise Sensitive Areas. The area immediately around the Project includes agricultural and residential uses. The parcels directly to the north and south of the project are zoned as Rural Residential, 5-acre minimum. The parcels directly to the east are zoned as Rural Residential, 10-acre minimum. The parcels to the west, across East Road, are zoned as Rural Residential, 2-acre minimum. To the southwest, there are parcels zoned for Agricultural uses. The closest resident to the Project is approximately 150 feet to the west. There are no churches within 0.5 mile of the Project site. The closest school is approximately 0.55 mile to the northwest but is separated by residential uses and is not visible from the Project site. Project-related work areas would not be within 100 feet of land uses containing sensitive receptors, since there are no sensitive receptors within 145 feet.

Methods

An environmental noise assessment was prepared for the project by WJV Acoustics, Inc. (WJVA), and is included as **Appendix E**. The assessment is based upon the Project site plan provided by the applicant (**Figure 4-3**), noise level data provided by the applicant, and findings of noise level measurements conducted in the project vicinity on August 15-16, 2023, as well as October 10-11, 2023. Long-term (24-hour) ambient noise level measurements were conducted at six locations (sites LT-1, LT-2, LT-3, LT-4, LT-5 and LT-6). (See **Figure 5.13-1: Project Vicinity and Ambient Noise Monitoring Sites**, for the locations of the six monitoring sites used.)

Figure 5.13-1. Project Vicinity and Ambient Noise Monitoring Sites



During the October 10-11 noise measurement, sites LT-1 through LT-6 were surveyed. Two sites (LT-1 and LT-3) were located near the closest residential land uses to the Project site, along East Road. One site (LT-2) was located near the existing residential land uses on Valley View Drive, and the last site (LT-4) was located off Electra Way, southeast of the Project site, in the vicinity of residential land uses. These sites were selected to capture exposure to traffic noise associated with vehicles, noise associated with residential land uses, and noise associated with substation operations as well as PG&E construction staging activities. During the October 10-11 noise measurement, sites LT-5 and LT-6 were surveyed, to provide a more accurate assessment of nighttime noise levels in the vicinity of Power Block 1 along Valley View Drive. Site LT-5 was located at the residential property line immediately north of the proposed Power Block 1 location, and site LT-6 was located at the residential property line northeast of the proposed Power Block 1 location. The assessment measured and summarized the ambient noise data in terms of the L_{50} statistical noise descriptor applicable to the Mendocino County noise level standards, which are 50 dB (L_{50}) during daytime hours and 40 dB (L_{50}) during nighttime hours. (Mendocino County, 2005)

In addition to measuring the ambient noise levels in the project vicinity, the environmental noise assessment also calculated what the anticipated noise levels would be, given noise levels provided by the applicant, at one meter away from Project components. The Project includes two power blocks, each one includes 64 individual MDS Battery Enclosures, 16 Auxiliary Enclosures, one inverter, and one medium voltage (MV) transformer. When operating, it is assumed that all of the components would be operating simultaneously over any given one-hour time period.

Regulatory

Regulating environmental noise is generally the responsibility of local governments. The U.S. EPA has published guidelines on recommended maximum noise levels to protect public health and welfare (U.S. EPA, 1974), and the State of California maintains recommendations for local jurisdictions in the General Plan Guidelines published by the Governor's Office of Planning and Research.

The CEQA Guidelines state that a project would normally be considered to have a significant impact if noise levels conflict with adopted environmental standards or plans, or if noise levels generated by the project would substantially increase existing noise levels at noise-sensitive receivers on a permanent or temporary basis. CEQA does not define what noise level increase would be substantial.

Typically, ambient noise level increases of more than 3 dBA due to a project are considered potentially significant where resulting exterior noise levels would exceed the normally acceptable noise level standard. Where noise level would remain at or below the normally acceptable noise level standard with the project, a noise level increase of 5 dBA or greater would be considered potentially significant.

Mendocino County relies principally on standards in its Noise Element, its Zoning Ordinance, and other County ordinances, and the Mendocino County Airport Comprehen-

sive Land Use Plan to evaluate noise-related impacts to development. The Mendocino County general plan considers noise levels between 55 dBA and 70 dBA to be within the "Normally Acceptable" and "Conditionally Acceptable" range for low density residential areas. The following summarizes the local requirements.

For construction noise, Mendocino County does not provide noise standards or guidance related to construction activities. Guidance from the Federal Transit Administration (FTA) has been provided, which identified a daytime noise level of 90 dB Leq as a reasonable criterion for construction noise impact assessment (FTA, 2006). The World Health Organization recommends that noise exposure levels should not exceed 70 dB over a 24-hour period, and 85 dB over a 1-hour period to avoid hearing impairment (WHO, 2022).

Mendocino County does not provide any specific vibration guidelines, see Appendix E for more information on vibration guidelines.

Local

Mendocino County General Plan. The Development Element of the General Plan (2020) includes policies to encourage protection of sensitive uses from excessive noise, and where noise-intensive uses are protected from encroachment by residential and other noise-sensitive uses. The General Plan also provides exterior noise level standards for both transportation and non-transportation (stationary) noise sources.

For transportation noise sources, the noise element establishes an exterior noise exposure level of up to 60 dB Ldn as "normally acceptable" for residential land uses. An exterior noise exposure level of up to 70 dB Ldn for residential land uses is considered to be "conditionally acceptable."

Policy DE-100: The following are the County's standards for maximum exterior noise levels for residential land uses. Table 5.13-1 provides the exterior noise level standards.

Table 5.13-1. Exterior Noise Level Standards (Levels not to be exceeded more than 30 minutes in any hour or L_{50})

Land Use Type	Time Period	Maximum Noise Level (dBA)
Single-Family Homes and Duplexes	10 p.m. to 7 a.m.	50
	7 a.m. to 10 p.m.	60
Multiple Residential 3 or More Units Per Building (Triplex +)	10 p.m. to 7 a.m.	55
	7 a.m. to 10 p.m.	60

- Where existing ambient noise levels exceed these standards, the ambient noise level shall be the highest allowable noise level measured in dBA Leq (30 minutes).
- The noise levels specified above shall be lowered by 5 dB for simple tonal noises (such as humming sounds), noises consisting primarily of speech or music, or for recurring impulsive noises (such as pile drivers, punch presses, and similar machinery).

- The County may impose exterior noise standards which are less restrictive than those specified above, provided that:
  1) The noise impact on the residential or other noise-sensitive use is addressed in an environmental analysis,
  2) A finding is made by the approving body stating the reasons for accepting a higher exterior noise standard, and
  3) Interior noise standards will comply with those identified in Policy DE-103.

Policy DE-101: Table 5.13-2 shows the noise compatibility guidelines for use in determining the general compatibility of planned land uses:

Table 5.13-2. Noise Compatibility Guidelines (Expressed as a 24-Hour Day-Night Average or Ldn)

Land Use	Completely Compatible	Tentatively Compatible	Normally Incompatible	Completely Incompatible
Residential	Less than 55 dBA	55-60 dBA	60-75 dBA	Greater than 75 dBA
Commercial	Less than 65 dBA	65-75 dBA	75-80 dBA	Greater than 80 dBA
Industrial	Less than 70 dBA	70-80 dBA	80-85 dBA	Greater than 85 dBA

Source: Mendocino County 2020

- See Policy DE-102 for the definitions of these levels of compatibility. These guidelines apply to land designated by this General Plan for these uses. Residential, retail, or public parks that have been developed on land designated for other uses shall be subject to the exterior noise guidelines for the land on which they are located.
- Non-residential uses located on residentially designated land shall be subject to the exterior noise guidelines for residential lands.
- All uses on Commercial lands, including non-commercial uses, shall be subject to commercial land standards. Land use designations not listed above do not have exterior noise compatibility standards. Land use designations with no exterior noise compatibility standard include office and industrial.
- Standards for public schools are set and enforced by the State of California and are not regulated by the County. Therefore, no standards for public schools are shown in Table 5.13-2.

Policy DE-102: The following definitions shall be used in combination with the standards in the Noise Compatibility Guidelines shown above.

- "Transportation Noise" consists of noise generated by motor vehicles, trains, and airports.
- "Completely Compatible" means that the specified land use is satisfactory, and both the indoor and outdoor environments are pleasant.

- "Tentatively Compatible" means that noise exposure may be of concern, but common building construction practices will make the indoor living environment acceptable, even for sleeping quarters, and the outdoor environment will be reasonably pleasant.
- "Normally Incompatible" means that noise exposure warrants special attention, and new construction or development should generally be undertaken only after a detailed analysis of noise reduction requirements is made and needed noise insulation features are included in the design. Careful site planning or exterior barriers may be needed to make the outdoor environment tolerable.
- "Completely Incompatible" means that noise exposure is so severe that new construction or development should generally not be undertaken.

Policy DE-105: A five dB increase in CNEL or Ldn noise levels shall be normally considered to be a significant increase in noise.

Policy DE-107: Distance and landscaping are the preferred methods for addressing noise created by roadways, railways, and similar sources.

Policy DE-108: Noise barriers should be considered only if proven effective by accompanying noise studies.

Policy DE-109: Noise barriers should be visually attractive, complement the surroundings, and require a minimum of maintenance.

5.13.2 Environmental 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?

Construction and Demolition

Less than Significant with Mitigation. The proposed Project would require a six- to nine-month duration of construction activities followed by 10 weeks of commissioning. Construction and demolition activities include mobilizing construction equipment, crews, and materials, excavating for installation of piping and conduit installation, installing concrete foundations, and grading. The construction activities would require use of vehicles and heavy-duty equipment capable of generating noise within the Project Site and along the roads used to access the site. Along with on-highway vehicles including trucks, the following types of construction equipment could be used at the site: grader, dozer, and front-end loader, and crane. Outside of the site, traffic noise would be caused by vehicles transporting equipment and materials to the site, trucks removing construction-related debris, and workers commuting to and from the work site. Commissioning would not include any off-road equipment, nor any heavy-duty vehicles, and would consist of 5 to 10 passenger vehicle one-way trips daily to transport employees to and from the site.

Construction, commissioning, and demolition would temporarily increase the noise levels near the substation site. To the extent feasible, construction and demolition activities would occur between the hours of 7:00 a.m. and 4:00 p.m. on weekdays and 8:00 a.m. and 5:00 p.m. on Saturdays. Limited work, such as interconnection and system upgrades, may be required at night to avoid disrupting daytime electric service. The surrounding land uses are rural residential and agricultural. As shown in **Figure 5.13-1**, residences are to the northeast and west of the site. **Figure 5.4-1 in Biological Resources** show that agricultural uses are primarily west and south.

The nearest residence to the west of the site, across East Road is approximately 150 feet from the nearest proposed MDS unit in Power Block 2. Other parts of the Project, such as Power Block 1 would be farther from residences, approximately 300 feet away. Most of the residences to the west of the site are shielded from the Project site by vegetation on their residential property, although one resident has no vegetation. The resident to the northeast of Power Block 1 is partially shielded from the Project site by vegetation. All other sensitive receptors, such as churches, schools, and hospitals, are over 0.5 mile away from the Project site.

Table 5.13-3 summarizes the typical noise levels for individual pieces of construction equipment.

Table 5.13-3. Typical Construction Equipment Maximum Noise Levels, dBA

Type of Equipment	100 Ft.	200 Ft.	300 Ft.
Concrete Saw	84	78	74
Crane	75	69	65
Excavator	75	69	65
Front End Loader	73	67	63
Jackhammer	83	77	73
Paver	71	65	61
Pneumatic Tools	79	73	69
Dozer	76	70	66
Rollers	74	68	64
Trucks	80	72	70
Pumps	74	68	64
Scrapers	81	75	71
Portable Generators	74	68	64
Backhoe	80	74	70
Grader	80	74	70

Source: Appendix E.

Construction activities would create both intermittent and continuous noises during the workday. Intermittent noise would be caused by periodic, short-term equipment operation. For example, the excavator would be used cyclically during the limited phases of

creating foundations or below grade trenching. Continuous noise would emanate from equipment operation over longer periods, such as steady use of a pump or generator.

Typical equipment noise levels and equipment usage factors are published in the federal Roadway Construction Noise Model, User's Guide (FHWA, 2006). For a collected group of equipment at the construction site, the maximum intermittent noise levels would typically range from 84 to 90 dBA at 50 feet. These would be the highest levels expected, and these could occur during installation of foundations or the below grade excavation. At 50 feet, continuous noise levels could range up to about 83 dBA. Because sound fades over distance, these levels would diminish over additional distance and could be reduced further by intervening structures. At 100 feet from the equipment continuous noise levels could range up to 77 dBA, and up to 71 dBA at 200 feet.

Construction would also cause noise away from work areas, primarily from commuting workers and from trucks needed to bring materials to the site. Haul trucks would make trips to bring materials to the construction site and remove excavated soil and waste. The noise levels associated with passing trucks and commuting worker vehicles would be approximately 71 to 76 dBA at 50 feet, and vehicular noise would be concentrated at the entrance to the Project Site.

Construction noise would affect the locations closest to the Project site, work areas and along the routes used by haul trucks and other construction traffic. The surrounding land uses would experience a temporary increase in noise greater than the conditions that exist without the project. However, the intermittent and variable nature of construction noise limits the potential for adverse effects such as annoyance to be experienced by off-site receptors, and sleep interference would not be a concern because activities would occur during daylight hours. Form Energy would take routine precautions to avoid creating unnecessary noise. Standard permit conditions require Form Energy to limit construction hours within 500 feet of residential uses to the hours of 7:00 a.m. and 7:00 p.m. on weekdays. Additionally, using quiet models of air compressors and other stationary noise sources where technology exist as well as use of mufflers on all internal combustion engine-driven equipment would be required. To further limit noise levels at the nearest receptors, staging areas will need to be located as far away as possible from the residences on the west of East Road.

Additionally, mitigation measures (**MM**) **NOISE-1** and **NOISE-2** would be implemented. **MM NOISE-1**, Construction Noise Notification, would require that the nearby residents are notified prior to the commencement of construction. This MM would also require that a telephone number be set up for the public to report any issues with construction noise. **MM NOISE-2**, **Noise Complaint Process**, would require the project owner to document, investigate, and attempt to resolve noise complaints related to the Project. These mitigation measures will ensure that nearby residents are not bothered by construction noise, and if they are, they will have a way to communicate the issue to the project owner and resolve it.

Noise impacts from demolition would be similar to construction noise impacts. The construction noise impact under this criterion would be less than significant with mitigation.

Operation

Less than Significant with Mitigation. During operation, noise associated with the Project would be generated by the individual MDS Battery Enclosures, Auxiliary Enclosures, Inverters, and MV Transformers. The environmental noise assessment (Appendix E) calculated that the Project-related operational noise levels would be approximately 63 dB at the residential land uses in the vicinity of Power Block 2, along East Road and approximately 52 to 53 dB at the residential land uses in the vicinity of Power Block 1. This level of noise is expected to exceed applicable noise level standards by up to 10 dB for Power Block 1, and 17 dB for Power Block 2.

Mendocino County's noise standard states that if existing ambient noise levels exceed the Mendocino County noise standards (shown in Table 5.13-1), the ambient noise level shall be the standard (Mendocino County 2005).

Along East Road, the typical noise levels would not be expected to exceed 54 dB L_{50} during daytime and 46 dB L_{50} during nighttime, which exceed the County of Mendocino's noise standards; and therefore, 54 dB and 46 dB become the maximum allowable noise at the residential land uses along East Road. Noise levels measured off Valley View Drive would not be expected to exceed 50 dB L_{50} during daytime and 44 dB L_{50} during nighttime, and therefore, because 44 dB exceed the County of Mendocino's noise standards, it becomes the maximum allowable nighttime noise at the residential land uses along Valley View Drive.

Based on these findings of the ambient noise survey conducted by WJVA the maximum allowable project-related noise levels at the residential land uses in the vicinity of the proposed project would be as follows:

Table 5.13-4. Maximum Allowable Project-Related Noise Levels at Residential Land Uses

Location/Time	Calculated Operational Noise Levels (dB)	Mitigation Requirements (dB)	Maximum Allowable Project-Related Noise Level (dB)
Power Block 1/Residences off Valley View Drive	54		
Daytime (7 a.m. to 10 p.m.)		4	50
Nighttime (10 p.m. to 7 a.m.)		10	44
Power Block 2/Residences along East Road	63		
Daytime (7 a.m. to 10 p.m.)		9	54
Nighttime (10 p.m. to 7 a.m.)		17	46

Source: Appendix E

Due to the exceedance of applicable noise level standards, the applicant must consider various measures to reduce Project noise so that it meets the noise standards. With the incorporation of **MM NOISE-3**, **Noise Restrictions**, noise levels would be mitigated to a less than significant level. **MM NOISE-3** requires that the project design and implementation will include mitigation measures to ensure that the Project, while operational, does not exceed the maximum allowable project-related noise levels at the residential land uses shown in Table 5.13-4. It is anticipated that a sound wall would need to be constructed to reduce Project noise to acceptable levels. Upon completion, an operational noise survey is required to ensure that the noise level does not exceed the noise limits, and additional noise reduction measures would be implemented, if necessary, to reach compliance. Therefore, the noise levels would be mitigated to a less than significant level.

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

Construction and Demolition

Less than Significant. Groundborne vibration levels from construction equipment and activities might be perceptible to receptors in the immediate vicinity of the project and work areas. The activity that would be most likely to cause groundborne vibration would be the passing of heavy trucks on uneven surfaces. The impact from construction-related groundborne vibration would be short-term and confined to only the immediate area around activities (within about 25 feet). All work for the project would be more than 25 feet from residences. No homes would be exposed to excessive vibration, and the impact during construction and demolition would be less than significant.

Operation

No Impact. Equipment associated with operation and maintenance of the proposed project would not produce any groundborne noise or vibration; therefore, operation and maintenance of the project would result in no impact under this criterion.

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?

Construction and Operation

No Impact. The Project is located approximately 8.5 miles from the nearest airport and is not within an airport land use plan. The Project would be unmanned aside from the occasional maintenance tasks and would not expose people to noise from the airport. Thus, the project would not combine with this or any other nearby public or private airport to expose people to excessive noise levels, and there would be no impact.

5.13.3 Mitigation Measures

MM NOISE-1. Construction Noise Notification. At least 15 days prior to the start of ground disturbance, the Project applicant shall notify all residents adjacent to the Project site along East Road between Lone Pine Drive and Road A, and along Valley Vista Drive from East Road to the hairpin turn, by mail or other effective means, of the commencement of project construction. The notice shall include:

- Date of the start of construction
- Description of the activities onsite
- Number to call if there is a noise complaint from construction or operational activities
- Complaint resolution process
- How long line will be maintained

The Project applicant shall establish a telephone number for use by the public to report any noise complaints associated with the construction and operation of the Project. The Project applicant shall include an automatic answering feature, with date and time stamp recording. This telephone number shall be maintained until the project has been operational for at least one year.

MM NOISE-2. Noise Complaint Process. Throughout the construction and operation of the Project, the Project applicant shall document, investigate, evaluate, and attempt to resolve all Project-related noise complaints. The Project applicant or authorized agent shall:

(a) Attempt to contact the person(s) making the noise complaint within 48 hours;

(b) Conduct an investigation to determine the source of noise related to the complaint;

(c) If the noise is Project-related, take all feasible measures to reduce the noise at its source; and

(d) Submit a report to the CEC documenting the complaint and the actions taken. The report shall include: a complaint summary, including results of noise reduction efforts; and if obtainable, a signed statement by the complainant stating that the noise problem is resolved to the complainant's satisfaction.

MM NOISE-3. Noise Mitigation – Off-Site. The Project design and implementation shall include appropriate noise mitigation measures adequate to ensure that noise levels in L_{50} terms (levels not to be exceeded more than 30 minutes in any hour) due to operation of the Project will not exceed any

of the values shown below when measured at the residential property line nearest to the following sources:

- Power Block 1 (residences along Valley View Drive)
  - Daytime (7 a.m. to 10 p.m.) 50 dBA L_{50}
  - Nighttime (10 p.m. to 7 a.m.) 44 dBA L_{50}
- Power Block 2 (residences along East Road)
  - Daytime (7 a.m. to 10 p.m.) 54 dBA L_{50}
  - Nighttime (10 p.m. to 7 a.m.) 46 dBA L_{50}

Mitigation shall include the construction of acoustical treatments with concrete masonry unit (CMU) blocks or similar enclosures between the power blocks and the closest residents. If a wall is constructed, it shall be engineered in such a manner as not to impede stormwater flows.

If the applicant is able to provide the CEC and its noise consultant with more accurate noise data that demonstrates that the Project will be able to meet the noise constraints 60 days prior to the start of construction, the sound wall would not need to be constructed.

Within 15 days of the start of Project operations, the Project applicant shall conduct a 24-hour community noise survey by measuring noise levels at the property line of the residences closest to the power block battery enclosures. The noise measurements shall be conducted during both daytime (7 a.m. to 10 p.m.) and nighttime (10 p.m. to 7 a.m.) periods.

If the results from operational noise surveys indicate that the noise level (L_{50}) due to project noise exceeds the noise limits shown above, additional noise reduction measures, such as localized soundproof enclosures or acoustic louvers around the batteries, inverters, or transformers, configured to maximize noise shielding in the direction of residential receptors, and shifting operational hours from late night and early morning hours to daytime hours or operating the plant at a reduced load, when possible, shall be implemented to reduce noise to a level of compliance with these limits. The time permitted to implement additional measures shall be approved by the CEC.

Within 15 days of the project reaching these noise level limits, the Project applicant shall submit to the CEC, a summary report of the noise survey and a statement attesting that the Project is in compliance with these noise level limits.

5.13.4 References

FHWA 2006 – Federal Highway Administration (FHWA). 2006. Roadway Construction Noise Model, User's Guide. http://www.fhwa.dot.gov/environment/noise/construction_noise/rcnm/rcnm.pdf. Accessed August 2023.

FTA 2006 – Federal Transit Administration (FTA). 2006. Transportation Noise and Vibration Impact Assessment, May 2006. https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/FTA_Noise_and_Vibration_Manual.pdf. Accessed in August 2023.

Mendocino County 2005 – Mendocino County Zoning Code, Appendix B, Exterior Noise Limit Standards. 2005. fn. 1. Accessed on October 18, 2023. Available online at: https://library.municode.com/ca/mendocino_county/codes/code_of_ordinances?nodeId=MECOCO_TIT20ZOOR_DIVIIMECOCOZOCO_APB

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U.S. EPA 1974 – United States Environmental Protection Agency (U.S. EPA). 1974. Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety. No. 550/9 74 004, Washington, D.C.

WHO 2022 – World Health Organization (WHO). 2022. Compendium of WHO and UN Guidance on Health and Environment. Available online at: https://www.who.int/tools/compendium-on-health-and-environment#:~:text=The%20Compendium%20is%20a%20comprehensive%20collection%20of%20available,hygiene%2C%20climate%20change%2C%20chemicals%2C%20radiation%2C%20or%20food%20systems. Accessed in August 2023.

5.14 Population and Housing

This section describes the environmental setting, regulatory background and impacts associated with the construction, operation, and demolition of the Project with respect to population and housing.

Population and Housing Would the project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
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)?	☐	☐	☒	☐
b. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

Environmental checklist established by CEQA Guidelines, Appendix G, Population and Housing.

5.14.1 Environmental Setting

The proposed Project is located in the Redwood Valley area of Mendocino County. Mendocino County is the study area for the population and housing-related impacts of this Project. The North Coast Region, which includes Mendocino, Del Norte, Humboldt, and Lake counties, is the study area for the labor supply for the Project. Local workers are defined as residing within a two-hour commute[1] for project construction and a one-hour commute for Project operation.

Mendocino County has an estimated land area of 2,246,000 acres, or 3,510 square miles, and is the 15th largest county in California in terms of land area (Mendocino County 2020a). The County has four incorporated cities: Fort Bragg, Willits, Ukiah, and Point Arena. Ukiah is the closest city to the proposed Project, located approximately 10 miles south by road. The Mendocino County Housing Element of the General Plan includes a housing needs assessment. The population is expected to grow to 92,655 people by 2030, representing an average annual change of 0.90 percent between 2010 and 2030. The incorporated cities' population showed a 1.09 percent average annual growth rate from 2010 to 2030. The unincorporated county has grown at a slower rate, increasing from 59,156 in 2010 to 59,776 in 2019, with a projected 2030 population of 62,225, representing a 0.85 percent average annual growth rate from 2010 to 2030.

