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Haybarn Energy Reliability Center

Initial Study

CEC Document No. CEC-500-2024-101

October 2024

CALIFORNIA
ENERGY COMMISSION
Gavin Newsom, Governor

DOCKET NUMBER 23-ERDD-07CE

INITIAL STUDY

Haybarn Energy Reliability Center

(23-ERDD-07)

Lead Agency

California Energy Commission

October 2024

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

NOTICE OF INTENT TO ADOPT A PROPOSED MITIGATED NEGATIVE DECLARATION

Haybarn Energy Reliability Center
(23-ERDD-07)

IEP Camp Pendleton Energy Storage 1, LLC (Applicant) proposes to install a battery energy storage project in response to a request for proposals from the Energy Commission (CEC) for non-lithium long-duration storage projects. The project, the Haybarn Energy Reliability Center (Project), would be located on Marine Corps Base (MCB) Camp Pendleton in San Diego 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 Haybarn Energy Reliability Center 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 Haybarn Energy Reliability Center (HERC) at MCB Camp Pendleton. The proposed project would provide a combined total of 50 megawatts (MW) of multi-day storage or 486 megawatt hours (MWh) of energy storage and includes the installation of a non-lithium long-duration energy storage battery system using zinc hybrid cathode aqueous flow battery technology. The project would be located within the perimeter of MCB Camp Pendleton that extends across 125,000 acres in northwestern San Diego County. The site of the proposed HERC is 19.35 acres in size located in Haybarn Canyon on land owned by MCB Camp Pendleton. The project would be constructed, owned, and operated by the Applicant. The Haybarn Canyon site is located on the southeast side of Vandegrift Boulevard with access to the site via Vandegrift Boulevard and Haybarn Road.

The battery system would be made up of multiple individual battery cubes. About 16 cells make up an energy storage block, which is about 20 feet long and 7 feet tall/wide in size. The cube includes zinc bromine 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 blend of water, halides, additives, and buffering agents.

The HERC would be primarily grid-facing, meaning it would be designed to provide power to the public power grid, but would also be designed to provide power to MCB Camp Pendleton in contingency situations, such as during a regional electrical grid failure.

Staff Conclusions

Energy Commission staff completed an independent review of the proposed Haybarn Energy Reliability Center and concluded 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 project.

Availability of Documents

The Initial Study for the Haybarn Energy Reliability Center can be found on the Commission's webpage for the project 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 MND and 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.

This Notice of Intent has been published in a newspaper of general circulation in the area affected by the proposed project in accordance with CEQA Guidelines section 15072(b). Additionally, this Notice of Intent has been provided to responsible agencies, trustee agencies, and organizations and individuals who have previously requested such notice. The 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 28, 2024. Written comments will be accepted until 5:00 p.m. on November 26, 2024.

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 "Haybarn Canyon MND" 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 for 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 Kevin Mallon, Project Manager, at (916) 232-9184, or by email at Kevin.Mallon@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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Proposed Mitigated Negative Declaration

Haybarn Energy Reliability Center (Docket Number)

1 Proposed Mitigated Negative Declaration

1.1 Project Description

Project: Haybarn Energy Reliability Center
Vandegrift Boulevard
Marine Corps Base Camp Pendleton
San Diego County, California

Applicant: IEP Camp Pendleton Energy Storage 1, LLC
Represented by Michael Firenze
603 Stanwix St. Gateway 2, Ste 1825
Pittsburg, PA 1522

1.2 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 IS utilizes the environmental checklist outlined in Appendix G of the State CEQA Guidelines. If an IS for a project indicates that a significant adverse impact could occur, a public agency shall prepare an Environmental Impact Report.

According to Article 6 (Negative Declaration Process) and Section 15070 (Decision to Prepare a Negative Declaration or Mitigated Negative Declaration) of the State 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*.

1.3 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 IS is based on information from the applicant's application, supplemental project description information provided by the applicant, and associated submittals, site visits, data requests and responses, and additional staff 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. The Applicant has agreed to proposed mitigation measures, as required in Section 15070 (b) (1) of the State CEQA Guidelines. Mitigation measures are proposed in the technical areas of Biological Resources, Cultural and Tribal Cultural Resources, and Paleontological Resources to ensure potential impacts are considered less than significant. 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 State 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
- ☐ Geology/Soils Greenhouse Gas Emissions
- ☐ Hazards & Hazardous Materials
- ☐ Hydrology/Water Quality
- ☐ Land Use/Planning
- ☐ Mandatory Findings of Significance
- ☐ Mineral Resources
- ☐ Noise
- ☐ Population/Housing
- ☐ Public Services
- ☐ Recreation
- ☐ Transportation
- ☐ Utilities/Service Systems
- ☐ Wildfire

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.

Cammy Peterson

Cammy Peterson, Deputy Director
Energy Research & Development Division
California Energy Commission

10-25-24
Date

Section 3

Introduction

3 Introduction

3.1 Project Overview

IEP Camp Pendleton Energy Storage 1, LLC (Applicant) has submitted an application for grant funding through the California Energy Commission (CEC) Long-Duration Energy Storage program for the proposed Haybarn Energy Reliability Center (HERC or project) at Marine Corps Base (MCB) Camp Pendleton. The proposed project analyzed in this Initial Study would provide a combined total of 50 megawatts (MW) of multi-day storage or 486 megawatt hours (MWh) of energy storage and includes the installation of a non-lithium long-duration energy storage battery system using zinc hybrid cathode aqueous flow battery technology.