[1] Workers with a greater commute would be considered non-local and would tend to seek lodging closer to the project site (temporarily during construction or permanently during operations).

Table 5.14-1 shows the historical and projected populations for Mendocino County. Population projections between 2010 and 2030 show a growth rate ranging from 0.9 percent to 1.2 percent per year in Mendocino County.

Table 5.14-1. Historical and Projected Populations

Jurisdiction	2010	2016	2017	2018	2019	2020	2030	Average Annual Change
Fort Bragg	4,455	5,019	6,078	7,026	7,273	7,311	7,784	**1.2%**
Point Arena	424	425	407	474	449	449	482	**1.2%**
Ukiah	10,095	12,035	14,599	15,497	16,075	16,065	16,964	**0.9%**
Willits	3,091	4,008	5,027	5,073	4,888	4,893	5,201	**1.1%**
Total Cities	18,065	21,487	26,111	28,070	28,685	28,718	30,430	**1.0%**
Unincorporated	33,036	45,251	54,234	58,195	59,156	59,573	62,225	**0.9%**
Total County	87,841	88,721	89,092	89,299	89,009	91,498	92,655	**0.9%**

Source: Mendocino County 2020b Housing Element

According to the California Employment Development Department 2020-2030 Industry Employment Projections for the North Coast Region (Del Norte, Humboldt, Lake, and Mendocino counties), the 2030 projected employment for the construction occupation is 4,830, which is an 8.5 percent change from 2020 estimated employment levels (4,450) as shown in Table 5.14-2 (CA EDD 2023). Over the same time period, from 2020 to 2030, the Trade, Transportation, and Utilities occupation is expected to have a 6.3 percent increase.

Table 5.14-2. Projected Employment Growth for the North Coast Region

Industry	Base Year Employment Estimate 2020	Projected Year Employment Estimate 2030	Percentage Change 2020-2030
Construction	4,450	4,830	8.5%
Trade, Transportation, and Utilities	18,530	19,690	6.3%
All Industries	108,860	116,620	7.0%

Source: CA EDD 2023

The Mendocino Council of Governments developed the Regional Housing Needs Plan, which allocates the estimated number of housing units needed in Mendocino County from 2018 to 2027 in the unincorporated County. It is estimated that 1,349 housing units are needed (Mendocino County 2020b).

Table 5.14-3 presents housing supply data for the most recent year. Year 2023 housing estimates indicated 5,391 vacant housing units within Mendocino County representing a vacancy rate of 12.9 percent. The closest city to the Project site, the City of Ukiah, has 391 vacant housing units, representing a vacancy rate of 5.6 percent; whereas, the unincorporated areas of the county have a 15.5 percent vacancy rate (CA DOF 2023).

Table 5.14-3. Housing Supply Estimates in the Project Area

Housing Supply	2023 Total Housing	2023 Vacancy Rate
Fort Bragg	3,364	10.5%
Point Arena	226	15.0%
Ukiah	6,980	5.6%
Willits	2,160	5.9%
Total Cities	12,730	7.1%
Unincorporated	28,988	15.5%
Total County	41,718	12.9%

Source: CA DOF 2023

Regulatory

No regulations related to population and housing apply to the project.

5.14.2 Environmental 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)?

Construction and Demolition

Less than Significant. During the six- to nine-month construction and demolition periods, and the 10 week commissioning period, the Project would not directly or indirectly induce substantial unplanned growth in the nearby City of Ukiah or the County of Mendocino. Construction, commissioning and demolition of the proposed Project would provide short-term jobs for a small workforce of about 5 to 10 construction and commissioning workers, with a peak workforce of up to 10 workers. Project construction, commissioning or demolition would not likely result in workers relocating to the area because there is a sufficient workforce pool in the North Coast Region. However, should all 10 workers relocate to Mendocino County, there are more than enough vacant housing units in the nearby City of Ukiah (391 units), such that there would not be unplanned population growth. Hence, the Project's workforce would not directly or indirectly induce substantial population growth in the Project area. Therefore, the impact would be a less than significant.

Operation

Less than Significant. Operation of the Project would not directly induce substantial unplanned growth in the County of Mendocino because the Project does not propose new housing or land use changes, nor does it require a full-time staff. The Project would not require a substantial expansion of Form Energy workforce to service and maintain the MDS facility, because the facility would not be staffed full-time. The facility would be remotely operated and monitored through a Supervisory Control and Data Acquisition

(SCADA) system. Staff would be on-call to respond to any alerts generated by the monitoring systems and would visit the site periodically to perform maintenance. It is anticipated that 96 work hours would be required for quarterly maintenance. All routine and emergency operational and maintenance activities would be conducted by Form Energy. The Form Energy staff would likely be based in the region and would not relocate closer to the Project site.

The operation of the Project would help facilitate future planned growth by helping to ensure reliable electricity to the area served by the Mendocino Substation and could result in an indirect effect of facilitating the development of the surrounding area in Mendocino County. Greater electrical reliability would provide developmental and employment opportunities to the regional workforce. While the further development or redevelopment in Mendocino County may induce some population growth, this has already been accounted for through the Mendocino County General Plan, as previously noted in Table 5.14-1. Therefore, there would be a less than significant effect as a result of the proposed Project.

b. Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

Construction, Operation, and Demolition

No Impact. The proposed Project would be within an existing PG&E property and would not displace any housing or people, and therefore, would not necessitate the construction of replacement housing. No impacts would occur.

5.14.3 Mitigation Measures

None required.

5.14.4 References

CA DOF 2023 – California Department of Finance (CA DOF). Population and Housing Estimates for Cities, Counties, and the State, January 1, 2021-2023, with 2020 Benchmark. Available online at: https://dof.ca.gov/Forecasting/Demographics/Estimates/estimates-e5-2010-2021/.

CA EDD 2023 – California Development Department (CA EDD). 2020-2030 Industry Employment Projections North Coast Region. Available online at: https://labormarketinfo.edd.ca.gov/data/employment-projections.html.

Mendocino County 2020a – Mendocino County. Mendocino County General Plan Chapter 3: Development Element. Adopted August 2009, updated 2020. Available online at: https://www.mendocinocounty.org/home/showpublisheddocument/54479/638055061911270000. Accessed on: June 2023.

Mendocino County 2020b – Mendocino County. Mendocino County General Plan Chapter 5: Housing Element, 2019-2027 Update. Adopted September 1, 2020. Available online at: https://www.mendocinocounty.org/home/showpublisheddocument/44814/637636854812800000.

5.15 Public Services

This section describes the environmental setting, regulatory background and impacts associated with the construction, operation, and demolition of the Project with respect to public services.

Public Services	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:	☐	☐	☐	☒
i. Fire protection?	☐	☐	☐	☒
ii. Police Protection?	☐	☐	☐	☒
iii. Schools?	☐	☐	☒	☐
iv. Parks?	☐	☐	☐	☒
v. Other public facilities?	☐	☐	☐	☒

Environmental checklist established by CEQA Guidelines, Appendix G, Public Services.

5.15.1 Environmental Setting

For the area where the proposed Project would be located, public services, including fire and police services, as well as public and private schools, parks and recreational areas, and other public services, are provided by the County of Mendocino, special districts, and private entities. The Project is located within the Redwood Valley Community Area, as designated in the Mendocino County General Plan, community specific policies (Mendocino County 2009).

Fire Protection

Fire protection in Mendocino County is provided by local fire districts, the cities of Ukiah and Fort Bragg, the California Department of Forestry and Fire Protection, and the U.S. Forest Service. A majority of the County is located within State Responsibility Areas, aside from National Forests (Federal Responsibility Area) and local responsibility areas within several incorporated cities and Fire Protection Districts. The Redwood Valley-Calpella Fire Department serves the Project site. The closest fire station is approximately 1.1 miles north of the Project site, approximately a two-minute drive away. The station has approximately five full-time staff and approximately 16 volunteer line fire fighters, approximately

12 vehicles including 5 engines and 2 water tenders, and is equipped to provide rescue, EMT, and hazardous materials first response (Robinson 2023).

Police Protection

The Mendocino County Sheriff's Office is responsible for providing law enforcement services to the county's unincorporated areas. The main sheriff's station, including dispatch and detention facilities, is located at the Mendocino County Administration Center complex in the City of Ukiah, approximately 7.7 miles from the Project site. The California Highway Patrol (CHP) is responsible for traffic enforcement services on state highways and county roads. A CHP office is in Ukiah (Mendocino County 2020).

Schools

Thirteen school districts and two community college districts serve Mendocino County. Each school district comprises various numbers of traditional public schools, charter schools, preschools, adult education, and special training opportunities. The Ukiah Unified School District serves the area that the Project site is within (Mendocino County 2020). The closest schools to the site are the Coyote Valley School, located approximately 0.6-mile northwest, Redwood Valley Charter School located approximately one mile north, Calpella Middle School is located approximately 1.2 miles southwest, and Eagle Peak Middle School is located approximately 1.5 miles northwest.

Parks

Mendocino County is a predominantly rural County, rich in lands and waters that provide a variety of recreational opportunities. The closest county park is the Redwood Valley Lions Club Park, approximately 1.6 miles north. This park includes a basketball court, volleyball court, softball field, picnic area, barbeque pit, and a playground.

The Lake Mendocino Recreation Area, located in the northeastern Ukiah Valley, offers a multi-purpose reservoir, day-use facilities, and overnight campground facilities operated by the U.S. Army Corps of Engineers (Mendocino County 2020). The Bushay Campground Little Bear Campsite is located approximately 2.5 miles southeast. Numerous public and commercial recreation facilities are located throughout the county.

Other Public Facilities

Mendocino County Library has six branches to serve Mendocino County (Mendocino County 2023). The closest library to the Project site is the Ukiah Branch Library, which is located approximately seven miles to the south. The closest hospital to the Project site is located in the City of Ukiah, approximately seven miles to the south of the Project. There are several hospitals in this area, providing an emergency department and intensive care unit.

Regulatory

State

2010 Strategic Fire Plan for California. The 2010 Strategic Fire Plan for California was developed in coordination with the State Board of Forestry and Fire Protection and CAL FIRE to reduce and prevent the impacts of fire in California. Goal 6 of the Plan sets objectives to determine the level of suppression resources (staffing and equipment) needed to protect private and public resources. Specific objectives include, but are not limited to: maintaining an initial attack policy that prioritizes life, property, and natural resources; determining suppression resources allocation criteria; analyzing appropriate staffing levels and equipment needs in relation to the current and future conditions; increasing the number of CAL FIRE crews for fighting wildfires and other emergency response activities; maintaining cooperative agreements with local, state, and federal partners; and implementing new technologies to improve firefighter safety, where available (State Board of Forestry and Fire Protection). The standards outlined are applicable to the fire department serving the Project site.

Local

County of Mendocino General Plan, Development Element.

Policy DE-217. Prioritize enhancement of utility systems in areas of high hazard potential (wildfire, flooding, landslides) to ensure services remain operational and effective (see Policy DE-219).

Community-Specific Policies: Redwood Valley Community Planning Area

Goal CP-RV-1. Focus new commercial development in the established downtown Redwood Valley area (along East Road), and new commercial and industrial development north and south of School Way. All new development should be located where public services and infrastructure are available.

Policy CP-RV-4. New industrial development in Redwood Valley should be located outside the downtown core in locations that minimize negative visual impacts and are compatible with existing and planned land uses.

5.15.2 Environmental Impacts

a. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:

i. Fire protection?

Construction, Operation, and Demolition

No Impact. The Project site is currently served by the Redwood Valley-Calpella Fire Department which is located approximately 1.1 miles north of the Project, which is a two-minute drive.

The MDS uses iron-air technology that uses non-toxic, non-flammable materials that do not have a pathway to thermal runaway. Therefore, there would be no fire suppression system required in the MDS enclosures. The risk of fire or explosion is very low, which is reduced further by exhaust fans at each module, see **Section 5.9, Hazards and Hazardous Materials**, for more information regarding MDS battery safety, and mitigation measures that would be implemented as part of the Project to reduce risk.

Other safety features would be incorporated, such as: monitoring, detection, alarms at the Battery Management System (BMS); redundant fault detection and mitigation; containment at cell, module, and system level; and exhaust system coupled to modules and enclosures. The system would also undergo rigorous testing, including Underwriter's Laboratories (UL) 9540A, and would be certified to UL 1973 and UL 9540[2]. The system's installation would be compliant with National Fire Protection Association (NFPA) 1, NFPA 855, International Building Code (IBC) 2021, International Fire Code (IFC) 2021, and NFPA 70 (National Electric Code).

As discussed in Section 5.9, Hazards and Hazardous Materials, the Project would not impair the implementation of or physically interfere with an adopted emergency response or evacuation plan. The Project would not increase traffic to a level where traffic performance would be degraded and at least one lane of travel would remain open at all times.

The construction, operation, and demolition of the proposed Project would not increase the risk of fire, and therefore, would not result in a need for additional fire protection facilities or affect response times or other service performance. Therefore, there would be no impact.

ii. Police Protection?

Construction, Operation, and Demolition

No Impact. The proposed Project site is currently serviced by the Mendocino County Sheriff. Construction of the Project would include the installation of fencing, gates, communication, and security systems. The Project fencing would comply with applicable design and safety requirements for protective arrangements in electric supply stations. These security measures would help deter criminal activity during operation. The

[2] The UL 9540A method tests the fire safety hazards associated with propagating thermal runaway within battery systems. UL 9540 provides a basis for safety of energy storage systems that includes reference to critical technology safety standards and codes, such as UL 1973, the Standard for Batteries for Use in Stationary, Vehicle Auxiliary Power and Light Electric Rail Applications (UL Solutions, 2023).

construction, operation, and demolition of the proposed Project would not result in a need for additional police facilities or affect response times or other service performance. The majority of construction and demolition-related activities would be located away from major emergency access routes and not be expected to significantly interfere with emergency response times. Therefore, there would be no impact.

iii. Schools?

Construction, Operation, and Demolition

Less than Significant. The proposed Project would be in the Ukiah Unified School District. District Board Policy (BP 7211 Facilities: Developer Fees) allows the Board of Trustees to establish, levy, and collect developer fees on residential, commercial, and industrial construction within the district. Government Code section 65995 expressly provides that "[t]he payment or satisfaction of a fee, charge, or other requirement levied or imposed pursuant to Section 17620 of the Education Code in the amount specified in Section 65995… are hereby deemed to be full and complete mitigation of the impacts of any legislative or adjudicative act, or both, involving but not limited to, the planning, use, or development of real property, or any change in governmental organization… on the provision of adequate school facilities." The current school impact fee for the district is $0.78 per square foot of covered, enclosed commercial/industrial space. The County of Mendocino's Planning & Building Services Department would determine the assessable square footage for developer fees of the proposed Project and the fees would be collected when the applicant applies for building permits (UUSD 2023).

Construction and demolition activities would be temporary and would not require the relocation of workers' families. During Project operation, Form Energy's regionally based staff would perform inspection and maintenance duties as needed and it is unlikely that any workers would relocate to the area near the Project site. With all the above elements, the impact on schools would be less than significant.

iv. Parks?

Construction, Operation, and Demolition

No Impact. The proposed Project would not increase the region's population. Construction and demolition of the Project would each take place over six to nine months, with commissioning being an additional 10-week period, all of which would require only a small construction workforce on any given day. While it is possible that workers traveling to the area may use existing public services or amenities such as parks, the potential increase in use and demand would be minimal and temporary and would not contribute substantially to the physical deterioration of existing facilities. Operation of the Project would be done remotely with Form Energy staff performing inspection and maintenance duties as needed. The Form Energy staff would be based in the region and are unlikely to relocate closer to the Project site due the small amount of time required for operations and maintenance activities. Therefore, operation of the Project would not contribute substantially to the physical deterioration of existing facilities. The Project would not increase any long-

term demands on existing parks in the area near the Project, and no new or expanded park facilities would be required because of the proposed Project. There would be no impact.

v. Other public facilities?

Construction, Operation, and Demolition

No Impact. The proposed Project would not increase population and would not affect other governmental services or public facilities that would lead to the requirement of new or expanded facilities to be developed. Therefore, there would be no impact on other public facilities.

5.15.3 Mitigation Measures

None required.

5.15.4 References

Mendocino County 2009 – Mendocino County. Mendocino County General Plan Chapter 6: Community-Specific Policies. Adopted August 2009. Available online at: https://www.mendocinocounty.org/home/showpublisheddocument/5236/636242320402030000. Accessed in June 2023.

Mendocino County 2020 – Mendocino County. Mendocino County General Plan Chapter 3: Development Element. Adopted August 2009, updated 2020. Available online at: https://www.mendocinocounty.org/home/showpublisheddocument/54479/638055061911270000. Accessed in June 2023.

Mendocino County 2023 – Mendocino County. Mendocino County Library website – Visit Library Branches. Available online at: https://www.mendolibrary.org/visit. Accessed in August 2023.

UL Solutions 2023 – UL Solutions. Energy Storage System Testing and Certification. Available online at: https://www.ul.com/services/energy-storage-system-testing-and-certification#:~:text=UL%209540%20provides%20a%20basis%20for%20safety%20of,Pressure%20Vessel%20Code%3B%20and%20ASME%20B31%20piping%20codes. Accessed in August 2023.

UUSD 2023 – Ukiah Unified School District (UUSD). Ukiah Unified School District Developer Fee. Available online at: https://www.uusd.net/apps/pages/developerfees. Accessed in August 2023.

Robinson 2023 – Kerry Robinson. 2023. Personal communication with Chief Kerry Robinson, Redwood Valley-Calpella Fire Department. August 29, 2023.

5.16 Recreation

This section describes the environmental setting, regulatory background, and impacts associated with the construction, operation, and demolition of the Project with respect to recreation.

Recreation	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒
b. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒

Environmental checklist established by CEQA Guidelines, Appendix G, Recreation.

5.16.1 Environmental Setting

Mendocino County is a predominantly rural county, with a variety of county, state, and federal parks and recreation facilities.

Federal Parks

Federal lands in Mendocino County include recreational resources used by visitors and residents of the county. The Mendocino National Forest (of which the western border is approximately 10 miles east of the Project) occupies approximately 81,000 acres in Mendocino County and offers a wide array of recreation opportunities. The Bureau of Land Management (BLM) manages the Cow Mountain Recreation Area, located over 10 miles southeast of the Project. The northern portion of the Crow Mountain Recreation Area is used for non-motorized activities, such as hunting, hiking, horseback riding, mountain bicycling, and camping, while the southern portion emphasizes off highway vehicle use. The Lake Mendocino Recreation Area, located in the northeastern Ukiah Valley, approximately two miles south of the project, offers a multi-purpose reservoir, day-use facilities, and overnight campground facilities operated by the U.S. Army Corps of Engineers (Mendocino County 2020).

State Parks

Mendocino County has many state parks and recreation lands, used by visitors and residents of the county. Many of the state parks are located along the coast and are not near the Project area. The closest state park is the Montgomery Woods State Reserve, which

is approximately 10 miles west of the project, managed by the California Department of Parks and Recreation.

County Parks

County parks typically serve residents of local communities or neighborhoods, depending on the park's size, improvements, and programs. The Mendocino County parks system consists of seven parks, operated, and maintained by the County General Services Department, Buildings and Grounds Division. The closest county park to the Project is the Redwood Valley Lions Club Park, located approximately 1.5 miles north of the Project. This park has a basketball court, volleyball court, softball field, picnic area, barbeque pit, and a playground. Two other county parks are located within 15 miles of the Project, Frank Hunter McKee Memorial Park (approximately 5.8 miles east) and Mill Creek Park (approximately 13.8 miles south). The Frank Hunter McKee Memorial Park provides a portage trail and Russian River access, and Mill Creek Park provides a picnic area, volleyball court, nature trails, barbeque, and horseshoe pits. (Mendocino County 2020).

The County also manages two public access areas, the Mariposa Swimming Hole in Redwood Valley, about 8.4 miles north of the Project, and the Vichy Springs Bridge Fishing Area in Ukiah approximately and 8.9 miles south of the Project (Mendocino County 2020).

Regulatory

This section includes a description of the recreation regulatory framework. There are no federal or State regulations associated with recreation that are relevant to the proposed Project.

Local

Mendocino County General Plan, Development Element. The policies in this Element seek to establish a wide range of parks and recreational opportunities for county residents. There are no policies that are directly related to the Project.

5.16.2 Environmental 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?

Construction, Operation, and Demolition

No Impact. The proposed Project does not include development of new residential or commercial developments that would increase population and increase the demand for parks. The Project would use vacant land at an existing PG&E substation site for a long-duration battery storage facility. Construction would take place over six to nine months and commissioning would take place over 10 weeks. Both would require only a small workforce on any given day (10 workers maximum). While some workers may use nearby park facilities during Project construction and commissioning, increased use would be

minimal and temporary and would not contribute substantially to the physical deterioration of existing facilities. As noted in **Section 5.14, Population and Housing**, it is unlikely that construction or demolition workers would relocate to the County due to the short construction period. Demolition impacts would be equal to, or less than construction impacts. Therefore, there would be no impact to recreation facilities.

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?

Construction, Operation, and Demolition

No Impact. The proposed Project does not include recreational facilities, nor does it require the construction of new or expanded parks or recreational facilities that could create an adverse physical effect on the environment. Hence, there would be no impact.

5.16.3 Mitigation Measures

None required.

5.16.4 References

Mendocino County 2020 – Mendocino County. Mendocino County General Plan Chapter 3: Development Element. Adopted August 2009, updated 2020. Available online at: https://www.mendocinocounty.org/home/showpublisheddocument/54479/638055061911270000. Accessed in June 2023.

5.17 Transportation

This section describes the environmental setting and regulatory background and discusses impacts associated with the construction, operation, and demolition of the Project with respect to transportation.

Transportation	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☐	☒	☐
b. Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	☐	☐	☒	☐
c. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☒	☐	☐
d. Result in inadequate emergency access?	☐	☒	☐	☐

Environmental checklist established by CEQA Guidelines, Appendix G, Transportation.

5.17.1 Environmental Setting

The proposed Project would use local roadways for accessing the site during construction, operations, and demolition. Baseline conditions of regional and local roadways likely used to access the Project site and work locations and those temporarily affected by Project construction and demolition activities are discussed below.

Highways

U.S. Highway 101 and State Route (SR) 20 provide regional access to the Project vicinity. These are both classified as "Other Principal Arterial" roads according to the Caltrans functional classification system (Caltrans 2023).

Access Routes

The county-maintained road system augments the state highway system to serve the unincorporated areas of the county. The system is primarily a network of two-lane roads for the vehicular movement of goods and people and provides facilities (such as sidewalks and bicycle lanes) for non-motorized traffic (Mendocino County 2020).

The Project is located on East Road. It is accessed by SR 20 and U.S. Highway 101, then using local roads such as East Road (the road the Project is on). East Road is classified as a Major Collector Road according to the Caltrans functional classification system (Caltrans 2023).

Major Collector Roads serve a critical role in the roadway network by gathering traffic from local roads and funneling them to the arterial network, and generally serve intra-county travel. The Federal Highway Administration's guidelines[3] show that Major Collectors in rural areas generally have an Annual Average Daily Traffic (AADT) of 300 to 2,600 vehicles (FHWA 2017).

Mass Transit

The Mendocino Transit Authority (MTA) provides public transportation services to Mendocino County residents and its incorporated cities. The MTA offers fixed-route and demand-responsive services to residents of the county. Route 65 and Route 20 run near the Project site. Route 65 is the CC Rider, which runs six days per week from Ft. Bragg to Willits, Ukiah, and Santa Rosa. The closest bus stop served by this route is located approximately 2.2 miles northwest of the Project, at the intersection of West Road and U.S. Interstate 101. Route 20 connects Willits and Mendocino Community College in Ukiah. The closest bus stop served by Route 20 is located approximately 0.5 mile south of the Project, at the nearby shopping strip mall (MTA 2023).

Rail

Rail service in Mendocino County is limited for both passengers and freight. During the summer, the Sierra Railroad operates the Skunk Train, also known as the California Western Railroad, a 40-mile passenger excursion route between Willits and Fort Bragg. The Northwestern Pacific Railroad (NWPRR) extends from the Arcata/Eureka area in Humboldt County to the San Rafael area in Marin County, but was heavily damaged in storms over several years and has not been in operation since 1998 (Mendocino County 2020).

Bicycle

The greatest concentration of bicycle lanes, generally Class II or III,[4] in Mendocino County is in the City of Ukiah. All state routes in the county are open to bicycle traffic. Mendocino County is a predominantly rural county, limiting the opportunity for bikeways to serve large segments of the population or provide a practical means of transportation for commuting purposes. There are no designated bike routes near the Project (Mendocino County 2020).

[3] The FHWA uses AADT to determine the roadway classification.

[4] Class I Bike Paths are facilities specifically designated for the exclusive use of bicycles and pedestrians. Class I bike paths are separate from streets, although they may cross roadways.

Class II Bike Lanes are striped lanes on a street or highway, designated for use by bicycles. Vehicle parking and vehicle pedestrian crossflows are permitted at designated locations.

Class III Bike Routes are usually designated by pavement markings to indicate the use of bicycles within the vehicular travel lane of a roadway (Mendocino County 2020).

Air Transportation

The aviation system is composed of the airports, privately owned aircraft of various types, privately operated aircraft service facilities, and publicly and privately operated airport service facilities. There are six public-use airports in Mendocino County, which provide regional and interregional services. Additionally, there are three private airfields in Mendocino County, none of which are near the Project. The closest airport to the Project site is the Ukiah Municipal Airport, located approximately 8 air-miles south of the Project (Mendocino County 2020).

Regulatory

State

California Vehicle Code. The California Vehicle Code (CVC) includes regulations pertaining to licensing, size, weight, and load of vehicles operated on highways; safe operation of vehicles; and the transportation of hazardous materials.

State CEQA Guidelines, Section 15064.3, Determining the Significance of Transportation Impacts. In response to Senate Bill 743 (Steinberg, 2013), this provision states that vehicle miles traveled (VMT) is the most appropriate measure of transportation impacts in the CEQA process. For transportation impacts under CEQA, VMT refers to the amount and distance of automobile travel attributable to a project. Other relevant considerations may include the effects of the Project on transit and non-motorized travel. Except for roadway capacity projects, a project's effect on automobile delay would not constitute a significant environmental impact under CEQA. For instances where existing models or methods are not available to estimate the VMT for the particular project being considered, a lead agency may analyze the Project's VMT qualitatively. Such a qualitative analysis would evaluate factors such as the availability of transit, proximity to other destinations, etc. For many projects, a qualitative analysis of construction traffic may be appropriate [14 CCR 15064.3(b)(3)].

Local

Mendocino County Regional Transportation Plan and Active Transportation Plan and Senate Bill 743 Vehicle Miles Traveled Regional Baseline Study. The Mendocino County Regional Transportation Plan and Active Transportation Plan (MCOG 2022) was developed to provide a clear vision of the regional transportation goals, policies, objectives, and strategies. The regional transportation planning process is a long-range (1- to 20-year) planning effort that involves federal, state, regional, local, and tribal governments, public and private organizations, and individuals working together to plan how future regional transportation needs can be met. Regional Transportation Plans are planning documents required by State legislation. Prior to the preparation of the Regional Transportation Plan, Mendocino County prepared the SB 743 Vehicle Miles Traveled Regional Baseline Study (Fehr and Peers 2020) to assist the jurisdictions in Mendocino County in selecting VMT analysis methodologies, setting new VMT thresholds, and determining the most feasible mitigation measures. This study provides an overview of

SB 743 and related policies, summarizes available VMT data for Mendocino County, and recommends VMT methods and thresholds for lead agencies in Mendocino County.

Mendocino County General Plan. The General Plan incorporates a wide range of policy approaches addressing transportation needs. Emphasis is placed on improving and maintaining existing roadway systems and bridges unless needed to improve circulation or emergency access.

Policy DE-142: Maximize the use of existing road systems and reduce environmental and community disruption through compatible land use planning.

Policy DE-143: The County encourages development using existing roads with available capacity prior to locating development in areas that require new transportation facilities.

5.17.2 Environmental Impacts

a. Would the project conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

Construction, Commissioning, and Demolition

Less than Significant. Project construction and demolition would occur in a rural setting and is not likely to create impacts to the circulation system in the Project area. Some lane closures and/or traffic controls may be required to allow for certain construction activities such as delivery of oversized equipment and material. During installation of the MDS Enclosures, which would occur over a four-week period, it is estimated that there would be 210 one-way heavy haul truck trips to deliver the battery and auxiliary enclosures. Over the entire construction phase, on average, there would be 29 daily trips, with a peak of 35 trips. During commissioning, which is expected to last up to 10 weeks, there would be an average of 5 one-way trips, with a peak of 10 one-way trips. During demolition and decommissioning, there would be approximately 26 daily trips, with a peak of 35 trips. The construction, commissioning, and demolition itself would occur entirely within the proposed Project site and would not affect modes of transport.

While construction, commissioning, and demolition traffic would create impacts, these impacts would be localized, temporary in nature, and would not change long-term traffic loads or patterns. Construction, commissioning, and demolition would not conflict with programs, policies, plans, or ordinances regarding public roadway, transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities, and is therefore, less than significant.

Operation

No Impact. Form Energy's existing operations and maintenance group would be responsible for operation and maintenance associated with the MDS system. The Project would be unstaffed and operated remotely by Form Energy. Form Energy's operations and

maintenance group would conduct on-site routine inspections and periodic maintenance visits. Form Energy staff are responsible for operations and maintenance of the MDS battery enclosures and related facilities. PG&E would be responsible for all operation and maintenance associated with their substation or switchyard. No additional PG&E workers would be required to maintain their facilities. Typical maintenance activities involve both routine inspections and preventive maintenance to ensure service reliability, as well as emergency work to maintain or restore service continuity. Maintenance would be performed quarterly, and crews are anticipated to consist of two to three workers. No substantial increase in traffic or traffic-related impacts would occur due to operation and maintenance activities.

b. Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

Construction, Commissioning, and Demolition

Less than Significant. CEQA Guidelines section 15064.3(b) concerns VMT as the measure of transportation impacts. As of July 1, 2020, CEQA requires use of VMT in the traffic analysis.

Construction of the proposed Project would occur over approximately six to nine months and project–related traffic would consist of worker commutes and the movement of materials and equipment to and from the site. Commissioning could last up to 10 weeks following construction. Vehicle miles traveled by personal vehicle trips and truck trips during construction would vary in their origins and destinations, but they are assumed to come primarily from the San Francisco Bay Area (for deliveries of equipment and materials, aside from MDS battery and auxiliary enclosures) and within Mendocino County (for labor), and they would be periodic and temporary. The MDS battery and auxiliary enclosures would be manufactured in West Virginia, and would need to be shipped, or driven, to the Project site in Mendocino County. Depending on the method of delivery, VMT would vary. Once the Project is completed, the vehicle trips associated with construction would end. Demolition impacts are anticipated to be similar to, or less than, construction impacts.

Construction/demolition personnel would commute to the work site at the beginning of the day and leave at the end of the day, and a few vehicles would travel to and from the site throughout the day. During construction, depending on the phase, it is estimated that there would be a peak of 30 one-way vehicle trips per day, accounting for worker vehicles, equipment/materials deliveries, and water truck trips. It is estimated that there would be about 500 heavy haul truck trips during the construction period, including MDS Enclosure Installation.

During the MDS Enclosure Installation and Electrolyte Fill construction phase, which would last approximately three weeks, there would be approximately 210 heavy-haul truck trips total, with an average of 16 trips per day, and a peak of 26 one-way trips. Form Energy has not yet chosen a logistics provider, but as a worse case, it is assumed that the MDS

enclosures would be shipped via flatbed truck from West Virginia, directly to the Project site. While these construction truck trips may require high VMT to deliver MDS enclosures, such trips would be necessary to deliver specialized equipment and materials that are not available locally. Due to the availability of rail lines and ports in the nearby San Francisco Bay Area, the logistics provider may decide to use these options. If so, VMT could be reduced by equipment and materials being hauled via rail to closer locations before being trucked to the Project site.

Additionally, during commissioning some project workers and PG&E personnel would be required to connect the Project to the PG&E substation and ensure it is functioning properly. The commissioning workforce would be onsite for up to 10 weeks, with an average of 5 workers and a peak workforce of 10 workers.

At the conclusion of the project, during decommissioning and demolition, there would be an average of 16 one-way trips per day and a peak of approximately 26 one-way vehicle trips, accounting for worker vehicles, equipment operations, and water truck trips. There would be 340 one-way heavy haul truck trips total over the six- to nine-month period of decommissioning and demolition.

Currently, there are no applicable VMT thresholds of significance for temporary construction/demolition trips. Project-related construction trips are not considered to cause a substantial or sustained increase in VMT compared to regional averages for rural construction projects. Therefore, while the proposed Project would include temporary construction/demolition-related trips with VMT from outside the immediate Project site, these trips would not affect existing transit uses or transportation corridors. Thus, the Project would cause a less than significant transportation impact under CEQA Guidelines section 15064.3(b).

Operation

Less than Significant. The Project would not require full-time workers from Form Energy or PG&E, but it would require routine inspection and periodic maintenance visits by Form Energy personnel. The Form Energy operations and maintenance team would consist of approximately two to three workers, who would be working on site approximately 96 hours per quarter. PG&E would not require any additional operations and maintenance trips.

Section 3.3 of the SB 743 Regional Baseline Study outlines recommendations for screening criteria for smaller projects. The study states that the project may be presumed to cause a less-than-significant VMT impact without further study if the project generates less than 640 VMT per day and is consistent with the jurisdictions general plan and the Regional Transportation Plan. The Form Energy Project would generate less than 640 VMT per day and is consistent with the Mendocino County General Plan and the Regional Transportation Plan, and therefore would cause a less than significant impact. The transportation impact under CEQA Guidelines section 15064.3(b) would be less than significant.

c. Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Construction and Demolition

Less than Significant with Mitigation Incorporated. Heavy equipment operating adjacent to or within a road right-of-way could increase the risk of accidents. The Project involves movement of heavy equipment to and from the site but does not include work adjacent to or in roadways. Concurrent deliveries of oversized equipment or materials have the potential to cause a temporary road hazard on East Road. Construction/demolition-related trucks could interact with other vehicles on the affected local streets and potentially create hazards. Construction traffic impacts would be reduced with implementation of mitigation measure (MM) TRANS-1 (Construction/Demolition Traffic Control Plan) to ensure that deliveries of oversized materials and equipment do not happen concurrently, and therefore do not result in increased traffic hazards from oversized trucks being queued along East Road. In addition, although East Road is a collector street, the amount of heavy haul traffic could affect the road condition. The Traffic Control Plan would ensure that any damage to the roadway would be repaired at the conclusion of the construction and demolition activities. The Project would not create a new access point but would use existing driveways to the site. These driveways provide ingress and egress at a low speed (25 mph). With the incorporation of MM TRANS-1, temporary impacts during construction and demolition would be less than significant.

Operation

Less than Significant. During operations the Project facilities would not increase transportation hazards or be an incompatible use for the site. The Project is similar in function to the existing site and similar ingress and egress would be provided. Maintenance of the proposed Project would require quarterly maintenance and preventative maintenance visits by the Form Energy operations and maintenance group. These trips would be independent of PG&E's trips to the site. PG&E does not expect any additional trips to the site as a result of the Project. Access would be via existing driveways. Therefore, the Project would not cause hazards or create incompatible uses as a result of its maintenance activities proximate to public roadways; no mitigation is required.

d. Would the project result in inadequate emergency access?

Construction, Commissioning, and Demolition

Less than Significant with Mitigation Incorporated. The Project would not alter emergency access onto the Project site. Construction of the proposed Project may cause a minor short-term delay in the local traffic movement in the immediate vicinity of the proposed Project if trucks become backed up on East Road from concurrent deliveries of oversized equipment or materials. During construction/demolition, the proposed Project would not increase traffic substantially compared to the existing traffic volume and the capacity of the street system in the area. When oversized equipment or materials are delivered, MM

TRANS-1 would ensure that deliveries would be spaced out to allow time for trucks to enter and exit the Project site without causing congestion. Therefore, the Project would not result in inadequate emergency vehicle movements or impede access to property. With the incorporation of MM TRANS--1, temporary impacts during construction and demolition would be less than significant.

Operation

Less than Significant. Once operational, the Project would have no impact on access or movement to emergency service providers. Occasional maintenance activities would be short-term in duration, estimated at approximately 96 hours of maintenance per quarter by two to three workers. Therefore, maintenance of the proposed Project would have a less than significant impact on emergency vehicle access and movements.

5.17.3 Mitigation Measures

MM TRANS-1 **Construction and Demolition Traffic Control Plan.** Prior to the start of construction, the Project applicant shall prepare and submit a Construction and Demolition Traffic Control Plan for review and approval by the CEC. The Construction and Demolition Traffic Control Plan shall include, but not be limited to:

- During construction, deliveries of materials and equipment shall be staggered to avoid traffic congestion due to concurrent deliveries. During demolition, the process will be reversed, ensuring that departures are staggered. The minimum time period of truck separation shall be stated in the Plan.
- The Project applicant shall coordinate with Mendocino County Public Works Department, Roadway Section to assess road conditions before the start of construction and after the conclusion of construction. The Project applicant shall comply with any requirements of the Public Works Department. The direction received, and any compliance requirements, shall be reported to the CEC within 14 days. The Project applicant shall do the same with demolition.

5.17.4 References

Caltrans 2023 – California Department of Transportation (Caltrans). California Road System – Functional Classification. Available online at: https://caltrans.maps.arcgis.com/apps/webappviewer/index.html?id=026e830c914c495797c969a3e5668538.

Fehr and Peers 2020 – Fehr and Peers. Senate Bill 743 Vehicle Miles Traveled Regional Baseline Study. Available online at: https://www.mendocinocog.org/files/60111f0bd/SB743+VMT+Regional+Baseline+Study-accepted%28w-links%29.pdf.

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Mendocino County 2020 – Mendocino County. Mendocino County General Plan Chapter 3: Development Element. Adopted August 2009, updated 2020. Available online at: https://www.mendocinocounty.org/home/showpublisheddocument/54479/638055061911270000. Accessed in June 2023.

MTA 2023 – Mendocino Transit Authority (MTA). Maps and Schedules. Available online at: https://mendocinotransit.org/maps-and-schedules/.

5.18 Utilities and Service Systems

This section describes the environmental setting, regulatory background, and impacts associated with the construction, operation, and demolition of the Project with respect to utilities and service systems.

Utilities and Service Systems	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☒	☐
b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☒	☐
c. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☒	☐
d. Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☒	☐
e. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☐	☒

Environmental checklist established by CEQA Guidelines, Appendix G, utilities and service systems.

5.18.1 Environmental Setting

Utility and services system facilities associated with electricity, domestic (potable) water, stormwater, solid waste, communications, and natural gas are provided and maintained by a variety of local purveyors, including cities, counties, special districts, water agencies, and private companies.

- Natural Gas – Pacific Gas & Electric Company (PG&E)
- Electricity – PG&E, Ukiah Public Utilities
- Water – Willow County Water District/Redwood Valley County Water District
- Wastewater – Mendocino County Water Agency

- Telephone and Cable – Comcast, Central Valley Cable, AT&T, Telecom Services Company
- Solid Waste – C&S Waste Solutions

Water Supply

The Potter Valley Project provides power generation, irrigation and domestic water, recreational opportunities, and fish habitat. There are many water service providers in Mendocino County, including the cities, special districts, and private water purveyors. Deficiencies in water supply may occur and vary from year-to-year, especially during years of low rainfall. The Redwood Valley County Water District, where the Project is located, is over seen by the Willow County Water District. The Districts have had a court-ordered moratorium, since 1989, on new water connections due to concerns about the reliability of its water sources (Mendocino County 2020). RVCWD water supply consists of a permit to divert up to 4,900 acre-feet per year (AFY) directly from Lake Mendocino between November 1 and April 30 of each year when flows and storage meet specific criteria. During dry years when the RVCWD water permit is unusable, and during spring and summer, water supplies are diverted from the Mendocino County Russian River Flood Control and Water Conservation Improvement District (RRFC) (Mendocino LAFC 2016).

The proposed Project is located within the Ukiah Valley groundwater basin (Basin), which underlies the Ukiah Valley and the Redwood Valley, and the tributaries located in them (Ukiah Valley Basin GSA 2021). There are no adjudicated subareas within the Basin and no alternative plans have been submitted for any part of the Basin (Ukiah Valley Basin GSA 2021). The Basin was categorized as a medium priority groundwater basin by the California Department of Water Resources under the Sustainable Groundwater Management Act (SGMA); a Groundwater Sustainability Agency—the Ukiah Valley Groundwater Sustainability Agency—oversees the groundwater basin and has prepared a Groundwater Sustainability Plan (GSP). Groundwater supply is the secondary source of supply for most of the Basin and largely augments the surface water supply.

Electricity and Natural Gas

Most residents and businesses in Mendocino County, except those in Ukiah, receive electric service from Pacific Gas and Electric (PG&E). PG&E maintains transmission lines throughout the county. The City of Ukiah owns a hydroelectric power facility at Coyote Dam/Lake Mendocino designed to produce three megawatts (about 10 percent of the City's load) of power when water flows are adequate. The City of Ukiah is responsible for maintaining and operating the hydroelectric plant, and the U.S. Army Corps of Engineers are responsible for operation and maintenance of the dam and structures. The City of Ukiah purchases the remainder of its power through the Northern California Power Association, a Joint Powers Agency comprised of 13 municipal and other public agencies.

Ukiah Public Utilities, the only municipal utility in Mendocino County, provides electricity to approximately 15,000 residential and business customers within the City of Ukiah.

PG&E also provides natural gas in southeast Mendocino County, served by their pipeline, along the U.S. 101 corridor from the Sonoma County line to Willits. Throughout the county, several private businesses maintain large-volume propane gas containers to supply households and businesses (Mendocino County 2020).

Sewage and Wastewater

Public sewer systems in Mendocino County are provided by cities, special districts, and some private water purveyors. There are 13 major wastewater systems in the county, four of which primarily serve the incorporated cities but also serve some unincorporated areas. Ukiah's Wastewater Treatment Plant also processes wastewater collected by the Ukiah Valley Sanitation District. Wastewater infrastructure, or lack thereof, has also imposed potential limits on development in some areas.

Stormwater drainage is an essential issue in Mendocino County due to the high amount of rainfall, the county's topography and stream patterns, settlement patterns favoring river valleys and hillside environments, and widespread discharge of pollutants to surface and groundwater systems.

New development often results in the introduction of impervious surfaces that limit the percolation of rain to the soil; thereby increasing the amount of runoff. Development projects in the unincorporated County are required to construct improvements that either retain storm drainage for a short time or detain it for more extended periods of time to reduce potential flooding impacts. In some instances, storm drainage may be sent to a stream or river, typically using pipes, culverts, or open channels (Mendocino County 2020).

Solid Waste Disposal

Currently, there are no remaining operating landfills in Mendocino County. The solid waste generated in the county is exported for disposal to the Potrero Hills Landfill in Solano County. This landfill has a remaining capacity of 13,872,000 cubic yards of the maximum capacity of 83,100,000, which is about 17 percent. The expected closure date of this landfill is in 2048 (CalRecycle 2023). Mendocino County's solid waste disposal system has shifted to a system of eight small volume transfer stations and two large volume transfer stations that receive waste for export. One of the two large volume transfer stations is located in Ukiah, approximately 10 miles south of the project (C&S 2023). This transfer station is privately owned and operated by C&S Waste Solutions under an agreement with the local government (Mendocino County 2020).

The Mendocino Solid Waste Management Authority (MendoRecycle) operates the MendoRecycle Household Hazardous Waste Facility in the City of Ukiah, approximately 10 miles south of the project. However, as of June 2023, this MendoRecycle facility is temporarily closed due to staffing issues (MendoRecycle 2023).

Regulatory

Federal

Clean Water Act Section 402: National Pollutant Discharge Elimination System. Section 402 of the Clean Water Act (CWA) establishes the National Pollutant Discharge Elimination System (NPDES) permit program to regulate point source discharges of pollutants to Waters of the United States. Discharges or construction/demolition activities that disturb one or more acres, which includes the proposed Project, are regulated under the NPDES stormwater program and are required to obtain coverage permit under a NPDES Construction General Permit. The Construction General Permit establishes limits and other requirements such as the implementation of the Stormwater Pollution Prevention Plan, which would further specify best management practices to avoid or eliminate pollution discharge into the nation's waters. The State Water Resources Control Board (SWRCB) issues both general and individual permits under this program. The SWRCB delegates much of its NPDES authority to nine regional water quality control boards. The proposed Project's NPDES permits would be under the jurisdiction of the North Coast Regional Water Quality Control Board (RWQCB).

State

California Government Code – Protection of Underground Infrastructure. The responsibilities of California utility operators working in the vicinity of utilities are detailed in Section 1, Chapter 3.1, "Protection of Underground Infrastructure" (Article 2 of California Government Code §§4216-4216.9). This law requires that an excavator must contact a regional notification center at least two days prior to excavation of any subsurface installation. Any utility provider seeking to begin a project that may damage underground infrastructure can call Underground Service Alert, the regional notification center. Underground Service Alert will notify the utilities that may have buried lines within 1,000 feet of the Project. Representatives of the utilities are required to mark the specific location of their facilities within the work area prior to the start of project activities in the area. The code also requires excavators to probe and expose underground facilities by hand prior to using power equipment.

California Integrated Waste Management Act of 1989. Assembly Bill 939 codified the California Integrated Waste Management Act of 1989 in the Public Resources Code and established a hierarchy to help the California Integrated Waste Management Board (CIWMB) and local agencies implement three major priorities under the Integrated Waste Management Act: source reductions; recycling and composting; and environmentally safe transformation and land disposal. Waste diversion mandates are included under these priorities. The duties and responsibilities of the CIWMB have since been transferred to the California Department of Resources Recycling and Recovery (CalRecycle) after the abolishment of the CIWMB in 2010, but all other aspects of the Act remain unchanged.

The Act requires all local and county governments to adopt a waste reduction measure designed to manage and reduce the amount of solid waste sent to landfills. This Act established reduction goals of 25 percent by the year 1995 and 50 percent by the year

2000. Senate Bill 1016 (2007) streamlines the process of goal measurement related to Assembly Bill 939 by using a disposal-based indicator: the per capita disposal rate. The per capita disposal rate uses only two factors: the jurisdiction's population (employment can be considered in place of population in certain circumstances) and the jurisdiction's disposal as reported by disposal facilities. CalRecycle encourages reduction measures through the continued implementation of reduction measures, legislation, infrastructure, and support of local requirements for new developments to include areas for waste disposal and recycling on-site.

California Code of Regulations (Title 27). Title 27 (Environmental Protection) of the California Code of Regulations defines regulations and minimum standards for the treatment, storage, processing, and disposal of solid waste at disposal sites. The State Water Resources Control Board maintains and regulates compliance with Title 27 of the California Code of Regulations by establishing waste and site classifications and waste management requirements for solid waste treatment, storage, or disposal in landfills, surface impoundments, waste piles, and land treatment units. The compliance of the proposed Project would be enforced by the North Coast RWQCB and the California Department of Resources Recycling and Recovery (CalRecycle) (formerly the California Integrated Waste Management Board). Compost facilities are regulated under the California Code of Regulations, Title 14, Division 7, Chapter 3.1, sections 17850 through 17895, by CalRecycle. Permit requests, Reports of Waste Discharge, and Reports and Disposal Site Information are submitted to the RWQCB and CalRecycle, and are used by the two agencies to review, permit, and monitor these facilities.

Local

Mendocino County General Plan. Development Element.

Policy DE-193. The County supports efficient and adequate public water and sewer services through combined service agencies, shared facilities, or other inter-agency agreements.

- Action Item DE-193.1. Work aggressively with water and sewer service providers to overcome the current and projected system and supply deficiencies necessary to serve planned community growth and emergency response needs.

Policy DE-196. Development of residential, commercial, or industrial uses shall be supported by water supply and wastewater treatment systems adequate to serve the long-term needs of the intended density, intensity, and use.

Policy DE-212. All development projects shall include plans and facilities to store and manage solid waste and hazardous materials and wastes in a safe and environmentally sound manner.

Policy DE-214. The County will seek to reduce the impacts of above-ground utilities. Standards and policies to reduce impacts include:

- Promoting the underground installation of utilities to reduce visual impacts to significant scenic resources.
- Locating utility systems in established corridors where possible.
- Ensuring that above-ground utilities are located and designed to minimize visual impact and clutter.
- Avoiding vegetation removal, new road construction, and silhouettes against the sky.
- Pursuing the undergrounding of utility lines in new development and in the downtown core of community areas.

5.18.2 Environmental Impacts

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

Construction and Operation

Less than Significant. The proposed Project would involve construction of a new long-duration battery storage facility. Construction activities would generate a minimal demand for water or wastewater treatment and no demand for natural gas facilities. The Project would not require the relocation, expansion, or development of new utility systems beyond the Project itself. The two Power Blocks would be connected to the pad-mounted switchgear via 880 feet of trenching. From the pad-mounted switchgear, a 300-foot overhead primary line will be extended to a new power pole within the substation that would also connect to a 12 kV tap along the east side of East Road. These upgrades would result in only minor changes to existing facilities. During routine operation and maintenance of the proposed Project, the Project would be unstaffed and would not create any need for new or expanded utilities or service systems.

Water, Wastewater Treatment, or Storm Water Facilities. The proposed Project would generate minimal demand for water or wastewater treatment. A water truck, provided by a commercial bulk water delivery service, would be on-site to support dust suppression during ground-disturbing construction or demolition work. It is assumed that a maximum of three truck loads per day would be required. Any water used for dust control would be dispersed onsite and would either evaporate or be absorbed into the ground; therefore, no wastewater generation is anticipated from this use. Water would be required to make concrete for equipment foundations. Excess concrete from construction would be disposed of at an approved site away from the work area.

Portable toilets are currently on-site for use by PG&E crews. They would be provided for construction work crews and would remain on-site for the operation and maintenance crews. These toilets will be maintained by a licensed sanitation contractor. Since the construction and demolition workforces are small (six to 10 workers), and duration is short (6 to 9 months) the amount of wastewater to be disposed of would be minimal.

The Project site will be graveled. Hence, the proposed Project would result in only a minor increase in stormwater flow from water diverted by the foundations and structures, which would likely infiltrate directly into the ground. No additional stormwater drainage systems would be required, and therefore, the Project would not require or result in the construction of new stormwater drainage facilities or the expansion of existing facilities.

Upon completion of construction, the proposed Project would not generate any demand for wastewater treatment, other than the minimal use of the portable toilets by the quarterly maintenance crews. There would be no sanitary sewer hookup at the site. Existing wastewater and water treatment facilities are adequate to accommodate the demand generated by the proposed Project.

During operations, demineralized water would be stored on-site in two 10,000-gallon tanks. Routine maintenance of the project would involve water truck deliveries from a commercial water delivery service of approximately five water truck deliveries per month, to refill these tanks. The water would be used to replenish electrolyte levels in the batteries. Annually, this would equal approximately 60 water truck deliveries. Assuming an average sized water truck with a volume of approximately 5,000 gallons, this would equal approximately 300,000 gallons/year or 0.92 AFY.

Thus, the Project would have less than significant impact that would not cause the need for the construction or expansion of water or wastewater treatment facilities, or storm water drainage.

Electric Power, Natural Gas, or Telecommunications Facilities. No new natural gas or telecommunications facilities would be required in support of the Project. The existing electric power system, including the existing substation, would remain in service during construction and commissioning of the Project. The Project would contribute to the stability of the City's power grid, by storing energy. These activities would not cause significant environmental effects.

b. Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

Construction, Demolition and Operation

Less than Significant. During construction and demolition, the Project would require approximately 3.5 acre-feet, and 2.3 acre-feet of water for each phase, respectively. Willow County Water District (which oversees the Redwood Valley County Water District) would be an alternative water purveyor for the Project area. The Willow County Water

District could not commit at this time to providing surface water for the Project, because of potential curtailments and fluctuations of water supply throughout the dry and wet seasons (Walker 2023). Groundwater serves as secondary source with wells located in the Basin. If groundwater resources were purchased from an existing commercial water purveyor and used for construction/demolition water supplies, the purveyor would be subject to, and have to comply with, the Ukiah Valley Groundwater Sustainability Plan and local water regulations. If the Project were not able to purchase water from the Willow County Water District, or a groundwater source, it could purchase and truck in water from an area where there is sufficient water supply, and no water curtailment. Because water demand for construction and demolition are short-term and temporary, they would not affect the Basin.

The Project would include the installation of two 10,000-gallon water tanks on-site, which would provide demineralized water for the operation of the MDS system. During operation, water would be delivered via a bulk water delivery service to fill the tanks. Annually, this would equal approximately 60 water truck deliveries. Assuming an average sized water truck with a volume of approximately 5,000 gallons, this would equal approximately 300,000 gallons/year or 0.92 AFY. The water used for the Project operations would be purchased from a private commercial supplier, who would be subject to Willow County Water District restrictions. If Willow County Water District, does not have sufficient surface supply, water would be acquired from a groundwater source subject to the GSP, or another source outside the restricted area that has sufficient water supply. The relatively small annual water required for operational activities would not affect the Basin. Therefore, the proposed Project would have sufficient water supplies available for its needs during normal, dry, and multiple dry years without impacting the current water supply.

c. Would the project result in a determination by the wastewater treatment provider which serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Construction, Demolition, and Operation

Less than Significant. The proposed Project would generate minimal wastewater during construction/demolition and operation. The proposed Project would provide portable toilets for construction workers and the waste would be disposed of through a wastewater treatment facility with adequate capacity. Because the number of construction/demolition workers is small, as discussed in Item (a) above, existing wastewater facilities would adequately accommodate the minor demand caused by Project construction while serving existing commitments. Therefore, this impact would be less than significant.

d. Would the project 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?

Construction and Demolition

Less than Significant. Construction debris and waste generated during construction of the Project would be transported to a transfer station for recycling or disposal.

Total solid waste generated by construction of the proposed Project is anticipated to be minor compared to the capacity of local recycling infrastructure and existing landfills/ transfer stations, as identified in Section 5.18.1. The Potrero Hills Landfill is not expected to close for about another 20 years.

During demolition, concrete foundations will be removed, crushed, and reused. The iron-air battery platform is composed of standard recyclable commodity materials. Form Energy is actively engaged in developing the supply chain required for end-of-life material management and a circular use framework. Early engagement has validated recycling pathways and offtakes for about 95 percent of end-of-life materials. Therefore, the impact of solid waste disposal on local infrastructure and landfill capacity would be less than significant.

Operation

During operation, the proposed Project would be unstaffed and would not generate notable quantities of solid waste. Therefore, the impact of solid waste disposal on local infrastructure and landfill capacity would be less than significant.

e. Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

Construction and Operation

No Impact. The California Integrated Waste Management Act of 1989 emphasizes resource conservation through the reduction, recycling, and reuse of solid waste. The act requires local jurisdictions in California to reduce, by 50 percent, the amount of solid waste disposed of in landfills by the year 2000 and beyond. During construction, the proposed Project would operate in accordance with these applicable Solid Waste Management Policy Plans by recycling materials where feasible. The Project would collect and haul construction debris off-site for recycling or disposal in local jurisdictions that comply with this state requirement and have programs in place to ensure that disposal of solid waste meets these requirements. As identified in Section 5.18.1, the landfill and large volume transfer station serving the site would have sufficient capacity to accommodate Project construction solid waste disposal needs, and Project solid waste disposal would not result in the need for new or expanded landfill facilities. Therefore, the proposed Project would comply with federal, State, and local management and reduction statutes and regulations related to solid waste disposal limits and landfill capacities. No impact would occur.

Demolition

The Project is expected to be operational for approximately five years, however, the facility may stay online past the initial five-year period. Once the project has completed its usefulness, it will be decommissioned and the electrical connections to the PG&E substation will be terminated. Demolition would likely involve a combination of salvage or disposal in accordance with applicable federal, state, and local regulations. Form Energy is developing a circular-use framework, which would result in recycling pathways and offtakes for approximately 95 percent of end-of-life materials. See Section 4.11, Demolition and Decommissioning, for more information regarding recycling and reuse of specific components. Form Energy is actively engaged in developing the supply chain required for end-of-life material management and a circular use framework, which would result in recycling pathways and offtakes for about 95 percent of end-of-life materials. Therefore, the proposed Project would comply with federal, State, and local management and reduction statutes and regulations related to solid waste disposal limits and landfill capacities. No impact would occur.

5.18.3 Mitigation Measures

None required.

5.18.4 References

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Mendocino County 2020 – Mendocino County. Mendocino County General Plan Chapter 3: Development Element. Adopted August 2009. Updated 2020. Available online at: https://www.mendocinocounty.org/home/showpublisheddocument/54479/638055061911270000. Accessed on: June 2023.

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Ukiah Valley Basin GSA 2021 – Ukiah Valley Groundwater Sustainability Agency (Ukiah Valley Basin GSA). Ukiah Valley Groundwater Sustainability Plan. Available online at: https://ukiahvalleygroundwater.org/wp-content/uploads/2023/01/GSP.pdf. Accessed on: July 2023.

Walker 2023 – Jared Walker. Personal communication with Jared Walker. Water Allocation Inquiry 2024 Project Redwood Valley. September 26, 2023.

5.19 Wildfire

This section describes the environmental setting, regulatory background, and impacts associated with the construction, operation, and demolition of the Project with respect to wildfires.

Wildfire	**Potentially Significant Impact**	**Less Than Significant with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a. Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☒	☐	☐
b. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☒	☐	☐
c. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☒	☐
d. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☒	☐	☐

Environmental checklist established by CEQA Guidelines, Appendix G, Wildfire.

5.19.1 Environmental Setting

Wildfire Hazard

The California Department of Forestry and Fire Protection (CAL FIRE) identifies, and maps areas of significant fire hazards based on fuels, terrain, and other relevant factors. These maps categorize this information by Fire Hazard Severity Zones (FHSZs), grouped into un-zoned, moderate, high, and very high zones. State Responsibility Areas (SRAs) are locations where the State of California is responsible for wildfire protection and Local Responsibility Areas (LRAs) are locations where the responding agency is the county or city.

Mendocino County's hilly areas create conditions conducive to wildfires due to the steep slopes, highly flammable vegetation, limited access for fire suppression, and inadequate water supply (CAL FIRE 2022a). The eastern half of Mendocino County has the most significant fire hazard, with 803,472 acres designated as very high fire hazard by CAL FIRE. The western half of the county is labeled as high (759,903 acres) and moderate (314,523 acres) fire hazard severity (CAL FIRE 2023). The Project is located south of the community of Redwood Valley on flat land surrounding PG&E's existing Mendocino substation. The Project site is surrounded by primarily agricultural and rural residential land use (see **Section 5.4, Figure 5.4-1**). The entire Project is located within the SRA. The majority of the Project site is currently classified by CAL FIRE as Very High Fire Hazard Severity. A small portion of the Project along East Road is classified as High Fire Hazard Severity. The FHSZ classification north of the Project site is moderate, and south and east of the Project is Very High. West of the Project site is an LRA with Moderate Fire Hazard Severity immediately adjacent to the Project and Unzoned Fire Hazard Severity further west.

Climate and Vegetation

Mendocino County enjoys a Mediterranean climate, with dry summers during which there is typically no rainfall from early June to late October. These periods without rainfall result in dry grasses, brush, and other vegetation, especially toward the end of the season. Diverse microclimates throughout the County benefit from having four seasons and 40 to 100 inches of annual rainfall, depending on the location, elevation, and weather patterns. The declared fire season in Mendocino County typically lasts from early June to mid- or late-October (Mendocino County Fire Chiefs' Association 2015).

Fire History

Mendocino County has recently experienced several large fires. Most notably, the Mendocino Complex fire, which included the River Fire and Ranch Fire, started in July 2018, and burned a total of 459,123 acres throughout Mendocino, Lake, Colusa, and Glenn counties. To date, The Mendocino Complex fire is the third largest fire in the State of California (Western Fire Chiefs Association 2022). Mendocino County was also affected by the August Complex Fire in 2020, the largest fire in the history of the State of California, burning a total of 1,032,648 acres across Mendocino, Lake, Trinity, Tehama, and Shasta counties (CAL FIRE 2022a). The Redwood Valley Fire burned approximately 2.5 miles to the north and northeast of the Project area in October 2017 after it was sparked by trees falling on powerlines. In total, the Redwood Valley Fire burned 36,523 acres (CAL FIRE 2022a).

Regulatory

Federal

A variety of line and tower clearance standards are used throughout the electric transmission industry. These address distances between energized lines and support structures and potential obstructions, including vegetation, structures, and the ground. Nationally,

most transmission line owners follow the National Electric Safety Code (NESC) rules or American National Standards Institute (ANSI) guidelines, or both, when managing vegetation around transmission system equipment. The NESC deals with electric safety rules including transmission wire clearance standards; whereas, the applicable ANSI code deals with the practice of pruning and removal of vegetation.

State

California Public Utilities Commission (CPUC) General Order (GO) 95. CPUC's GO 95 is the key standard governing the design, construction, operation, and maintenance of overhead electric lines in the State. The CPUC has promulgated various rules to implement the fire safety requirements of GO 95, including:

- *GO 95 Rule 31.2* requires that lines be inspected frequently and thoroughly to ensure that they are in good condition, and that lines temporarily out of service be inspected and maintained in such condition so as not to create a hazard.
- *GO 95 Rule 35* governs requirements that vegetation management activities be performed to establish and maintain necessary and reasonable clearances.
- *GO 95 Rule 38* establishes minimum vertical, horizontal, and radial clearances of wires from other wires.

California Public Resources Code Sections 4292 and 4293. The California Public Resources Code (CPRC) Sections 4292 and 4293 specify requirements related to fire protection and prevention in transmission line corridors. CPRC Section 4292 states that any person that owns, controls, operates, or maintains any electrical transmission or distribution line has primary responsibility for fire protection of such areas, and shall maintain around and adjacent to any pole or tower which supports a switch, fuse, transformer, lightning arrester, line junction, or dead end or corner pole, a firebreak which consists of a clearing of not less than 10 feet in each direction from the outer circumference of such a pole or tower (CPRC 4292). CPRC Section 4293 specifies clearance distances required between vegetation and conductors of 2,400 to 110,000 volts. Conductors operating between 2,400 and 72,000 volts shall have four feet of clearance, those operating between 72,000 and 110,000 volts shall have six feet of clearance, and those operating at or above 110,000 volts shall have 10 feet of clearance.

Fire Hazard Severity Zones (Pub. Resources Code, Sections 4201 4204.1.). The purpose of establishing FHSZs is to provide for the classification of lands within SRAs in accordance with the severity of fire hazard present and identify measures to be taken to retard the rate of spreading and to reduce the potential intensity of uncontrolled fires that threaten to destroy resources, life, or property.

Local

Mendocino County Community Wildfire Protection Plan. This plan was collaboratively developed in 2015 to identify and prioritize areas for hazardous fuel reduction treatments and recommend measures to reduce the ignitability of structures throughout

Mendocino County. Three fuels reduction projects have been identified in Redwood Valley.

Mendocino County Multi-Jurisdictional Hazard Mitigation Plan. This multi-jurisdictional plan includes a risk assessment that identifies the natural hazards and risks that can impact a community based on historical experience, estimate the potential frequency and magnitude of disasters, identify areas of particular vulnerability, and assess potential losses to life and property. The plan also includes developed mitigation goals and objectives as part of a strategy for mitigating hazard-related losses.

Mendocino County General Plan, Development Element. The following policies are presented in the Mendocino County General Plan, Development Element (Mendocino County 2009).

Policy DE-215: Development shall be located, designed, and managed to reduce fire risk to life, property, and natural resources, and incorporate adequate fire protection consistent with the General Plan and adopted regulations.

Policy DE-216: Development shall facilitate and integrate the ability for fire protection agencies to access and maintain fuel and firebreaks, water supplies, and emergency access routes.

Policy DE-217: New development in State Responsibility Areas and urban/rural interfaces should incorporate:

- Fuelbreaks or greenbelts coordinated with water supplies and access providing maximum circulation consistent with topography.
- Adequate and accessible defensible space.
- At least two ingress-egress routes to a public roadway, unless alternative routes accessible to fire equipment are provided.
- Access to publicly maintained evacuation routes at regular intervals.
- Access routes sufficient to accommodate evacuating vehicles, fire equipment and vegetation management zones.
- Primary traffic lanes to all building sites with turnarounds to accommodate fire equipment
- Water supplies within short distance for fire equipment access.
- Fire flows with adequate duration.
- Develop fire safe plans for communities to assist in qualifying for grants.

5.19.2 Environmental Impacts

a. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project substantially impair an adopted emergency response plan or emergency evacuation plan?

Construction/Demolition

Less than Significant with Mitigation. During Project construction, commissioning and demolition, traffic levels would experience a minimal increase that is not expected to degrade traffic performance significantly. Short-duration lane closures of roadway lanes could occur during construction/demolition to accommodate delivery and haul away of oversize equipment such as the multi-day storage (MDS) enclosures and other equipment. However, when oversized equipment or materials are delivered (or removed from the site), mitigation measure (MM) TRANS-1 would ensure that deliveries would be spaced out to allow time for trucks to enter and exit the project site without causing congestion of East Road. No streets would be fully closed, rerouted, or substantially altered during construction/demolition. The battery modules would not impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan.

Operation & Maintenance

No Impact. Once operational, the proposed Project would have no impact on emergency response or evacuation. Occasional maintenance activities would be short-term in duration, use few staff, and would occur within the property. Therefore, maintenance of the proposed Project would not substantially impair an emergency response plan or emergency evacuation plan.

b. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project 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?

Construction/Demolition

Less than Significant. The greatest risk of a wildfire during construction, commissioning and demolition would be from construction vehicles, tools, and equipment coming in contact with dry grass in and around the Project site. However, during initial construction activities, the Project site would be removed of all vegetation (other than trees) and maintained as such throughout construction, commissioning, operations, and demolition. This would reduce the risk of wildfire from vehicles and construction tools/equipment. Therefore, risks of wildfire exacerbation would be less than significant throughout construction and demolition.

Operation & Maintenance

Less than Significant with Mitigation. As described in Section 5.9.3a (Hazards and Hazardous Materials), the MDS units will have exhaust fans installed within each battery module to eliminate the buildup of heat or hydrogen within the module containers. Additionally, MM HAZ-1 and MM HAZ-2 would be implemented to ensure module shut-down in the event of ventilation system failure and ensure that testing for thermal runaway, as per industry standard UL9540A, has been completed. In addition, the system is designed in accordance with industry-recognized safety standards, including UL 9450A, to ensure that the batteries do not operate at any potentially unsafe or damaging temperatures, regardless of the heat source. Therefore, the potential risk for the batteries to cause an onsite fire hazard are low.

Vegetation would be removed from the Project site during construction, and the area in and around the power blocks would be covered in gravel to reduce unwanted vegetation throughout operation of the facility. In addition, a perimeter roadway—which will also act as a firebreak—will be maintained during the life of the project. In the event of an encroaching wildfire, the power blocks would shut down completely (MM HAZ-3). These actions would keep the project from exacerbating an existing fire. Impacts from operation and maintenance would be less than significant with mitigation.

c. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

Construction/Demolition and Operation

Less than Significant. The Project includes the installation of a 300-foot, 12kV overhead interconnection line that will run from the pad-mounted switchgear to the existing PG&E Mendocino Substation and to a transmission line along the east side of East Road (see **Figure 4-3**). The interconnection line will be owned and managed by PG&E and will comply with all applicable components of CPUC GO 95 including vegetation management and equipment maintenance. As part of site development, a demineralized water system and a water piping network would be installed to replenish water in the battery modules. Additionally, two small access roads will be installed from the existing substation access road to connect with the north and south power blocks. The installation and maintenance of these infrastructure components would not exacerbate fire risk; thus, impacts would be less than significant.

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?

Construction/Demolition

Less than Significant with Mitigation. The Project is not in a FEMA flood zone, and flooding is unlikely at the relatively flat Project site (Mendocino County n.d.). Minor grading will be done during construction to level out the site and prepare for foundation installation. Minor grading activities and foundations would not substantially alter local drainage patterns. With implementation of MM NOISE-3, the sound wall would be engineered so as not to impede stormwater flows and thus would not alter the existing drainage pattern at the site. Stormwater discharge during construction would be managed according to the Project's Storm Water Pollution Prevention Plan. The Project would not, therefore, be expected to contribute to a flooding hazard onsite or offsite.

As discussed, the topography of the Project site is relatively flat and therefore would not be exposed to post-fire slope instability or drainage changes.

Operation & Maintenance

Less than Significant with Mitigation. The Project is not in a FEMA flood zone, and flooding is unlikely at the relatively flat Project site. Operation of the Project would not alter the course of a drainage and would not substantially alter local drainage patterns. With implementation of MM NOISE-3, the sound wall would be engineered so as not to impede stormwater flows, and thus, would not alter the existing drainage pattern at the site. As discussed, the topography of the Project site is relatively flat and therefore would not be exposed to post-fire slope instability or drainage changes.

5.19.3 Mitigation Measures

Mitigation measures required in **Section 5.9, Hazards and Hazardous Materials**, **Section 5.17 Transportation**, and **Section 5.13, Noise**, would ensure that Project impacts are reduced to less than significant.

5.19.4 References

BLM n.d. – Bureau of Land Management (BLM). Mendocino Complex Fires. Available online at: https://www.blm.gov/programs/fire-and-aviation/regional-information/california/mendocino-complex-fires. Accessed on June 6, 2023.

CAL FIRE 2022a – CAL FIRE. 2022a. *August Complex.* Available at https://storymaps.arcgis.com/stories/1a0a88e7872e48919831793fd496b814. Accessed on June 6, 2023.

CAL FIRE 2023 – CAL FIRE. 2023. *State Responsibility Area Fire Hazard Severity Zones Viewer*. Available at https://osfm.fire.ca.gov/divisions/community-wildfire-

preparedness-and-mitigation/wildfire-preparedness/fire-hazard-severity-zones/#explorefhsz. Accessed on September 1, 2023.

Mendocino County 2009 – Mendocino County. 2009. Mendocino County General Plan: Development Element. Available at: https://www.mendocinocounty.org/home/showpublisheddocument/5232/636242309522970000. Accessed on June 6, 2023.

Mendocino County n.d. – Mendocino County. n.d. Public GIS Portal: Land Constraints. Available at: https://gis.mendocinocounty.org/portal/home/. Accessed on June 20, 2023.

Mendocino County EO 2021 – Mendocino County Executive Office, Office of Recovery, & Office of Emergency Services. 2021. Mendocino County Multi-Jurisdictional Hazard Mitigation Plan. Available at: https://mitigatehazards.com/mendocino-county/final-mjhmp/. Accessed on June 6, 2023.

Mendocino County Fire Chiefs' Association 2015 – Mendocino County Fire Chiefs' Association. 2015. Mendocino County Community Wildfire Protection Plan. Available at: https://firesafemendocino.org/mcwpp-plan/. Accessed on June 2, 2023.

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Western Fire Chiefs Association 2022 – Western Fire Chiefs Association. 2022. History of California Wildfires. Available at: https://wfca.com/articles/history-of-california-wildfires/. Accessed on June 2, 2023.

5.20 Mandatory Findings of Significance

Mandatory Findings of Significance	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
b. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☐	☒	☐
c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☒	☐	☐

Environmental checklist established by CEQA Guidelines, Appendix G, mandatory findings of significance.

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?

Air Quality

Less than Significant. As discussed in **Section 5.3, Air Quality**, the proposed Project would increase emissions temporarily during construction/demolition-related activities. However, project emissions from construction/demolition activities would not exceed the thresholds for significant construction impacts. Operation-related emissions at the proposed Project site would be minimal as the site would be operated remotely and the batteries themselves would not result in any air emissions. Although the thresholds of significance are different for the construction and operations phases, daily operation

phase emissions would be much less than the daily construction/demolition phase emissions and operation emissions would also be well below the thresholds of significance. Therefore, impacts would not be significant and would not substantially degrade the quality of the environment.

Biological Resources

Less than Significant with Mitigation Incorporated. With mitigation, the project would not substantially degrade the quality of the environment, reduce the existing habitat of any fish or wildlife species, cause any fish or wildlife population to drop below self-sustaining levels, threaten to eliminate any plant or animal community, or substantially reduce the number or restrict the range of an endangered, rare, or threatened species.

The potential to degrade environmental quality is minimal as the Project site houses an existing substation and storage yard. The Project area primarily consists of rural grassland that has the potential to be disturbed during construction activities. However, due to similar or higher quality habitat in adjacent areas and throughout the general region, the Project would not substantially reduce the habitat of a sensitive wildlife species, and only common wildlife species would be expected to occur onsite. Additionally, the project would not cause wildlife populations to drop below self-sustaining levels or threaten to eliminate a plant or animal community.

The Project Area has been subject to historic and ongoing disturbance for over 30 years, limiting the potential for special-status plants to occur. No special-status wildlife species were observed or detected during the June and July 2023 surveys. As discussed in **Section 5.4, Biological Resources**, the literature review identified 29 special-status wildlife species with the potential to occur within or adjacent to the Project area. There are no recorded occurrences for any of these species within or near the Project area.

Proposed mitigation measures (MMs) BIO-1 through BIO-8 include preconstruction worker training, preconstruction surveys and avoidance measures for special-status species (if present), biological monitoring, protocol surveys, exclusion fencing, and a requirement that all vehicles and equipment are cleaned prior to entering work areas. MMs BIO-1 through 8 would ensure less than significant impacts.

Cultural and Tribal Cultural Resources

Less than Significant with Mitigation Incorporated. Important examples of the major periods of California history or prehistory represented by historical, unique archaeological, or tribal cultural resources are not known to be present in the Project area. Nevertheless, the extent of proposed ground disturbance has the potential to damage unknown, buried archaeological resources in the Project area. As described in **Section 5.5, Cultural and Tribal Cultural Resources**, the ground disturbance required to construct the proposed Project could lead to the discovery of unanticipated cultural resources. If these resources were to be exposed or destroyed, it would be a significant impact. Implementation of MM CUL-1 through CUL-3 would reduce the impacts to buried cultural resources to a less than

significant level. The proposed Project, therefore, is unlikely to eliminate important examples of major periods of California history or prehistory.

Geology and Soils

Less than Significant with Mitigation. **Section 5.7, Geology and Soils** indicates that no previous paleontological finds have been made at or near the site. It is unlikely that excavations would exceed the depths of previous disturbance and reach Pleistocene sediments; therefore, impacts to paleontological resources are expected to be minimal. Implementation of MM PAL-1 would reduce risks to less than significant if unexpected paleontological resources are encountered during Project construction.

Hydrology and Water Quality

Less than Significant. As discussed in **Section 5.10, Hydrology and Water Quality**, the Applicant will comply with all applicable rules and regulations pertaining to transport, storage, and use of hazardous materials during all phases of the Project, which, would further reduce the potential for water quality contamination through the accidental release or spill of hazardous materials. Compliance with applicable permits, rules, and regulations would ensure this impact would be less than significant. The proposed Project, therefore, is unlikely to substantially degrade the quality of the environment.

b. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?

Less than Significant. CEQA defines a cumulative impact as an effect that is created as a result of the combination of the proposed Project together with other projects (past, present, or future) causing related impacts. Cumulative impacts of a Project need to be evaluated when the Project's incremental effect is cumulatively considerable and, therefore, potentially significant.

The analysis of cumulative impacts can employ one of two methods to establish the effects of other past, current, and probable future projects. A lead agency may select a list of projects, including those outside the control of the agency, or, alternatively, a summary of projections. These projections may be from an adopted general plan or related planning document, or from a prior environmental document that has been adopted or certified, and these documents may describe or evaluate the regional or area-wide conditions contributing to the cumulative impact.

This Initial Study evaluates cumulative impacts using a list of past, present, or future projects that would occur simultaneously less than one mile from the proposed Project. Based on consultation with Mendocino County Planning & Building Services, there were no projects located less than one mile from the proposed Project Site. As discussed in preceding Sections 5.1 through 5.19 any potential impacts of the proposed Project would

occur during construction or demolition, with few, if any, operational effects. Because the construction/demolition-related impacts of the Project would be temporary and localized, they would have the potential to combine with similar impacts of other projects only if they occur at the same time and in close proximity. Since there are no past, present, and future projects located less than one mile from the proposed Project site, cumulative impacts would be less than significant or less than cumulatively considerable for all issue areas. Given this, and given that the Project, with mitigation, would have less than significant impacts on these resources, the Project's contribution to these impacts would not be singularly or cumulatively considerable.

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

Less than Significant with Mitigation Incorporated. The proposed Project would result in temporary impacts to human health during construction and demolition, including changes to pre-existing noise levels and exposure to hazardous materials. The proposed Project would result in temporary noise impacts to humans during construction/ demolition as well as noise generated by the battery enclosures and transformers during operation. As discussed in **Section 5.13, Noise**, with implementation of MM NOISE-1 through NOISE-3, residents will be notified prior to ground disturbing activities, residents can participate in the noise complaint process, and the installation of a sound wall and other measures will ensure that operational noise levels would comply with applicable maximum noise thresholds and would not elevate the existing ambient noise levels at the nearest residences. These mitigation measures would reduce Project noise levels to meet the applicable noise standards. As discussed in **Section 5.9, Hazards and Hazardous Materials**, the Project would be required to comply with appropriate laws and regulations to control storage, use, and disposal of hazardous waste during its construction, operation, and demolition phases. MM HAZ-1 and MM HAZ-2 would be implemented to limit the risk of upset and accident associated with the battery modules and the electrolyte material contained within. Additionally, implementation of MM HAZ-3 would ensure that both energy storage power blocks would shut down in the event of an encroaching wildland fire. Therefore, the Project would not cause substantial adverse effects on human beings either directly or indirectly.

5.20.1 References

Mendocino County 2009 – Mendocino County General Plan Final Environmental Impact Report. Available at: https://www.mendocinocounty.org/government/planning-building-services/plans/mendocino-county-general-plan. Accessed on August 31, 2023.

5.21 Environmental Justice

This section describes the environmental setting, regulatory background, and impacts associated with the construction, operation, and demolition of the proposed Project with respect to environmental justice.

5.21.1 Environmental Setting

The United States Environmental Protection Agency (U.S. EPA) defines environmental justice (EJ) as, "the fair treatment and meaningful involvement of all people regardless of race, color, national origin or income with respect to the development, implementation and enforcement of environmental laws, regulations and policies" (U.S. EPA 2015, p. 4).

The following subsection describes why EJ is part of the California Energy Commission's (CEC's) environmental review process, the methodology used to identify an EJ population, including but not limited to the consideration of data from the California Environmental Protection Agency's (CalEPA) California Communities Environmental Health Screening Tool (CalEnviroScreen 4.0). Later, the "Project Outreach" subsection discusses the CEC's outreach program specifically as it relates to the proposed Project.

Lastly, the "Environmental Justice Project Screening" subsection presents the demographic data for those people living in a six-mile radius of the Project site and a determination on presence or absence of an EJ population. When an EJ population is identified, the analysis in 10 technical areas[5] consider the Project's impacts on this population and whether any impacts would disproportionately affect the EJ population. These technical areas were selected because they have potential impacts and could impact surrounding populations offsite.

Environmental Justice in the Energy Commission Environmental Review Process

Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," focuses federal attention on the environment and human health conditions of minority communities and calls on federal agencies to achieve environmental justice as part of their mission. The order requires the U.S. EPA and all other federal agencies (as well as state agencies receiving federal funds) to develop strategies to address this issue. The agencies are required to identify and address any disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority and/or low-income populations.

The California Natural Resources Agency recognizes that EJ communities are commonly identified as those where residents are predominantly minorities or live below the poverty level; where residents have been excluded from the environmental policy setting or

[5] The 10 technical areas are Aesthetics, Air Quality/Public Health and Toxic Air Contaminants, Cultural and Tribal Cultural Resources, Hazards and Hazardous Materials, Hydrology and Water Quality, Land Use and Planning, Noise, Population and Housing, Transportation, and Utilities and Service Systems. Cultural and Tribal Cultural Resources considers impacts to Native American populations.

decision-making process; where they are subject to a disproportionate impact from one or more environmental hazards; and where residents experience disparate implementation of environmental regulations, requirements, practices, and activities in their communities. Environmental justice efforts attempt to address inequities of environmental protection implementation in these communities.

An EJ analysis is composed of the following:

- Identification of areas potentially affected by various emissions or impacts from a proposed project;
- Providing notice to EJ communities in appropriate languages (when possible) of the proposed project and opportunities for participation in public meetings;
- A determination of whether there is a significant population of minority persons, or persons below the poverty level, living in an area potentially affected by the proposed project; and
- A determination of whether there may be a significant adverse impact on a population of minority persons or persons below the poverty level caused by the proposed project alone, or in combination with other existing and/or planned projects in the area.

California law defines EJ as "the fair treatment of people of all races, cultures and income with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations, and policies" (Gov. Code, § 65040.12; Pub. Resources Code, §§ 71110-71118). All departments, boards, commissions, conservancies, and special programs of the Resources Agency must consider EJ in their decision-making process if their actions have an impact on the environment, environmental laws, or policies. Such actions that require EJ consideration may include:

- Adopting regulations
- Enforcing environmental laws or regulations
- Making discretionary decisions or taking actions that affect the environment
- Providing funding for activities affecting the environment
- Interacting with the public on environmental issues

CalEnviroScreen - More Information About an EJ Population

The California Communities Environmental Health Screening Tool (CalEnviroScreen) is a science-based mapping tool used by CalEPA to identify disadvantaged communities[6] pursuant to Health and Safety Code section 39711 as enacted by Senate Bill (SB) 535

[6] The California Environmental Protection Agency, for purposes of its Cap-and-Trade Program, defines communities in terms of census tracts and identifies four types of geographic areas as disadvantaged: (1) census tracts receiving the highest 25 percent of overall scores in CalEnviroScreen 4.0; (2) census tracts lacking overall scores in CalEnviroScreen 4.0 due to data gaps, but receiving the highest 5 percent of CalEnviroScreen 4.0 cumulative pollution burden scores; (3) census tracts identified in the 2017 DAC designation as disadvantaged, regardless of their scores in CalEnviroScreen 4.0; (4) and areas under the control of federally recognized Tribes (CalEPA 2022a).

(De León, Stats. 2012 Ch. 830). As required by SB 535, disadvantaged communities are identified based on geographic, socioeconomic, public health, and environmental hazard criteria. CalEnviroScreen identifies impacted communities by taking into consideration pollution exposure and its effects, as well as health and socioeconomic status, at the census-tract level (OEHHA 2021a, pg. 8).

The CalEnviroScreen model consists of four components in two broad categories. The Exposure and Environmental Effects components comprise a Pollution Burden category, and the Sensitive Populations and Socioeconomic Factors components comprise a Population Characteristic category. The four components are made up of environmental, health, and socioeconomic data from 21 statewide indictors.

The CalEnviroScreen score presents a relative, rather than an absolute, evaluation of pollution burdens and vulnerabilities in California communities by providing a relative ranking of communities across the state (OEHHA 2021a, pg. 8). Calculating the CalEnviroScreen scores begins by assigning percentile scores to the 21 statewide indicators, which fall into the categories: Pollution Burden or Population Characteristics. The percentiles are averaged for the set of indicators in each of the four components (Exposures, Environmental Effects, Sensitive Populations, and Socioeconomic Factors). These four components in turn, are combined to yield an overall CalEnviroScreen score (CalEPA 2022, pg. 5-6). Each category has a maximum score of 10, and, thus, when multiplied the maximum CalEnviroScreen score is 100. Based on these scores, census tracts across California are ranked relative to one another. Values for the various components are shown as percentiles, which indicate the percent of all census tracts with a lower score. A higher percentile indicates a higher potential relative burden. A percentile does not describe the magnitude of the difference between two tracts, but rather it simply tells the percentage of tracts with lower values for that indicator (OEHHA 2021a, pg. 20).

Table 5.21-1 lists the indicators that go into the pollution burden score and the population characteristics score to form the unified CalEnviroScreen score. These indicators are used to measure factors that affect the potential for pollution impacts in communities.

Table 5.21-1. Components that Form the CalEnviroScreen 4.0 Score

Pollution Burden	
Exposure Indicators	**Environmental Effects Indicators**
Children's lead risk from housing	Cleanup sites
Diesel particulate matter (PM) emissions	Groundwater threats
Drinking water contaminants	Hazardous waste
Ozone concentrations	Impaired water bodies
PM 2.5 concentrations	Solid waste sites and facilities
Pesticide use	
Toxic releases from facilities	
Traffic density	

Population Characteristics	
Sensitive Populations Indicators	**Socioeconomic Factors Indicators**
Asthma (emergency department visits)	Educational attainment
Cardiovascular disease (emergency department visits for heart attacks)	Housing burdened low-income households
Low birth-weight infants	Linguistic isolation
	Poverty
	Unemployment

Notes: PM= particulate matter. PM 2.5= fine particulate matter 2.5 microns or smaller.
Source: OEHHA 2021b

The assessment of how, or if, the Project would impact an EJ population includes a review of CalEnviroScreen data for the Project area. Based on the nature of the Project, there are three technical areas with potential impacts that are not bound by the site and have the potential to result in offsite impacts to surroundings communities. These three technical areas where potential project impacts could exacerbate CalEnviroScreen indicators are: Air Quality (including Public Health), Hazards and Hazardous Materials, and Utilities and Service Systems.

The CalEnviroScreen indicators relevant to each of the three technical areas are:

- For air quality, these indicators are asthma, cardiovascular disease, diesel PM emissions, low birth-weight infants, ozone concentrations, pesticide use, concentrations of PM 2.5, toxic releases from facilities, and traffic density.
- For hazards and hazardous materials, these indicators are cleanup sites and hazardous waste.
- For utilities and service systems, these indicators are cleanup sites, hazardous waste, and solid waste sites and facilities.

When these technical areas have identified a potential project impact where an EJ population is present, CalEnviroScreen is used to better understand the characteristics of the areas where the impact would occur and ensure that disadvantaged communities in the vicinity of the proposed project have not been disproportionately impacted when screened by race/ethnicity and low income.

Note that CalEnviroScreen is not intended to:

- Substitute for a cumulative impact analysis under the California Environmental Quality Act (CEQA),
- Restrict the authority of government agencies in permit and land use decisions; or,
- Guide all public policy decisions.

Project Outreach

As a part of the U.S. EPA's definition of EJ, meaningful involvement is an important part of the project approval process. Meaningful involvement occurs when:

- Those whose environment and/or health would be potentially affected by the decision on the proposed activity have an appropriate opportunity to participate in the decision;
- The population's contribution can influence the decision; and,
- The concerns of all participants involved are considered in the decision-making process.

Energy Commission staff initiated public outreach by posting a Notice of Intent to Adopt a Mitigated Negative Declaration and the Proposed Mitigated Negative Declaration to nearby residents, the State Clearinghouse, and provided the same documents to the Mendocino County Clerk on October 27, 2023. In addition, a Notice of Availability, which contains a QR code to the CEC webpage is being posted at the Ukiah Main Branch of Mendocino County Library (105 N Main St. Ukiah, CA 95482).

In accordance with the Governor's Executive Order B-10-11, the Energy Commission's Tribal Consultation Policy, and tribal consultation amendments to CEQA (i.e., AB 52), the Energy Commission Tribal Liaison contacted 11 California Native American tribes as defined in CEQA on August 14, 2023. This consultation effort includes contacting groups via hard-copy letters inviting them to comment on the proposed Project and offering to hold face-to-face meetings regarding the Project. On behalf of CEC, Aspen staff mailed initial consultation letters to these 11 Native American Tribal Groups on August 14, 2023, via certified mail. Additional information regarding the specific groups contacted can be found in **Section 5.5, Cultural and Cultural Tribal Resources**.

Environmental Justice Project Screening

Figure 5.21-1, Minority Population and Tribal Lands shows 2020 census tracts in a six-mile radius of the Project and the percentage of minority populations within each census tract (U.S. Census 2020). The population in these census tracts represent an EJ population based on race and ethnicity as defined in U.S. EPA's *Guidance on Considering Environmental Justice During the Development of Regulatory Actions* (U.S. EPA 2015). Additionally, there are five Native American Reservations that fall within the six-mile radius and are shown in **Figure 5.21-1**.

Based on **Figure 5.21-2, Low-income Populations** and the California Department of Education data in **Table 5.21-2,** it was determined that the percentage of those living in the school district of Ukiah Unified (within a six-mile radius of the Project site) and enrolled in the free or reduced price meal program is larger than those in the reference geography, and thus are considered an EJ population based on a low-income population as defined in *Guidance on Considering Environmental Justice During the Development of Regulatory Actions*. Although Potter Valley unified is within the 6-mile radius, this school district does not exceed the Mendocino County meal program threshold and is therefore not considered an EJ population based on income.

Figure 5.21-1. Minority Population and Tribal Lands

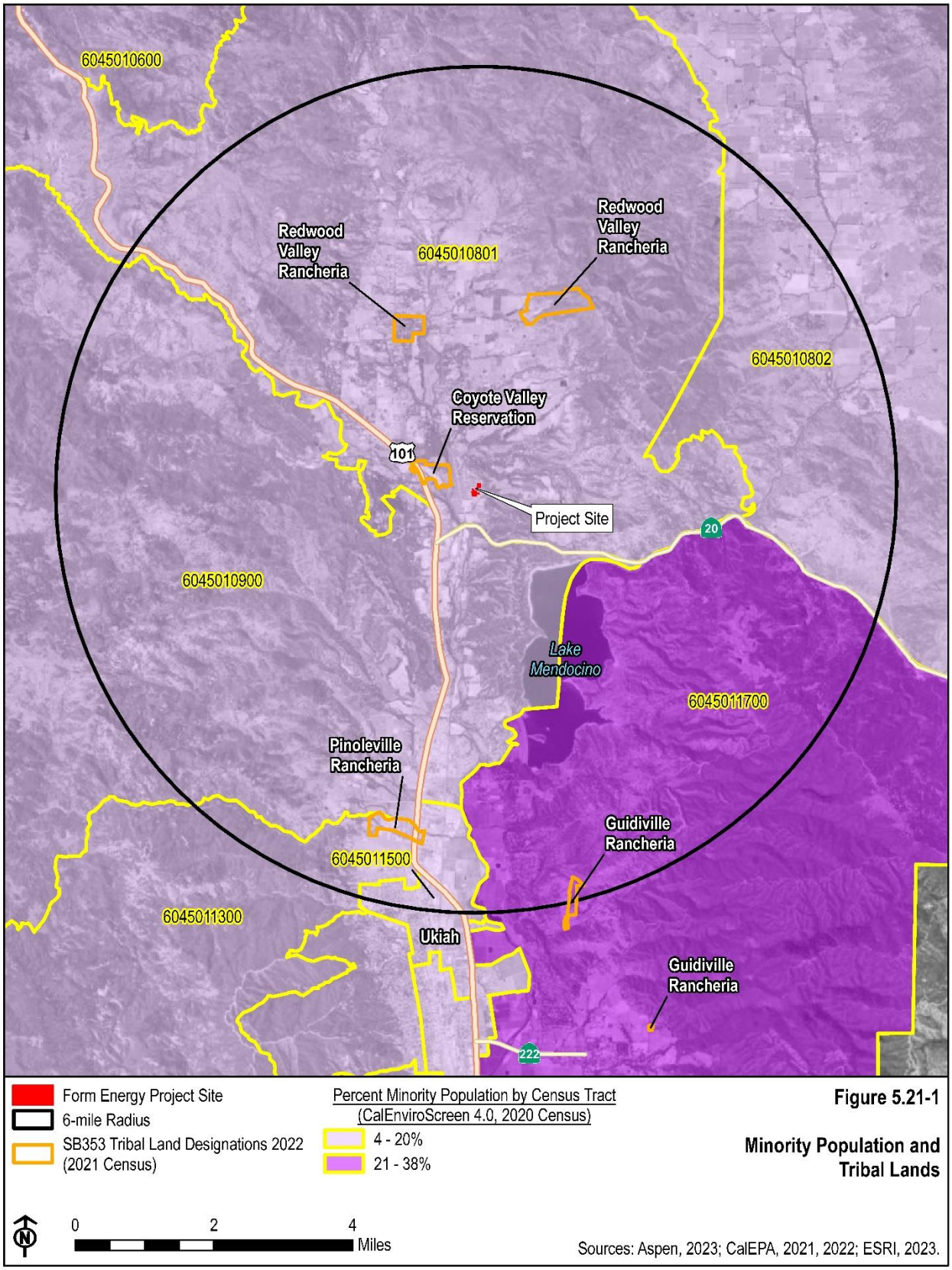


Figure 5.21-2. Low-income Population

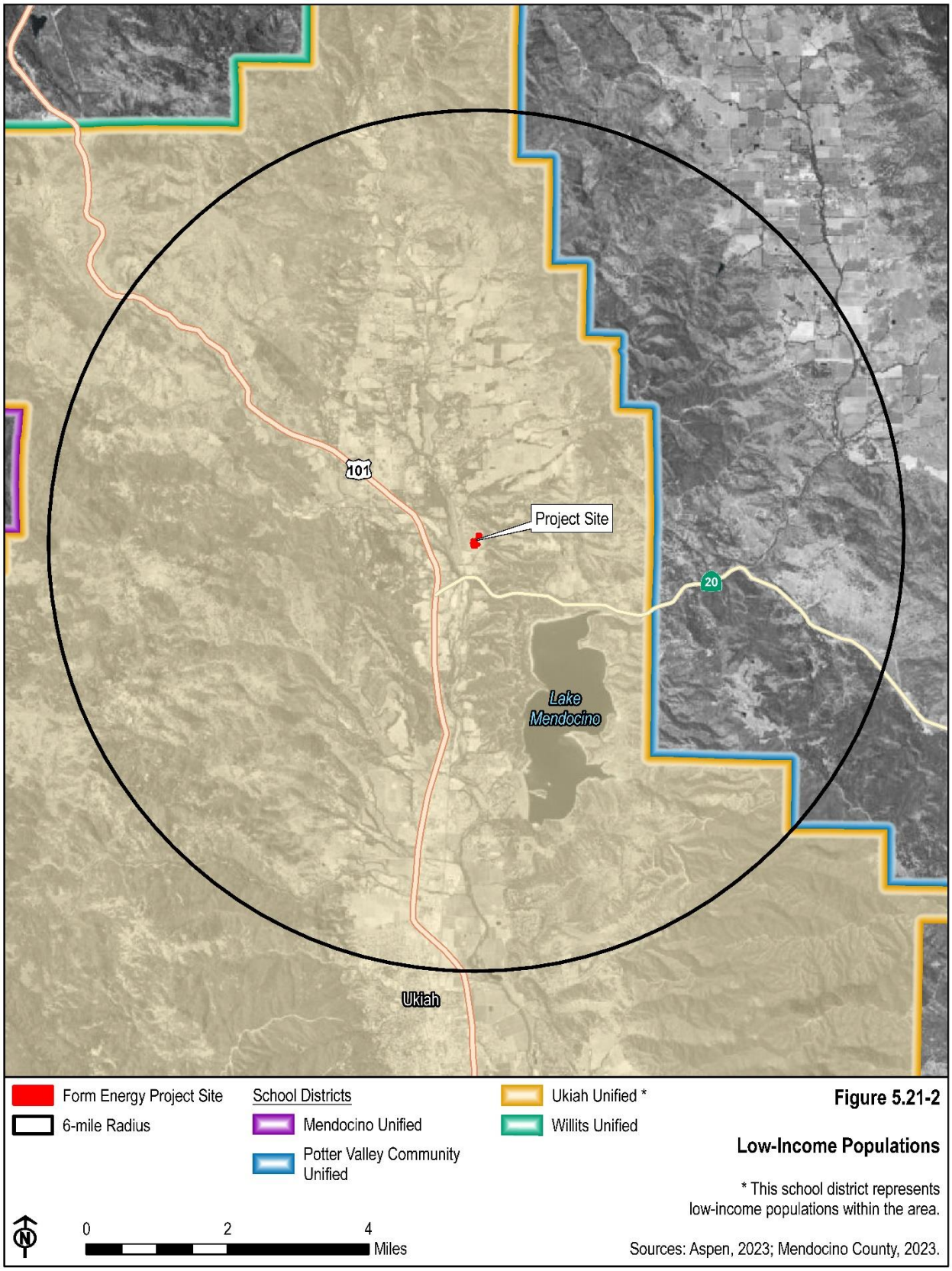


Table 5.21-2. Low Income Data within the Project Area

School Districts in a Six-Mile Radius of the Project Site	Enrollment Used for Meals	Free or Reduced Price Meals	
Potter Valley Community Unified	276	162	58.7%
Ukiah Unified	**6,554**	**5,032**	**76.8%**
Reference Geography			
Mendocino County	12,846	9,442	73.5%

Bold indicates school districts considered having an EJ population based on low income.
Source: CDE 2023

CalEnviroScreen – Disadvantaged Communities

CalEnviroScreen 4.0 was used to gather additional information about the population potentially impacted by the proposed Project. The CalEnviroScreen indicators were used to measure factors that affect the potential[7] for pollution impacts in communities (OEHHA 2021a). CalEnviroScreen 4.0 is used in this analysis to identify disadvantaged communities in the vicinity of the proposed Project and better understand the characteristics of the areas where impacts would occur (see **Figure 5.21-1**, which includes CalEnviroScreen-defined disadvantaged communities by census tracts).

Table 5.21-3 presents the CalEnviroScreen data for the disadvantaged communities in the Project area. Percentiles above 90 are considered high and could be seen as drivers for the census tract's identification as a disadvantaged community. None of the disadvantaged community census tracts around the Project have an overall percentile (pollution burden percentile and population characteristics percentile combined) of 90 percent or above.

Table 5.21-3. CalEnviroScreen Scores for Disadvantaged Communities

Census Tract No.	Total Population	CES* Percentile	Pollution Burden Percentile	Population Characteristics Percentile
6045010801	5,322	18	15	24
6045010900	4,989	43	20	60
6045011700	4,097	48	50	43
6045010802	1,869	29	19	39
6045011500	6,639	64	55	64
6045011300	5,673	59	43	65
6045010600	6,346	51	27	65

* CES = CalEnviroScreen 4.0
Note: Disadvantaged communities by census tract in the Project's six-mile radius.
Source: OEHHA 2021b

[7] It is important to note that CalEnviroScreen is not an expression of health risk and does not provide quantitative information on increases of impacts for specific sites or projects. CalEnviroScreen uses the criteria of "proximity" to a hazardous waste site, a leaking underground tank, contaminated soil, an emission stack (industry, power plant, etc.) to determine that a population is "impacted." It does not address general principles of toxicology: dose/response and exposure pathways. For certain toxic chemicals to pose a risk to the public, offsite migration pathways must exist (through ingestion, inhalation, dermal contact, etc.) and contact to a certain amount - not just any amount - must exist.

Table 5.21-4 presents the CalEnviroScreen 4.0 percentiles for the indicators that make up the pollution burden percentile in a six-mile radius of the Project site. The combined pollution burden is the average of all pollution indicators. **Table 5.21-5** presents the CalEnviroScreen 4.0 percentiles for the indicators that make up the population characteristics in a six-mile radius of the Project site. The combined population characteristics is the average of all population characteristic indicators.

Table 5.21-4. CalEnviroScreen Indicator Percentiles for Pollution Burden for Disadvantaged Communities

	Percentiles													
Census Tract No.	Combined Pollution Burden	Ozone	PM2.5	Diesel PM	Drinking Water	Pesticides	Toxic Release	Traffic	Cleanup Sites	Ground-water Threats	Hazardous Waste	Impaired Water Bodies	Solid Waste	Childrens Lead Risk from Housing
6045010801	15	14	6	8	33	63	0	18	0	69	22	51	64	40
6045010900	20	14	6	4	19	44	0	6	46	72	55	67	64	40
6045011700	50	14	6	13	23	82	0	10	69	88	94	51	100	44
6045010802	19	14	3	3	36	66	0	8	0	38	69	33	84	56
6045011500	55	14	13	68	9	87	0	13	27	93	80	44	76	72
6045011300	43	14	6	5	7	62	0	8	69	78	90	59	97	66
6045010600	27	14	5	3	51	36	0	7	23	93	65	44	84	46

Note: Pollution burden by census tract in the Project's six-mile radius.
Source: OEHHA 2021b

Table 5.21-5. CalEnviroScreen Indicator Percentiles for Population Characteristics for Disadvantaged Communities

	Percentiles								
Census Tract No.	Combined Population Characteristics	Asthma	Low Birth Weight	Cardiovascular Disease	Education	Linguistic Isolation	Poverty	Unemployment	Housing Burden
6045010801	24	44	16	43	34	6	52	58	7
6045010900	60	76	47	28	66	53	66	77	50
6045011700	43	85	27	39	24	0	64	72	39
6045010802	39	53	44	38	29	23	69	1	82
6045011500	64	86	48	40	71	26	76	99	30
6045011300	65	83	57	37	58	30	76	N/A	77
6045010600	65	91	52	37	44	8	66	94	85

Note: Pollution characteristics by census tract in the Project's six-mile radius.
Source: OEHHA 2021b

5.21.2 Environmental Impacts and Mitigation Measures

The following 10 technical areas addressed below discuss impacts to EJ populations: Aesthetics, Air Quality/Public Health and Toxic Air Contaminants, Cultural and Tribal Cultural Resources, Hazards and Hazardous Materials, Hydrology and Water Quality, Land Use and Planning, Noise, Population and Housing, Transportation, and Utilities and Service Systems. Impacts analyzed in these technical areas have the potential to impact communities surrounding the Project site because they are not limited by the bounds of the Project site. Therefore, these identified technical areas have the potential to impact EJ populations.

Part of the assessment of how, or if, the Project would impact an EJ population includes a review of CalEnviroScreen data for the Project area. There are three technical areas that could have project impacts that could combine with the indicators in CalEnviro-Screen: Air Quality, Hazards and Hazardous Materials, and Utilities and Service Systems. When the experts in these technical areas identify a potential impact where an EJ population is present, they use CalEnviroScreen to better understand the characteristics of the areas where the impact would occur and ensure that disadvantaged communities in the vicinity of the proposed Project are considered throughout the analysis.

Aesthetics

Less than Significant. A disproportionate impact pertaining to Aesthetics to an EJ population may occur if a project is in proximity to an EJ population and the following occur:

- The project, if in a non-urbanized area, substantially degrades the existing visual character or quality of the public view of the site and its surroundings.
- The project, if in an urbanized area, conflicts with applicable zoning and other regulations governing scenic quality.
- The project creates a new source of substantial light and glare that would adversely affect day or nighttime views in the area.

As discussed in **Section 5.1, Aesthetics**, the Project is located in a rural area with primarily rural residential and agricultural land uses. Additionally, the properties on which the Project would be sited are designated for this Public Facility use and currently house an existing substation and equipment storage area. Due to the presence of the existing substation, the Project would not substantially degrade the existing visual character or quality of the public view of the site and its surroundings. There is existing lighting within the substation as well as within the equipment storage area. However, the Project will not have night-time lighting unless temporarily needed for repairs or for safety and security. All Project lighting would be directed downward and shielded to focus illumination on the desired areas only and to minimize light trespass in accordance with applicable County requirements. The Project would be a permitted use for this zone and therefore would not conflict with the applicable zoning and other regulations governing scenic quality. The Project would not have a disproportionate effect to an EJ population and would have a less than significant effect.

Air Quality/Public Health and Toxic Air Contaminants

Less than Significant with Mitigation incorporated. **Table 5.21-4** and **Table 5.21-5** include indicators that relate to both air quality and public health. The indicators that are associated with criteria pollutants such as ozone and PM2.5 are indicators related to air quality. Indicators that are associated with protecting public health are: Diesel PM, Pesticide Use, Toxic Release from Facilities, Traffic Density, Asthma, Low Birth Weight Infants, and Cardiovascular Disease. Each of these air quality and public health indicators are summarized under this Air Quality subsection.

Ambient air quality standards (AAQS) are established to protect the health of even the most sensitive individuals in our communities, which includes the EJ population, by defining the maximum amount of a pollutant that can be present in outdoor air without harm to the public's health. Both the California Air Resources Board (CARB) and the U.S. EPA are authorized to set ambient air quality standards.

This analysis identified the potential air quality impacts (i.e., ozone and PM2.5) that could affect the EJ population represented in **Figures 5.21-1** and **5.21-2**. The analysis also examined individual contributions of indicators in CalEnviroScreen that are relevant to air quality (see **Table 5.21-4**).

Analysists identified the potential public health impacts (i.e., cancer and non-cancer health effects) that could affect the EJ population represented in **Figures 5.21-1** and **5.21-2**. These potential public health risks were evaluated quantitatively based on the most sensitive population, which includes the EJ population, by conducting a health risk assessment. The results were presented by levels of risk.

Individual contributions of indicators in CalEnviroScreen that are relevant to air quality were examined (see **Table 5.21-1**). The indicator scores presented in **Tables 5.21-4** and **5.21-5** are similar among census tracts, as it relates to air quality for ozone and PM2.5 impacts. The text below addresses each of the air quality and public health indicators included in **Tables 5.21-4** and **5.21-5**.

Ozone Impacts

Ozone is known to cause numerous health effects that can potentially affect EJ communities as follows:

- Lung irritation, inflammation, and exacerbation of existing chronic conditions, even at low exposures (Alexis et al. 2010, Fann et al. 2012, Zanobetti and Schwartz 2011);
- Increased risk of asthma among children under two years of age, young males, and African American children (Lin et al. 2008, Burnett et al. 2001); and,
- Higher mortality, particularly in the elderly, women, and African Americans (Medina-Ramon 2008).

Although ozone is not directly emitted from the emission sources (i.e., Project construction vehicles and equipment), the precursor pollutants that create ozone such as nitrogen oxides (NOx) and volatile organic compounds (VOCs) are expected to be emitted. Since the site disturbance will be greater than one acre, the applicant will be required to obtain a Large Grading Operation permit from the Mendocino County Air Quality Management District (MCAQMD) prior to the start of construction. See more detailed discussion in **Section 5.3, Air Quality**.

For CalEnviroScreen, the air monitoring data used in this indicator have been updated to reflect ozone measurements for the years 2017 to 2019. CalEnviroScreen 4.0 uses the mean of the daily maximum eight-hour ozone concentration (ppm) for the summer months (May-October), averaged over three years (2017-2019). According to CalEnviroScreen data, census tracts are ordered by ozone concentration values, and then are assigned a percentile based on the statewide distribution of values.

Results for ozone are included in **Table 5.21-4**. Ozone levels in all the census tracts within a six-mile radius of the Project site are relatively low, with all percentiles at 14. This can be interpretated as ozone levels in these three census tracts are higher than only 14 percent of the census tracts in California, or 86 percent of all California census tracts have higher ozone levels than these near the Project site. For ozone, the census tracts within a six-mile radius of the proposed Project's site are not exposed to high ozone concentrations compared to the rest of the state.

The Project would not contribute significantly to the degradation of regional air quality as it relates to ozone. Therefore, the Project would not contribute significantly to regional ozone concentrations, relative to baseline conditions. In addition, as discussed in **Section 5.3 Air Quality**, the Project would not exceed the Mendocino County Air Quality Management District's threshold of significance for ozone precursors and therefore would not expose sensitive receptors to substantial ozone precursor concentrations. The Project's ozone and ozone precursor air quality impacts would be less than significant for the local EJ community and the general population.

PM2.5 Impacts

Particulate matter (PM) is a complex mixture of aerosolized solid and liquid particles including such substances as organic chemicals, dust, allergens, and metals. These particles can come from many sources, including cars and trucks, industrial processes, wood burning, or other activities involving combustion. The composition of PM depends on the local and regional sources, time of year, location, and weather.

PM2.5 refers to particles that have a diameter of 2.5 micrometers or less. PM2.5 is known to cause numerous health effects, which can potentially affect EJ communities. Particles in this size range can have adverse effects on the heart and lungs, including lung irritation, exacerbation of existing respiratory disease, and cardiovascular effects.

For CalEnviroScreen, the indicator PM2.5 is determined by the annual mean concentration of PM2.5 (average of quarterly means), averaged over three years (2015-2017). According to CalEnviroScreen data, PM2.5 concentrations in each census tract are ordered by PM2.5 concentration values, and then are assigned a percentile based on the statewide distribution of values and are shown in **Table 5.21-4**. The percentiles range from 3 to 13 for all census tracts. This means that PM2.5 exposure levels are well below the state average and nowhere near the 90th percentile. Therefore, the proposed Project would not individually or cumulatively contribute to disproportionate PM 2.5 air quality impacts to the EJ population.

The Project would not contribute significantly to the regional air quality related to PM2.5. The Project would not expose sensitive receptors to substantial pollutant concentrations of PM2.5 during construction. The Project would use best management practices during construction, which would reduce PM emissions. Therefore, the Project would not contribute significantly to regional PM2.5 concentrations, relative to baseline conditions. The Project's PM2.5 air quality impacts would be less than significant for the local EJ community and the general population.

N02 Impacts

As stated in **Section 5.3, Air Quality**, the estimated maximum daily NOx construction emissions do not exceed the threshold of significance and therefore would not expose sensitive receptors or any EJ population to substantive criteria pollutant concentrations.

Public Health and Toxic Air Contaminants

Analysists identified the potential public health impacts (i.e., cancer and noncancer health effects) that could affect the EJ population represented in **Figures 5.21-1** and **5.21-2**. These potential public health risks were evaluated quantitatively based on the most sensitive population, which includes the EJ population, by conducting a health risk assessment. The results were presented by level of risks. The potential construction, operation, and demolition risks are associated with exposure to diesel particulate matter, total organic gases in diesel exhaust, and evaporative and exhaust total organic gases from gasoline vehicles. The toxic air contaminants from total organic gases include 1,3-butadiene, acetaldehyde, benzene, ethylbenzene, formaldehyde, n--hexane, methanol, methyl ethyl ketone, naphthalene, propylene, styrene, toluene, and xylene. Analysists concluded that construction, operation, and demolition of the Project would not cause significant adverse direct or indirect public health impacts from the Project's toxic air emissions and that no additional mitigation is needed. Likewise, the Project would not cause disproportionate public health impacts on sensitive populations, such as the EJ population.

The following sections focus on toxic air contaminant issues. See **Tables 5.21-4** and **5.21-5**.

Diesel PM

This indicator represents how much diesel PM is emitted into the air within and near the census tract. Under the proposed Project, the use of diesel-fueled equipment during construction, operation, and demolition activities would release diesel PM. **Table 5.21-4** shows that diesel PM values for the three census tracts generally range from 3 to 13 percent, with one outlier at 68 percent. The majority of these percentiles are well below average, with only census tract 6045011500 percentile above average (68 percent) but below the 90th percentile, and therefore, not considered significant. Therefore, the Project's diesel PM air quality impacts would be less than significant for the local EJ community and the general population.

Pesticide Use

Pesticides would not be used as part of the proposed Project. **Table 5.21-4** shows that none of these census tracts are higher than the 90th percentile. Therefore, because pesticides will not be used, there would be no Project impacts for the local EJ community and the general population.

Toxic Release from Facilities

This indicator represents modeled toxicity-weighted concentrations of chemical releases to air from facility emissions and any off-site incineration in and near the census tract. **Table 5.21-4** shows that for all census tracts the toxic release percentile is zero. The Project will not cause any toxic releases from facility emissions and off-site incineration, because the Project does not use toxic substances or result in off-site incineration; therefore, there would be no Project impact to the local EJ community and the general population.

Traffic Density

This indicator represents the sum of traffic volumes adjusted by road segment length. It is calculated as sum of traffic volumes adjusted by road segment length (vehicle-kilometers per hour) divided by total road length (kilometers) within 150 meters of the census tract. It is not a measure of level of service on roadways. **Table 5.21-4** shows that traffic values for the census tracts are low (with 18 percent the highest value). The Project would only have traffic impacts when delivering the multi-day storage containers during construction and when removing them during demolition. However, implementation of mitigation measure (MM) TRANS-1 would eliminate those traffic impacts. Therefore, the Project's traffic volume impact would not have a significant cumulative contribution to the traffic density for the local EJ community and the general population.

Asthma

This indicator is a representation of an asthma rate. It measures the number of emergency department (ED) visits for asthma per 10,000 people over the years 2015 to 2017. **Table 5.21-5** shows that only one of these census tracts is higher than the 90th percentile in the asthma indicator. Census tract 6045010600 has an indicator value of

91 percent. This indicates the number of emergency department visits for asthma per 10,000 people over the years 2015 to 2017 are higher than 91 percent of tracts statewide.

As discussed in **Section 5.3, Air Quality**, impacts associated with emissions from construction, operation, and demolition activities (diesel-fueled equipment) would be less than significant, and therefore, these emissions would not have a significant cumulative contribution to asthma-related ED visits. Therefore, the Project's emissions would not have a significant cumulative contribution to asthma ED visits for the local EJ community and the general population.

Low Birth Weight Infants

This indicator measures the percentage of babies born weighing less than 2,500 grams (about 5.5 pounds) out of the total number of live births over the years 2009 to 2015. **Table 5.21-5** shows that none of these census tracts are higher than the 90th percentile. Therefore, the Project's emissions would not have a significant cumulative contribution to low birth-weight infant births for the local EJ community and the general population.

Cardiovascular Disease

This indicator represents the rate of heart attacks. It measures the number of ED visits for acute myocardial infarction (AMI, or heart attack) per 10,000 people over the years 2015 to 2017. **Table 5.21-5** shows that none of these census tracts are higher than the 90th percentile in the cardiovascular disease indicator.

According to the results of the health risk assessment conducted for the Project in **Section 5.3, Air Quality**, impacts associated with emissions from construction, operation, and demolition activities (diesel-fueled equipment) would be less than significant, and therefore, would not have a significant cumulative contribution to cardiovascular disease. The Project's emissions would not have a significant cumulative contribution to cardiovascular disease for the local EJ community and the general population.

Environmental Justice Air Quality/Public Health Conclusion

Less than Significant. The analysists do not expect adverse air quality impacts to members of the public, recreational users, or EJ population. Air quality impacts, specifically with regards to ozone, PM2.5 and NO2 would not contribute to disproportionate impacts to the EJ population. The Project would not cause adverse public health impacts to members of the public, or EJ population. Public health impacts, specifically regarding Diesel PM, Pesticide Use, Toxic Release from Facilities, Traffic Density, Asthma, Low Birth Weight Infants, and Cardiovascular Disease would not contribute to disproportionate impacts to the EJ population.

Cultural and Tribal Cultural Resources

Less than Significant. EJ populations were considered in the analysis of the Project. Four Native American EJ populations reside within six miles of the Project: Coyote Valley Reservation, Redwood Valley Rancheria, Pinoleville Rancheria, and Guidiville Rancheria.

The closest reservation is Coyote Valley Reservation which is approximately 0.3 mile west of the Project site. However, since this Project was not found to have significant impacts under any issue in the cultural resource area, it would not disproportionately impact Native American EJ populations.

Hazards and Hazardous Materials

Less than Significant Impact with Mitigation Incorporated. EJ populations may experience disproportionate hazards and hazardous material impacts if the storage and use of hazardous materials within or near EJ communities occur to a greater extent than within the community at large. As discussed in **Section 5.9, Hazards and Hazardous Materials**, the only hazardous material used on-site during operations will be contained within the MDS units and consist of a battery electrolyte containing 25 to 35 percent potassium hydroxide. MM HAZ-1 through HAZ-3 would limit the risk of upset and accident associated with the battery modules and electrolyte material contained within and ensure that both energy storage power blocks would shut down in the event of an encroaching wildland fire. Therefore, the likelihood of a spill of sufficient quantity to impact the surrounding community and EJ population would be very unlikely, and thus, is considered less than significant.

Hydrology and Water Quality

Less than Significant. A disproportionate hydrologic or water quality impact on an EJ population could occur if the Project would contribute to impairment of drinking water, exacerbate groundwater contamination threats, or contribute pollutants to impaired water bodies.

Since the overall CalEnviroScreen score reflects the collective impacts of multiple pollutants and factors, the individual contributions to indicators were examined as they relate to hydrology and water quality. The pollutants of concern in this analysis are those from construction, operation, and demolition activities. The CalEnviroScreen scores for the disadvantaged community census tracts in a six-mile radius of the Project (see **Figure 5.21-1**) are presented in **Table 5.21-4** for each of the following environmental stressors that relate to hydrology and water quality: Drinking Water Contaminants, Groundwater Threat, and Impaired Water Bodies. A disproportionate hydrology or water quality impact on an EJ population could occur if a project introduces an additional pollutant burden to a disadvantaged community.

CalEnviroScreen 4.0 assigns a score to each type of stressor. To assess the impact of a stressor on population within a census tract, the score is assigned a weighting factor that decreases with distance from the census tract. For stationary stressors related to hydrology or water quality, the weighting factor diminishes to zero for distances larger than 1,000 meters (0.6 mile). As **Figure 5.21-1** shows, the Project falls within only one census tract, 6045010801. Census tract 6045010900 is within 0.42 mile of the Project site and the remaining census tracts are farther than 0.6 mile (or 1,000 meters) from the Project site. Thus, this summary will only focus on census tracts 6045010801 and 6045010900.

Drinking Water Contaminants

Low-income and rural communities, particularly those served by small community water systems, can be disproportionately exposed to contaminants in their drinking water. CalEnviroscreen aggregates drinking water quality data from the California Department of Public Health, the U. S. EPA, and the California State Water Resources Control Board (SWRCB). The score provided by the Drinking Water Contaminant metric calculation is intended to rank water supplies relative to their history or likelihood to provide water that exceeds drinking water standards.

Census tract 6045010801 scored 33 percent and census tract 6045010900 scored 19 percent in the Drinking Water Contaminants indicator (see **Table 5.21-4**). This indicates that drinking water contamination threats in these census tracts are low, and that these communities do not have a significant level of exposure to contaminants through drinking water.

In addition, the Project would not contribute significantly to drinking water source degradation. The Project would be required to comply with the Clean Water Act (CWA) by controlling the discharge of pollutants during its construction, operation, and demolition phases. The Project's hydrology and water quality impacts would be less than significant for the census tracts of concern and the general population.

Groundwater Threats

Common groundwater pollutants found at leaking underground storage tank and cleanup sites in California include gasoline and diesel fuels, chlorinated solvents, and other volatile organic compounds such as benzene, toluene, and methyl tert-butyl ether; heavy metals such as lead, chromium, and arsenic; polycyclic aromatic hydrocarbons; persistent organic pollutants like polychlorinated biphenyls; Dichlorodiphenyl-trichloroethane and other insecticides; and perchlorate. CalEnviroscreen aggregates data from the SWRCB GeoTracker website about groundwater threats. The score provided by the Groundwater Threat metric calculation is intended to rank the relative risk of environmental contamination by groundwater contamination, within each census tract.

Census tract 6045010801 scored 69 percent and census tract 6045010900 scored 72 percent in the Groundwater Threat indicator (see **Table 5.21-4**). This indicates that groundwater contamination threats are below the 90th percentile and therefore these communities are not expected to experience significant groundwater threats.

The Project would be required to comply with the CWA by controlling the discharge of pollutants during its construction, operation, and demolition phases. Since the Project's hydrology and water quality impacts were found to be less than significant (**Section 5.10 Hydrology and Water Quality**), the Project would not contribute significantly to groundwater degradation for the census tracts of concern and the general population.

Impaired Water Bodies

Rivers, lakes, estuaries, and marine waters in California are important for many different uses. Water bodies used for recreation may also be important to the quality of life of nearby residents if subsistence fishing is critical to their livelihood. Water bodies also support abundant flora and fauna. Changes in aquatic environments can affect biological diversity and overall health of ecosystems. Aquatic species important to local economies may be impaired if the habitats where they seek food and reproduce are changed. Additionally, communities of color, low-income communities, and tribes generally depend on the fish, aquatic plants, and wildlife provided by nearby surface waters to a greater extent than the general population. CalEnviroscreen aggregates data from the SWRCB's Final 2012 California Integrated Report (CWA Section 303(d) List / 305(b) Report). The score provided by the Impaired Water Bodies metric calculation is intended to rank the relative risk of impaired water bodies, within each census tract.

Census tract 6045010801 scored 51 percent and census tract 6045010900 scored 67 percent in the Impaired Water Bodies indicator (see **Table 5.21-4**). None of these census tracts have indicator values higher than the 90th percentile. This indicates that these communities are not expected to contain a significantly high abundance of impaired water bodies in comparison with the statewide average.

The Project would not contribute significantly to the impairment of local or regional water bodies. The Project would be required to comply with the CWA by controlling the discharge of pollutants during its construction, operation, and demolition phases. The Project's hydrology and water quality impacts would be less than significant for the census tracts of concern and the general population.

Land Use and Planning

No Impact. A land use impact could occur if a project would 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. Consistency of the proposed Project was assessed with relevant policies and regulatory requirements contained in the Mendocino County General Plan (General Plan) and the Mendocino County Inland Zoning Code (Division 1 of Title 20). The General Plan land use designation for the site is Public Services, which accommodates uses that include battery storage. The Project is a permitted use as a Major Impact Services and Utilities facility, and therefore, would comply with the Mendocino County Inland Zoning Code. Additionally, the Project would be located on undeveloped portions of two parcels owned by PG&E, which include an existing substation. The proposed Project would not involve uses that could cause unmitigated hazardous conditions or nuisance impacts. (See also sections **5.3, Air Quality; 5.9, Hazards and Hazardous Materials; and 5.17, Transportation** of this Initial Study.)

Construction, operation, and demolition of the Project would not conflict with land use plans or policies or physically divide an existing community such that a significant environ-

mental impact would occur. Therefore, there would be no impacts to land use that could disproportionately impact an EJ population.

Noise

Less than Significant Impact with Mitigation Incorporated. EJ populations may experience disproportionate noise impacts if the siting of unmitigated industrial facilities occurs within or near EJ communities to a greater extent than within the community at large. As discussed in **Section 5.13, Noise**, because the proposed Project could exceed applicable noise level criteria, mitigation measures would be implemented to ensure that noise from the power blocks does not exceed existing ambient noise levels. With implementation of MMs NOISE-1 through NOISE-3, residents will be notified prior to ground disturbing activities, residents can participate in the noise complaint process, and the installation of a sound wall and other measures will ensure that operational noise levels would comply with applicable maximum noise thresholds and would not elevate the existing ambient noise levels at the nearest residences. Thus, MM NOISE-3 would ensure that noise levels meet county requirements, and the impacts would be less than significant for all the area's population, including the EJ population.

Population and Housing

Less than Significant. The study area used to analyze the population influx and housing supply impacts is Mendocino County. The Project's population and housing impacts were considered relative to the EJ population living in this geographic area.

The potential for population and housing impacts is predominantly driven by the temporary influx of non-local construction workers seeking lodging closer to a project site. Construction needs for this Project are not anticipated to result in workers relocating to the area, as the number of workers is small and there is a sufficient workforce pool within a two-hour drive. The proposed Project would generate neither a permanent increase in population levels nor a decrease in available housing.

A population and housing impact could disproportionately affect an EJ population if the Project were to displace minority or low-income residents from where they live, causing them to find housing elsewhere. If this occurs, an EJ population may have a more difficult time finding replacement housing due to racial biases and possible financial constraints. Because the Project would not displace any residents or remove any housing, there would be no disproportionate impact to EJ populations from this Project.

Transportation

Less than Significant Impact with Mitigation Incorporated. Significant reductions in transportation options may significantly impact EJ populations. In particular, an impact to bus transit, pedestrian facilities, or bicycle facilities could cause disproportionate impacts to low-income communities, as low-income residents more often use these modes of transportation. The Project would not affect these alternative transportation modes. Additionally, traffic congestion has the potential to disrupt vehicle access in the case of

an emergency. Although traffic percentiles shown in **Table 5.21-4** are well below the 90th percentile (with 18 percent being the highest out of all census tracts), in accordance with **Section 5.17 Transportation,** MM TRANS-1 would be implemented to limit traffic congestion and ensure that construction and demolition activities would not impact emergency access.

Therefore, transportation impacts from the Project, would be less than significant with mitigation incorporated, and therefore would cause less than significant impacts to EJ populations. Likewise, transportation impacts would not be disproportionate.

Utilities and Service Systems

Less Than Significant. A disproportionate utilities and system services impact on an EJ population could occur if the Project would contribute to or exacerbate the effects of hazardous material cleanup sites, hazardous waste generators and facilities, and solid waste facilities.

Since the overall CalEnviroScreen score reflects the collective impacts of multiple pollutants and factors, the individual contributions to indicators as they relate to wastes addressed under Utilities and System Services were analyzed. The wastes of concern in this analysis are those from construction, operation, and demolition activities. The handling and disposal of each type of waste depends on the hazardous ranking of its constituent materials. Existing laws and regulations ensure the desired handling and disposal of waste materials without potential public or environmental health impacts. The CalEnviroScreen scores for the disadvantaged community census tracts in a six-mile radius of the Project (see **Figure 5.21-1**) for each of the following environmental stressors that relate to waste management: cleanup sites, hazardous waste generators and facilities, and solid waste facilities are presented in **Table 5.21-4**. The percentile for each disadvantaged census tract reflects its relative ranking among all of California's census tracts. A disproportionate waste management impact on an EJ population could occur if Project wastes impacted the disadvantaged community.

CalEnviroScreen 4.0 assigns a score to each type of stressor. To assess the impact of a stressor on population within a census tract, the score is assigned a weighting factor that decreases with distance from the census tract. For stationery stressors, the weighting factor diminishes to zero for distances larger than 1,000 meters (0.6 mile). As **Figure 5.21-1** shows, the Project site falls within only one census tract, 6045010801. Census tract 6045010900 is 0.4 mile from the Project site and the remaining census tracts are over 0.6 mile (or 1,000 meters) from the Project site. Therefore, this analysis will focus on the census tract containing the Project site, and the one within 0.4 mile of the site.

Cleanup Sites

This indicator is calculated by considering the number of cleanup sites including Superfund sites on the National Priorities List, the weight of each site, and the distance to the census tract. Sites undergoing cleanup actions by governmental authorities, or by property owners, have suffered environmental degradation due to presence of hazardous

substances. Of primary concern is the potential for people to come in contact with these substances.

As seen in **Table 5.21-4**, the percentile scores for the cleanup sites indicator for the two census tracts within 1,000 meters of the Project site are 0 percent (tract 6045010801) and 46 percent (6045010900). The interpretation is that contamination threats due to the presence of cleanup sites in those census tracts are the lowest and average, respectively, among all tracts statewide. This indicates that the presence of cleanup sites in these census tracts is below the statewide average and these communities are not expected to contain a high abundance of exposure from cleanup sites. Since the remaining census tracts are located more than 0.6 mile (or 1,000 meters) away from the Project site, the cleanup site indicator values diminished to zero.

The project owner would have to comply with appropriate laws and regulations that would require additional cleanup of contaminated soils and groundwater that might be encountered during construction, operation, and demolition activities. Therefore, the Project would not be expected to contribute significantly to effects from cleanup sites for the relevant census tracts and for the general population.

Hazardous Waste Generators and Facilities

This indicator is calculated by considering the number of permitted treatment, storage, and disposal facilities or generators of hazardous waste, the weight of each generator or site, and the distance to the census tract. Most hazardous waste must be transported from hazardous waste generators to permitted recycling, treatment, storage, or disposal facilities by registered hazardous waste transporters. Most shipments must be accompanied by a hazardous waste manifest. There are widespread concerns for both human health and the environment from sites that serve for the processing and disposal of hazardous waste. Newer facilities are designed to prevent the contamination of air, water, and soil with hazardous material. However, even newer facilities may negatively affect perceptions of surrounding areas in ways that have economic, social, and health impacts.

Census tract 6045010801 scored 22 percent and census tract 6045010900 scored 55 percent in the Hazardous Waste indicator (see **Table 5.21-4**). This indicates that hazardous waste in these census tracts is either below or near the statewide average in terms of relative abundance. This indicates that these communities are not expected to contain a high abundance of hazardous waste.

The Project would not be expected to contribute significantly to hazardous waste generation or to the number or size of facilities handling hazardous waste processing. As discussed in **Section 5.9, Hazards and Hazardous Materials**, the Project would be required to comply with appropriate laws and regulations to control the shipping, storage, and disposal of hazardous waste during its construction, operation, and demolition phases. With implementation of mitigation, the Project's impacts related to hazardous waste generation and disposal would be less than significant for the relevant census tracts and the general population.

Solid Waste

This indicator is calculated by considering the number of solid waste facilities including illegal sites, the weight of each, and the distance to a census tract. Newer solid waste landfills are designed to prevent the contamination of air, water, and soil with hazardous materials. However, older sites that are out of compliance with current standards or illegal solid waste sites may degrade environmental conditions in the surrounding area and pose a risk of exposure. Other types of facilities, such as composting, treatment, and recycling facilities may raise concerns about odors, vermin, and increased traffic.

Census tracts 6045010801 and 6045010900 both scored 64 percent in the Solid Waste indicator (see **Table 5.21-4**). This indicates that solid waste in these census tracts is below the 90th percentile and these communities are not expected to contain a high abundance of solid waste.

Solid waste generated during construction, operation, and demolition of the Project would be segregated, where practical, for recycling, and disposed where there is adequate capacity for disposal of non-hazardous waste. Also, the Project would be required to develop and implement plans that would ensure proper disposal of non-hazardous waste at appropriately licensed facilities. The Project owner would use solid wastes sites or facilities that are verified to be in compliance with current laws and regulations. In addition, there would be no increase of solid waste generators and facilities in the area due to project construction, operation, or demolition because there is adequate space for disposal of waste from the Project and 95 percent of the Project components are expected to be recycled or reused at the end of the Project's life. Therefore, there would be no impact due to solid waste facilities that would disproportionately impact an EJ community in the relevant census tracts.

Mandatory Findings of Significance

Less than Significant. This analysis concluded that cumulative Project impacts would be mitigated to less than significant levels. Therefore, cumulative impacts would be less than significant for both the general population and the EJ population.

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The following are a list of preparers and contributors to this **Section 5.21, Environmental Justice**:

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Section 6

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6 Authors and Reviewers

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Section 7

Mitigation Monitoring and Reporting Program

East Road Storage Project
October 2023

7 Mitigation Monitoring and Reporting Program

7.1 Preface

Section 21081.6 of the California Environmental Quality Act (CEQA) requires a Lead Agency to adopt a Mitigation Monitoring and Reporting Program (MMRP) whenever it approves a project for which measures have been required to mitigate or avoid significant effects on the environment. The purpose of the monitoring and reporting program is to ensure compliance with the mitigation measures during project implementation. Therefore, the MMRP will be implemented and enforced by the CEC's Contract Agreement Project Manager (CAM, or CEC) upon approval of the project.

The Final Initial Study/Mitigated Negative Declaration (IS/MND) prepared for the East Road Storage Project concluded that the implementation of the project would not result in significant effects on the environment with the incorporation of mitigation measures. This MMRP addresses those measures in terms of how and when they will be implemented.

This document does not discuss those subjects for which the IS/MND concluded that the impacts from implementation of the project would be less than significant.

Mitigation and Avoidance Measures	Action	Implementing Party	Monitoring Party	Timing
BIOLOGICAL RESOURCES				
MM BIO-1: Implement Worker Environmental Awareness Program. A Worker Environmental Awareness Program (WEAP) biological resources module will be conducted for onsite construction/demolition personnel prior to the start of construction/demolition activities. The module will describe key personnel (i.e., Qualified Lead Biologist, Qualified Biological Monitor) roles and responsibilities. The module will explain the measures developed to prevent impacts on special-status species, including nesting birds. The module will also include a description of special-status species and their habitat needs, as well as an explanation of the status of these species and their protection under the Federal Endangered Species Act, California Endangered Species Act, and other statutes. A brochure will be provided with color photos of sensitive species, as well as a discussion of any protective measures. A copy of the program and brochure shall be provided for review and approval to the CEC at least 60 days prior to the start of construction. The WEAP shall be designed to assure that construction workers are aware of the obligation to protect and preserve biological resources. The WEAP Program shall also include the following measures to reduce impacts to biological resources: • ***Delineation of Project Work Limits:*** Prior to any ground-disturbing activities Project work limits, including staging and parking areas shall be clearly delineated by staking, flagging, or other clearly identifiable materials. • ***Parking:*** Vehicles and equipment shall be parked on pavement, existing roads, and previously disturbed or developed areas, or work areas as identified in this document. • ***Work Areas, Staging Areas:*** Work, staging, vehicle parking, and equipment parking areas shall be contained within the clearly delineated areas as identified in this document. • ***Speed Limit:*** A maximum speed limit of 10 miles per hour shall be enforced on any unpaved roads or work areas within the Project site. Signage indicating the 10 miles per hour speed limit shall be installed at all ingress points and at locations within the Project site. • ***Refueling:*** No vehicles or equipment shall be refueled within 100 feet of an aquatic feature unless a bermed and lined refueling area is constructed. • ***Soil Bonding Agents:*** Any soil bonding and weighting agents used for dust suppression on unpaved surfaces shall be non-toxic to plants and wildlife. • ***Water Sources:*** All potable and non-potable water sources, such as water buffaloes and water truck tanks, shall be covered or otherwise secured to prevent animals (including birds) from entering.	Applicant to provide the California Energy Commission (CEC) with copy of WEAP for implementation approval.	Applicant	CEC	Sixty days prior to the start of construction activities

Mitigation and Avoidance Measures	Action	Implementing Party	Monitoring Party	Timing
• ***Litter and Trash Management:*** Food scraps, wrappers, food containers, cans, bottles, and other trash from the Project site shall be deposited into closed trash containers. Trash containers shall be removed from the project work areas at the end of each working day unless located in an existing substation, potential staging area, or the switching station site. • ***Wildlife Entrapment:*** Project-related excavations shall be secured to prevent wildlife entry and entrapment. Holes and trenches shall be backfilled, securely covered, or fenced. Excavations that cannot be fully secured shall incorporate appropriate wildlife escape ramps at a slope of no more than a 3:1 ratio, or other means to allow trapped animals to escape. All pipes or other construction materials or supplies will be covered or capped in storage or laydown areas. No pipes or tubing will be left open either temporarily or permanently, except during use or installation. Any pipes, culverts, or other hollow materials will be inspected for wildlife before it is moved, buried, or capped. If an animal is entrapped, a qualified biological monitor shall be notified immediately to remove the animal. If the biological monitor cannot safely remove the animal, local animal control shall be contacted to obtain assistance as soon as possible. • ***Erosion Control Materials:*** Erosion control materials shall be certified weed-free and not contain plastic netting. Plastic netting could entangle wildlife, resulting in injury or death. • ***Vehicle and Equipment Cleaning:*** All vehicles and equipment will be cleaned to remove any weed seeds or plant parts prior to arriving onsite. Vehicles that contain mud or plant debris will be prohibited from entering work areas and will be sent offsite for cleaning. A log detailing records of vehicle and equipment washing will be kept and maintained onsite by the construction site manager or foreman. • ***Pets and Firearms:*** No pets or firearms shall be permitted at the Project site. • ***Injured Wildlife:*** Any injured wildlife observed on the Project site shall be immediately reported to the qualified biologist. The qualified biologist shall be trained in the safe and proper handling and transport of injured wildlife. The qualified biologist shall be available to capture and transport injured wildlife to a local wildlife rehabilitation center or veterinarian as needed. Any injured special-status wildlife species found within or near the Project site shall be reported to CDFW and/or USFWS within one workday. • ***Dead Wildlife:*** Dead animals of non-special-status species found on the Project site shall be reported to the appropriate local animal control agency within 24 hours. A qualified biological monitor shall safely move the carcass out of the road or work area as needed. Dead animals of special-status species found in the Project site shall be reported to CDFW and/or USFWS, and the CEC within one work day and the carcass shall be handled as directed by the				

Mitigation and Avoidance Measures	Action	Implementing Party	Monitoring Party	Timing
regulatory authority. If any contractor or employee inadvertently kills or injures wildlife, or finds one either dead, injured, or entrapped, the contractor shall immediately report the incident to the Environmental Inspector(s) or qualified lead biologist(s) identified in the WEAP. The representative shall contact the USFWS (for federally listed species and migratory birds), CDFW (for all wildlife) and/or the local animal control agency, and the CEC, as appropriate. A biological monitor shall safely move the carcass out of the road or work area if needed and dispose of the animal as directed by the agency. If an animal is entrapped, a biological monitor shall free the animal if feasible, work with construction crews to free it in compliance with safety requirements, or work with animal control, USFWS, or CDFW, and the CEC to resolve the situation.				
MM BIO-2: Conduct Preconstruction Surveys for Special-Status Wildlife. Not later than seven days prior to start of Project construction or demolition activities, a qualified biologist shall conduct surveys for special-status wildlife. The names and credentials of the qualified biologist shall be submitted to the CEC no less than 14 days prior to the surveys for review and approval. Surveys shall include the Project site and a 250-foot buffer where legal access is available. Surveys shall focus on terrestrial species and include inspections of potential microhabitats where smaller species could occur. Any special status wildlife found within the Project site during surveys shall be allowed to leave on its own volition prior to the onset of construction. If species of special concern are found within the Project site during surveys and will not leave on its own volition, the species shall be relocated to the nearest suitable habitat outside of the Project site. Species of special concern shall only be handled by qualified personnel as authorized by CDFW and/or USFWS under an issued state scientific collecting permit (SCP), memorandum of understanding (MOU), or Lake and Streambed Alteration Agreement. Impacts to federally or state-listed species or state-listing candidate species are not authorized. If any State or federally listed, candidate, or proposed species are detected work shall be stopped and the applicant shall notify the CEC, CDFW, and or USFWS within 24-hours for further direction. If present, occupied burrows or denning sites for ringtail, fisher, or American badger that are identified during surveys shall be flagged and vegetation removal or grading activities shall be avoided within 100 feet of the occupied den. CEC shall be notified within 24 hours of any occupied burrows or dens. Natal dens shall be avoided during the whelping/pup rearing season for ringtail (March 1 through June 30), fisher (February 15 through June 30), and American badger (February 15 through July 1) and a minimum 250-foot avoidance buffer established. The avoidance buffer may be adjusted following coordination with the CEC provided the buffer reductions would not result in adverse impacts to the species. Any inactive burrow or cavity that could potentially support American badger identified within the Project site shall be excavated by hand or mechanized equipment under the direct supervision of a qualified biologist and backfilled to prevent use or reuse.	Applicant to conduct preconstruction wildlife surveys; provide the CEC with the name and qualifications of proposed biologists. Applicant, or biologist, shall also provide survey findings.	Applicant	CEC	Surveys to be conducted within seven days prior to the start of ground disturbance. Biologist qualifications to be submitted to CEC 14 days prior to surveys; Survey results to be submitted to the CEC within 14 days of completion

Mitigation and Avoidance Measures	Action	Implementing Party	Monitoring Party	Timing
Within 14 days of completion of the surveys, CEC shall be provided with a report describing the findings, including the date, time, and duration of the surveys; identity of the surveyor(s); a list of all common and special-status species observed; and locations of any special-status species identified, including any established avoidance buffers; and any actions taken at the direction of CEC, CDFW, and/or USFWS.				
MM BIO-3: Conduct Biological Monitoring and Reporting. A qualified biologist and a qualified biological monitor shall be retained to oversee Project activities and to ensure compliance with biological resource mitigation measures and permit conditions. Resumes of the Biological Monitoring Team shall be submitted to the CEC for approval no less than 14 days prior to the initiation of initial vegetation removal and/or ground-disturbing activities. The minimum qualifications for those positions are: Biologist Qualifications: • Bachelor's degree in biological sciences, zoology, botany, ecology, or a closely related field • Three years of experience in field biology or current certification of a nationally recognized biological society, such as The Ecological Society of America or The Wildlife Society • Demonstrated experience with species found in or near the Project area, including habitat, life history, ecology, identification, and implementation of conservation measures • Has conducted field surveys for relevant species and is familiar with survey protocols • Is knowledgeable of state and federal laws regarding protection of sensitive species Biological Monitor Qualifications: • A resume demonstrating that the proposed Biological Monitor has the appropriate education and experience in biological resources and resource management activities to accomplish the assigned biological resource tasks • Is able to recognize species that may be present in the Project area and is familiar with species habitats and behavior During all initial vegetation removal and ground-disturbing activities, a qualified biological monitor(s) shall be onsite daily to ensure compliance with Project mitigation measures and permit conditions. Upon completion of initial vegetation removal and ground-disturbing activities, the qualified biological monitor shall	Applicant to provide the CEC with the name and qualifications of hired biologists. Biological monitoring to occur during ground disturbance, construction, and demolition. Applicant shall also provide copy of the Biological Monitors reports.	Applicant	CEC	Resumes to be provided 14 days prior to ground-disturbing (or vegetation removal). Biological monitoring to occur during ground disturbance, construction, and demolition activities. Monitoring activities to be documented on each day when monitoring occurs.

Mitigation and Avoidance Measures	Action	Implementing Party	Monitoring Party	Timing
inspect the Project site at least one-time weekly until construction activities are completed. The responsibilities of the qualified biologist shall include, but are not limited to, the following: • Serving as the primary point of contact for the CEC and regulatory agencies regarding biological resources mitigation and compliance. • Preparing, conducting and/or overseeing WEAP training (MM BIO-1). • Overseeing surveys for special-status species and ensuring that reporting requirements and timelines are met. • Supervising the qualified biological monitor(s). • Ensuring that proper biological monitoring coverage is maintained during all required Project activities. • Monitoring compliance with any Project-related applicable jurisdictional water permit(s) (MM BIO-7). • Immediately notify the CEC (and no later than the following morning of the incident, or Monday morning in case of a weekend) in writing of dead or injured special-status species or any non-compliance with biological resource mitigation measures (BIO-1 through BIO-8), including applicable project-related jurisdictional water permit(s) (BIO-7), and any required special-status species handling permits (BIO-2). Also notify the CEC of the circumstances and actions being taken to resolve the problem, as directed by the applicable mitigation measure or in consultation with CEC and CDFW and/or USFWS. • Conducting or overseeing weekly site inspections upon completion of initial vegetation removal and ground-disturbing activities, and communicating any remedial actions needed (i.e., trash, fencing repairs, etc.) to maintain compliance with biological resource mitigation measures (BIO-1 through BIO-8), including applicable Project-related jurisdictional water permit(s) (BIO-7), and any required special-status species handling permits (BIO-2). • Providing written Weekly and Monthly Biological Monitoring Reports to the CEC that shall, at a minimum, include a summary of Project activities, biological surveys and monitoring performed during the reporting period, special-status species observed, new active nest observations and active nest updates, and any approved adjustments to nesting bird buffers. Non-compliance issues and remedial actions taken (i.e., loose trash, fencing repairs, and placement of sensitive species buffers, etc., as outlined in MM BIO-1, MM BIO-5, MM BIO-4 and MM BIO-6, respectively).				

The responsibilities of the qualified biological monitor shall include, but are not limited to, the following: • During monitoring duties, performing clearance surveys (sweeps) for sensitive biological resources that may be located within or adjacent to work areas prior to crews initiating work activities. If sensitive resources are observed, the biological monitor shall take appropriate actions as defined in in biological resource mitigation measures BIO-1 through BIO-8, including applicable project-related jurisdictional water permit(s) (BIO-7), and any required special-status species handling permits (BIO-2). Work activities shall not commence at any work area until the clearance survey has been completed and the biological monitor communicates to the contractor that work may begin. • Conducting compliance monitoring during Project activities consistent with the timeline identified above. • Ensuring that work activities are contained within approved disturbance area limits at all times. • Clearly delineating sensitive biological resources with staking, flagging, or signage, or other appropriate materials that are readily visible and durable. The biological monitors will inform work crews of these areas and the requirements for avoidance and will inspect these areas at appropriate intervals for compliance with mitigation measures and permit conditions. • Routinely inspecting wildlife exclusionary fencing to ensure that it remains intact and functional. Any need for fencing repairs shall be immediately communicated to the responsible party and repairs shall be completed in a timely manner, generally within one workday. • Routinely inspecting work areas where animals may have become trapped or entangled, including equipment covered with bird deterrent netting (if any) and release any trapped or entangled animals. Inspections should also include high traffic areas, such as access roads and staging areas, to locate animals that are potentially in harm's way and relocate them, if necessary. Handling, relocation, release from entrapment, or other interactions with wildlife shall only occur if authorized by CDFW and/or USFWS and performed consistent with species handling permits outlined in MM BIO-2. The biological monitor shall use handling measures that are safe, practicable, and consistent with mitigation measures and permit conditions to relocate (actively or passively) wildlife out of harm's way. If safety or other considerations prevent the biological monitor from aiding trapped or entangled animals or animals in harm's way, the Applicant or its designee shall consult with CDFW and/or USFWS, a wildlife rehabilitator, or other appropriate party to obtain aid for the animal, consistent with applicable mitigation measures and permit conditions. If consultation with CDFW and/or USFWS is required, the CEC shall be notified within one day of the consultation.				

Mitigation and Avoidance Measures	Action	Implementing Party	Monitoring Party	Timing
• Maintaining the authority and responsibility to halt any Project activities that are not in compliance with applicable mitigation measures or permit conditions, or will have an unauthorized adverse effect on biological resources. • At the end of each monitoring day, the biological monitor shall verify that all excavations, open tanks, trenches, pits, or similar wildlife entrapment hazards have been adequately covered or have sufficient escape ramps installed to prevent wildlife entrapment and communicate with work crews to ensure covers or ramps are installed and functioning properly. • Documenting monitoring activities on each day when monitoring occurs to include location and description of activities monitored. The biological monitor shall prepare and submit all special-status observations to the CNDDB within 30 days of the observation.				
MM BIO-4: Conduct Protocol Surveys for Western Bumble Bee and Implement Avoidance Measures. If Project activities are scheduled to begin or are ongoing during the colony active period (April 1 through September 30), surveys for western bumble bee shall be conducted during the colony active period by a qualified entomologist(s) or biologist(s) familiar with the life history and ecology of western bumble bee. The names and credentials of the qualified entomologist(s) shall be submitted to the CEC and CDFW no less than 14 days prior to the surveys for review and approval. Surveys will cover all Project work areas, including staging and parking areas, plus a 50-foot buffer. Surveys will follow non-invasive protocols established by CDFW in "*Survey Considerations for California Endangered Species Act (CESA) Candidate Bumble Bee Species*" or more recent CDFW-approved methods if they become available prior to project implementation (CDFW 2023d). Survey methods should include a minimum of three on-site surveys spaced two to four weeks apart and should be developed to detect foraging bumble bees and potential nesting sites. If handling is required for identification, it will only be conducted by a person possessing a 2081(a) Memorandum of Understanding (MOU) from CDFW. Otherwise, bumble bees observed during the surveys will be photographed in the open for identification. If any western bumble bees are detected during surveys, the qualified biologist shall notify CDFW and CEC within 24 hours If western bumble bee(s) is observed foraging within the Project site, work activities at the location shall pause until the bee moves outside the Project site. If an active western bumble bee nest is identified during the surveys, a 50-foot avoidance buffer will be clearly delineated with staking, flagging, and/or signage and Project activities will be prohibited from the area until it is determined that the nest is no longer active. Impacts to the nest	Applicant to provide the CEC with the name and qualifications of hired entomologist. Applicant shall also provide survey findings.	Applicant	CEC	Names and credentials of the qualified entomologist(s) shall be submitted to the CEC and CDFW no less than 14 days prior to ground disturbance, construction, and demolition if such activities are scheduled during April 1 through September 30 (Western Bumble Bee colony active period).

Mitigation and Avoidance Measures	Action	Implementing Party	Monitoring Party	Timing
will not occur unless authorized by a 2081(b) Incidental Take Permit issued by CDFW. Survey results will be submitted to CEC and CDFW prior to the initiation of ground-disturbing activities and will include the following: • Names of surveyors and, if applicable, names of biologist(s) determining identification. • Location (latitude and longitude) and extent of surveyed areas with maps. • Description of conditions during each survey: date, time, temperature, wind speed. • Detailed habitat assessment including percent cover of floral resources and potential nesting and overwintering habitat. • Number of surveyors per acre, number of acres surveyed, amount of time of focused surveys. • List of species observed. • Foraging habitat surveys: name (at least to genus) of host plants observed and whether bees were observed on them. • Nesting habitat surveys: type of nest/structure surveyed and if bees were found in them, number of nests found in Project site, photo log of suitable habitat and plants. • Photo vouchers of bumble bees for identification. • Confirmation that photo vouchers were submitted, and candidate bumble bees were identified, if applicable. Survey data shall also be submitted to the CNDDB and shall include specifying the type of observation (individual bee/nest), type of vegetation cover, slope, aspect, GPS location, distance to foraging location (if known), and other relevant conditions noted. Negative survey results shall also be reported. Positive observations shall not be documented on publicly available databases.				
MM BIO-5: Install and Maintain Wildlife Exclusion Fencing. Silt fencing shall be installed around the perimeter of the work areas as identified in this document to prevent terrestrial wildlife such as Coast Range newt and western pond turtle from entering. The qualified biological monitor will routinely (inspect the fence on each day when monitoring occurs to ensure it remains in functioning condition and that no wildlife are observed along the silt fence line. If wildlife are observed along the silt fence line, the qualified biological monitor will capture and relocate the animal to suitable habitat away from the fenced work areas. Handling of any special-status wildlife species will only be performed by a qualified biologist with the appropriate permits from the USFWS and CDFW.	Silt fencing to be installed by Applicant. Biological Monitor to include actions in reports.	Applicant	CEC	Prior to ground disturbance, construction, and demolition activities.

Mitigation and Avoidance Measures	Action	Implementing Party	Monitoring Party	Timing
MM BIO-6: Conduct Preconstruction Surveys for Nesting Birds and Raptors and Implement Avoidance Measures. If Project activities must occur during the breeding season (February 1 through August 31), a preconstruction survey for nesting birds and raptors shall be conducted by a qualified ornithologist(s) no more than three days prior to initiating Project activities. The names and credentials of the qualified ornithologist(s) shall be submitted to the CEC no less than 14 days prior to the surveys for review and approval. Surveys shall include the entire Project site and all work areas, including staging and parking areas, plus a 500-foot buffer where legal access is available. Surveys will be repeated if Project activities are suspended or delayed for more than seven days during the breeding season. The surveys shall focus on all areas within the Project site and buffer area that could potentially support nesting birds and raptors, including vegetation (e.g., trees, shrubs, grasslands), existing infrastructure, and equipment and materials. If an active nest is detected, a 250-foot (500-foot for raptors) avoidance buffer shall be established and clearly delineated by staking, flagging, and/or signage. Avoidance buffers may be reduced only with the approval of the CEC in consultation with CDFW. Any active nests and avoidance buffers will be inspected weekly by the qualified ornithologist(s) until the nest is determined to be inactive. If a nest is discovered during construction activities, all work in the area will be immediately halted and/or relocated and an avoidance buffer (as defined above) shall be implemented. The qualified ornithologist(s) shall submit a copy of the preconstruction nest survey report(s) indicating the results of the survey and any designated buffer zones to the CEC prior to the start of construction activities or the removal of trees or other vegetation. The report(s) shall contain maps showing the location of all nests, species nesting, status of the nest (e.g., incubation of eggs, feeding of young, near fledging), and the buffer size around each nest (including reasoning behind any alterations to the initial buffer size). The report will be provided within 10 days of completing a preconstruction nest survey.	Applicant to provide the CEC with the name and qualifications of hired ornithologist(s) Applicant, or ornithologist, shall also provide survey findings.	Applicant	CEC	A preconstruction survey shall occur no more than three days prior to ground disturbance, construction, and demolition activities if such activities are scheduled during February 1 to August 31 (the bird breeding season). The names and credentials of the qualified ornithologist(s) shall be submitted to the CEC no less than 14 days prior to the surveys. A report will be provided within 10 days of completing a preconstruction nest survey.
MM BIO-7: Provide Evidence of Applicable Jurisdictional Waters Permits. The Project shall comply with all applicable laws and regulations regarding requirements of the California Department of Fish and Wildlife, United States Army Corps of Engineers, and the Regional Water Quality Control Board for aspects of the Project, if any, which fall within those agencies' respective purview, including obtaining any permits required for the construction of the power block access roads, as well as compliance with any additional conditions attached to any required permits and monitoring requirements (if any). Copies of all regulatory waters permits shall be submitted to the CEC prior to ground-disturbing activities in areas supporting jurisdictional waters.	Applicant to provide the CEC with evidence of absence of Waters of the State or Waters of the US or copies of receipts of permits.	Applicant	CEC	Copies of all regulatory waters permits shall be submitted to the CEC prior to ground-disturbing activities in areas supporting jurisdictional waters.

Mitigation and Avoidance Measures	Action	Implementing Party	Monitoring Party	Timing
MM BIO-8: Avoid and Minimize Impacts to Oak Woodlands. The Project will avoid ground disturbance within the dripline canopy of oak trees adjacent to Power Block 1. If ground-disturbance within the dripline/root zone of adjacent oak trees cannot be avoided, roots greater than one inch in diameter that will be damaged, broken or severed will be pruned. Roots will be cut smoothly to the trunk side of ground disturbance and draped immediately with untreated burlap. The burlap shall be soaked nightly and left in place until the trench is backfilled to original grade. Pruning and sealing of exposed roots shall be accomplished under the supervision of a qualified arborist to minimize root deterioration beyond the soil line.	Avoidance of oak woodland trees in Power Block 1.	Applicant	CEC	During ground disturbing activities within the dripline canopy of oak trees adjacent to Power Block 1.
CULTURAL RESOURCES AND CULTURAL TRIBAL RESOURCES				
MM CUL-1: Worker Environmental Awareness Program. Prior to the commencement of construction, the applicant will retain a qualified archaeological specialist to be on-call during construction and to prepare a Worker Environmental Awareness Program (WEAP). The name and credentials of the Secretary of the Interior-qualified archaeologist shall be submitted to the CEC for review and approval no less than 14 days prior to the commencement of the preparation of the WEAP. The WEAP shall be designed to assure that construction workers are aware of the obligation to protect and preserve valuable archaeological and Native American resources. The WEAP training shall be submitted to the CEC at least 60 days prior to the start of construction for review and approval. This program will be provided to all construction workers via a recorded presentation and will include a discussion of applicable laws and penalties under the laws; samples or visual aids of resources that could be encountered in the project site and vicinity; instructions regarding the need to halt work in the vicinity of any potential archaeological and Native American resources encountered; and measures to notify their supervisor, the applicant, and the archaeological specialist.	Applicant to provide the CEC with the name and qualifications of the hired archaeological specialist and a copy of the WEAP for implementation approval.	Applicant	CEC	The name and credentials of the Secretary of the Interior-qualified archaeologist shall be submitted to the CEC for review and approval no less than 14 days prior to the commencement of the preparation of the WEAP. WEAP training shall be submitted to the CEC at least 60 days prior to the start of construction.
MM CUL-2: Unanticipated Discovery. If archaeological resources are encountered during excavation or grading of the site, all activity within a 50-foot radius of the find shall be stopped, the Director or Director's designee of the Mendocino County Department of Planning and Building Services shall be notified, and a Secretary of the Interior-qualified archaeologist will examine the find. The Secretary of the Interior-qualified archaeologist will evaluate the find to determine if it meets the definition of a historical, unique archaeological, or Tribal Cultural Resource, and make appropriate recommendations regarding the disposition of such find(s) prior to the continuation of any construction work occurring within the above-referenced 50-foot radius. If the find is determined to potentially	The archaeological specialist (retained by the applicant) shall prepare a report of findings documenting data recovery.	Applicant	CEC	If archaeological resources are encountered during excavation or grading of the site.

Mitigation and Avoidance Measures	Action	Implementing Party	Monitoring Party	Timing
be a Tribal Cultural Resource, local Native American tribes will be contacted and included in the decision making regarding the resource. If the find(s) do(es) not meet the definition of a historical~~,~~ unique archaeological, or Tribal Cultural Resource, no further study or protection is necessary prior to project implementation. If the find meets the definition of a historical~~,~~ unique archaeological, or Tribal Cultural Resource, then the Secretary of the Interior-qualified archaeologist shall record the resource, including field notes, measurements, and photography, and document the find using the California Department of Parks and Recreation 523 series forms, and it will be avoided by project activities. If avoidance is not feasible, adverse effects to such resources will be mitigated in accordance with the recommendations of the Secretary of the Interior-qualified archaeologist. Recommendations will include collection, recordation, and analysis of any significant cultural materials. A report of findings documenting any data recovery shall be submitted to the Director or Director's designee of the Mendocino County Department of Planning and Building Services, Native American Heritage Commission (Tribal Cultural Resources), and the Northwest Information Center. The Project applicant will ensure that construction personnel do not collect or move any cultural material and will ensure that any fill soils that may be used for construction purposes does not contain any archaeological materials.				
MM CUL-3: Treatment of Human Remains. If human remains are discovered during excavation or grading of the site or other construction activities, all activity within a 50-foot radius of the find will be stopped. The Mendocino County Coroner shall be notified immediately and will make a determination as to whether the remains are of Native American origin or whether an investigation into the cause of death is required. If the remains are determined to be Native American, the Coroner shall notify the Native American Heritage Commission (NAHC) within 24 hours of the identification. Once the NAHC identifies the most likely descendant(s) (MLD), the descendant(s) will make recommendations regarding the treatment and disposition with appropriate dignity of the Native American human remains (including the treatment of grave goods), which will be implemented in accordance with section 15064.5(e) of the California Code of Regulations, Title 14. The Secretary of the Interior-qualified archaeologist will recover scientifically valuable information, as appropriate and in accordance with the recommendations of the MLD. A report of findings documenting any data recovery shall be submitted to the Director or Director's designee of the Mendocino County Department of Planning and Building Services and the Northwest Information Center.	If human remains are discovered during excavation or grading of the site or other construction activities, the Mendocino County Coroner shall be notified immediately.	Applicant	CEC	During ground disturbance activities.

Mitigation and Avoidance Measures	Action	Implementing Party	Monitoring Party	Timing
GEOLOGY AND SOILS				
PR-1: Worker Training and Management of Paleontological Resources. A paleontologist must be retained who meets the professional paleontologist qualifications (Society of Vertebrate Paleontology's Standard Procedures, 2010) and has demonstrated experience in carrying paleontological projects to completion. The name and credentials of the paleontologist shall be submitted to the CEC for review and approval no less than 14 days prior to the commencement of the preparation of the Paleontological Worker Environmental Awareness Program (WEAP). The qualified professional paleontologist shall prepare a WEAP and training shall be provided for all workers who will be onsite during excavations. The WEAP shall show what local Pleistocene and Pliocene fossils look like in general, where they may appear on the Project site, and how to proceed should material suspected to be a fossil is encountered. The WEAP shall be submitted to the CEC for review and approval 60 days prior to the commencement of ground disturbance activities.	The paleontologist (retained by the applicant) shall prepare a WEAP provide training for all onsite staff.	Applicant	CEC	The name and credentials of the paleontologist shall be submitted to the CEC no less than 14 days prior to the preparation of the WEAP. The WEAP shall be submitted to the CEC 60 days prior to the start of ground disturbance activities.
PR-2: Paleontological Resources Management Plan. The qualified paleontologist shall develop and implement a Paleontological Resources Management Plan (PRMP) for the Project site that meets the standards set forth by the Society of Vertebrate Paleontology (2010). This PRMP shall be submitted to the CEC for review and approval 60 days prior to commencement of Project construction activities. The PRMP, at a minimum, shall include the following information: • A monitoring plan for ground disturbing activities that provides the monitor(s) with the authority to temporarily halt or divert equipment. The Paleontologist shall determine a suitable monitoring schedule based on construction activities and anticipated depth of ground disturbance for sediments of unknown sensitivity. Monitors must have demonstrated sufficient paleontological training and field experience to have acceptable knowledge and experience of fossil identification, salvage and collection methods, paleontological techniques, and stratigraphy. • Identification of personnel with authority and responsibility to temporarily halt or divert grading equipment to allow for recovery of unexpected fossils discovered during grading or excavation. • A recovery plan for significant fossils that provides for the treatment of specimens to the point of identification and permanent preservation, including washing of sediments to recover small invertebrates and vertebrates, analysis and reporting, and final curation location.	The paleontologist shall develop and implement a PRMP.	Applicant	CEC	The PRMP shall be submitted to the CEC 60 days prior to start of Project construction activities.

Mitigation and Avoidance Measures	Action	Implementing Party	Monitoring Party	Timing
HAZARDS AND HAZARDOUS MATERIALS				
MM HAZ-1: Installation of Hydrogen Gas Detectors. The Project applicant shall install hydrogen gas detectors and an exhaust fan so that the level of hydrogen is kept below the lower explosive limit (LEL) of hydrogen (4% v/v; https://safe.engineering.asu.edu/hydrogen-gas) in the gas ducts and enclosure main volume. If the exhaust fan fails, then the MDS units shall shut down immediately. At least 30 days prior to the start of construction, the plans and specifications for the hydrogen detection and exhaust system shall be submitted to the Mendocino County Planning and Building Department for review and approval and to the CEC for review and comment. A letter from the Project applicant confirming the successful review of the hydrogen detection and exhaust system shall be sent to the CEC.	Applicant shall provide CEC with a letter confirming the successful review of the hydrogen detection and exhaust system.	Applicant	Mendocino County Planning and Building Department and CEC	At least 30 days prior to the start of construction, the plans and specifications for the hydrogen detection and exhaust system shall be submitted to the Mendocino County Planning and Building Department and to the CEC.
MM HAZ-2: UL9540A Testing of MDS Battery Enclosures. The Project applicant shall submit a letter to the Mendocino Planning and Building Department and to the CEC 60 days prior to the start of construction. This letter shall affirm that the battery energy storage system meets the criteria of the UL9540A Test Method conducted by UL Solutions, or another certified OSHA Nationally Recognized Testing Laboratory (NRTL) organization.	Applicant to submit a letter that the battery energy storage system meets UL9540A Test Method criteria	Applicant	Mendocino Planning and Building Department; CEC	Letter to be submitted 60 days prior to the start of construction.
MM HAZ-3: Prepare an Emergency Response and Emergency Action Plan. Sixty days prior to the start of construction, the Project applicant shall develop and submit electronically an Emergency Response and Emergency Action Plan for the Project to the California Environmental Reporting System (CERS; the statewide web-based system that supports the electronic exchange of required information among businesses, local governments, CalEPA, and the U.S. EPA), with a copy sent to the CEC for review and comment within 30 days of receipt. This Plan shall be consistent with the requirements of Public Utilities Code section 761.3 as amended effective January 1, 2024. The Project applicant shall develop the plan in coordination with the Mendocino County Environmental Health CUPA and include among other things the designation of a local agency with the authority to order the Project to shut down due to events such as wildland fire. This Plan shall be reviewed and approved by the Mendocino County CUPA.	Applicant to prepare an Emergency Response and Emergency Action Plan	Applicant	Mendocino County CUPA; CEC	Plan to be submitted 60 days prior to the start of construction
NOISE				
MM NOISE-1: Construction Noise Notification. At least 15 days prior to the start of ground disturbance, the Project applicant shall notify all residents adjacent to the Project Site along East Road between Lone Pine Drive and Road A, and Valley Vista Drive from East Road to the hairpin turn, by mail or other effective means, of the commencement of project construction. The notice shall include: • Date of the start of construction	Applicant shall notify all residents within the designated area and establish a telephone number for use by the public	Applicant	CEC	At least 15 days prior to the start of ground disturbance.

Mitigation and Avoidance Measures	Action	Implementing Party	Monitoring Party	Timing
• Description of the activities onsite • Number to call if there is a noise complaint from construction or operational activities • Complaint resolution process • How long line will be maintained The Project applicant shall establish a telephone number for use by the public to report any noise complaints associated with the construction and operation of the Project The Project applicant shall include an automatic answering feature, with date and time stamp recording. This telephone number shall be maintained until the Project has been operational for at least one year.	to register complaints.			
MM NOISE-2: Noise Complaint Process. Throughout the construction and operation of the Project, the Project applicant shall document, investigate, evaluate, and attempt to resolve all Project-related noise complaints. The Project applicant or authorized agent shall: 1. Attempt to contact the person(s) making the noise complaint within 48 hours; 2. Conduct an investigation to determine the source of noise related to the complaint; 3. If the noise is Project-related, take all feasible measures to reduce the noise at its source; and 4. Submit a report to the CEC documenting the complaint and the actions taken. The report shall include: a complaint summary, including results of noise reduction efforts; and if obtainable, a signed statement by the complainant stating that the noise problem is resolved to the complainant's satisfaction.	Applicant shall document, investigate, evaluate, and attempt to resolve all project-related noise complaints.	Applicant	CEC	Throughout the construction and operation of the project.
MM NOISE-3: Noise Mitigation – Off Site. The Project design and implementation shall include appropriate noise mitigation measures adequate to ensure that noise levels in L50 terms (levels not to be exceeded more than 30 minutes in any hour) due to operation of the Project will not exceed any of the values shown below when measured at the residential property line nearest to the following sources: • Power Block 1 (residences along Valley View Drive) o Daytime (7 a.m. to 10 p.m.) 50 dBA L50 o Nighttime (10 p.m. to 7 a.m.) 44 dBA L50 • Power Block 2 (residences along East Road) o Daytime (7 a.m. to 10 p.m.) 54 dBA L50 o Nighttime (10 p.m. to 7 a.m.) 46 dBA L50 Mitigation shall include the construction of acoustical treatments with concrete masonry unit (CMU) blocks or similar enclosures between the power blocks and the closest residents. If a wall is constructed, it shall be engineered in such a manner as not to impede stormwater flows.	Applicant shall incorporate noise reduction measures into the Project design. Applicant shall conduct a 24-hour community noise survey. Additional noise reduction measures shall be incorporated, if necessary.	Applicant	CEC	Conduct noise survey within 15 days of the start of project operations. Project applicant to submit a summary report of the noise survey results within 15 days of the Project meeting the noise level limits.

Mitigation and Avoidance Measures	Action	Implementing Party	Monitoring Party	Timing
If the applicant is able to provide the CEC and its noise consultant with more accurate noise data that demonstrates that the Project will be able to meet the noise constraints 60 days prior to the start of construction, the sound wall would not need to be constructed. Within 15 days of the start of Project operations, the Project applicant shall conduct a 24-hour community noise survey by measuring noise levels at the property line of the residences closest to the power block battery enclosures. The noise measurements shall be conducted during both daytime (7 a.m. to 10 p.m.) and nighttime (10 p.m. to 7 a.m.) periods. If the results from operational noise surveys indicate that the noise level (L50) due to project noise exceeds the noise limits shown above, additional noise reduction measures, such as localized soundproof enclosures or acoustic louvers around the batteries, inverters, or transformers, configured to maximize noise shielding in the direction of residential receptors, and shifting operational hours from late night and early morning hours to daytime hours or operating the plant at a reduced load, when possible, shall be implemented to reduce noise to a level of compliance with these limits. The time permitted to implement additional measures shall be approved by the CEC. Within 15 days of the Project reaching these noise level limits, the Project applicant shall submit to the CEC, a summary report of the noise survey and a statement attesting that the Project is in compliance with these noise level limits.				
TRANSPORTATION				
MM TRANS-1 Construction and Demolition Traffic Control Plan. Prior to the start of construction, the Project applicant shall prepare and submit a Construction and Demolition Traffic Control Plan for review and approval by the CEC. The Construction and Demolition Traffic Control Plan shall include, but not be limited to: • During construction, deliveries of materials and equipment shall be staggered to avoid traffic congestion due to concurrent deliveries. During demolition, the process will be reversed, ensuring that departures are staggered. The minimum time period of truck separation shall be stated in the Plan. • The Project applicant shall coordinate with Mendocino County Public Works Department, Roadway Section to assess road conditions before the start of construction and after the conclusion of construction. The Project applicant shall comply with any requirements of the Public Works Department. The direction received, and any compliance requirements, shall be reported to the CEC within 14 days. The Project applicant shall do the same with demolition.	Applicant shall prepare a Construction and Demolition Traffic Control Plan.	Applicant	CEC	Plan to be submitted prior to the start of construction. The direction received, and any compliance requirements, shall be reported to the CEC within 14 days.