The project would be located within the perimeter of MCB Camp Pendleton that extends across 125,000 acres in northwestern San Diego County. The site of the proposed HERC is 19.35 acres in size located in Haybarn Canyon on land owned by MCB Camp Pendleton. The project would be constructed, owned, and operated by the Applicant. The Haybarn Canyon site is located on the southeast side of Vandegrift Boulevard with access to the site via Vandegrift Boulevard and Haybarn Road.

The HERC would be primarily grid-facing, meaning it would be designed to provide power to the public power grid, but would also be designed to provide power to MCB Camp Pendleton in contingency situations, such as during a regional electrical grid failure. The battery system would be made up of multiple individual battery cubes, each standing approximately 7 feet tall. They are connected by sheet metal cub connectors. About 16 cells make up an energy storage block, which is about 20 feet long and 7 feet tall/wide in size. The cube includes zinc bromine 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 blend of water, halides, additives, and buffering agents. Like most aqueous batteries, zinc hybrid batteries create a small amount of hydrogen while charging. In the proposed 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.

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 Haybarn Energy Reliability Center.

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 the Applicant 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 the Applicant 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 State CEQA Guidelines and the Warren-Alquist Act:

- Aesthetics
- Agriculture & Forestry Resources
- Air Quality
- Biological Resources
- Cultural & Tribal Resources
- Energy
- 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

IEP Camp Pendleton Energy Storage 1, LLC (Applicant) has submitted an application for grant funding through the California Energy Commission (CEC) Long-Duration Energy Storage program for the proposed Haybarn Energy Reliability Center at Marine Corps Base (MCB) Camp Pendleton (project). The proposed project analyzed in this Initial Study would provide a combined total of 50 megawatts (MW) of multi-day storage (MDS) or 486 megawatt hours (MWh) of energy storage and includes the installation of a non-lithium long-duration energy storage battery system using zinc hybrid cathode aqueous flow battery technology.

4.1 Project Title

Haybarn Energy Reliability Center at Marine Corps Base Camp Pendleton

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

Kevin Mallon, Project Manager
Energy Research and Development Division
California Energy Commission
(916) 232-9184

4.4 Project Location

The project would be located within the perimeter of MCB Camp Pendleton that extends across 125,000 acres in northwestern San Diego County. See Figure 4-1 for a regional location map for the project. The site of the proposed Haybarn Energy Reliability Center (HERC) is 19.35 acres in size located in Haybarn Canyon on land owned by MCB Camp Pendleton. The project will be constructed, owned, and operated by the Applicant. As shown in Figure 4-2, the Haybarn Canyon site is located on the southeast side of Vandegrift Boulevard with access to the site via Vandegrift Boulevard and Haybarn Road. The HERC would be northeast and adjacent to the existing SDG&E Pendleton Substation. The site is currently disturbed and is partially graded and paved. Coastal sage scrub and riparian scrub habitats exist within portions of the project site.

Figure 4-1: Regional Location Map

Figure 4-2: Haybarn Canyon Project Site

4.5 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 (Newsom 2021). 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. 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 advance the LDES technologies into commercialization for rapid deployment without the need for future public funding.

Under the CEC LDES program, the proposed project proposes commercial deployment of a 50-MW (486-MWh), non-lithium-ion, LDES project that is the subject of this Initial Study. The project would demonstrate the scaling capability of the zinc hybrid cathode aqueous flow battery system to both support the California grid as well as provide energy security for regional critical assets.

4.6 Project Objectives

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

- Connect the entire front-of-the-meter 50 MW/486 MWh LDES system to the local 69-kV bulk power system and transmission network.
- Demonstrate the integration of multiple LDES systems operating together in clusters as one large front-of-the-meter asset that can provide resiliency downstream when the transmission grid is down or in times of emergency.

- Demonstrate the performance of zinc hybrid cathode aqueous battery technology in a large commercial project.
- Increase knowledge about how US-made flow battery 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 outages or other grid emergencies
    - Identifying barriers to the efficient participation of MDS in California ISO markets

4.7 Land Use Zoning Conformance

The project would be located on federal land that is administered by the U.S. Marine Corps (i.e., MCB Camp Pendleton). The site of the Proposed Action has been previously developed with utility uses or identified for utility uses according to the MCB Camp Pendleton Master Plan.

The San Diego County General Plan designates the project area as Public Agency Lands. Under this category, the entire MCB Camp Pendleton is designated in the sub-category of "Military Installations." The General Plan applies to the unincorporated area of the county. Within the unincorporated area, the County's land-use jurisdiction is limited by Tribal lands, and State and Federally owned lands, and military installations, including Marine Corps Base Camp Pendleton.

The project would require a lease from Camp Pendleton that would include provisions identified by the Department of Defense for conformance with site-specific considerations (e.g., natural resources, existing uses, etc.).

4.8 Project Characteristics

The proposed project includes the addition of energy storage facilities (battery energy storage systems) at a site in Haybarn Canyon on Marine Corps Base (MCB) Camp Pendleton and a new electric connection to this facility. The Applicant would install a demonstration energy storage project known as the Haybarn Energy Reliability Center (HERC) at a 19.35-acre site in Haybarn Canyon in Area 24 of MCB Camp Pendleton (Figure 2-1). The HERC would provide 50 megawatts (MW) of multi-day energy storage (MDS) with a storage capacity of 486 megawatt hours (MWh) using zinc hybrid cathode aqueous flow battery technology. The site sits directly adjacent to the Pendleton Substation (Figure 2-2). An unnamed dirt road off Vandegrift Road provides access to the Pendleton Substation and the equipment storage areas.

This facility would be primarily grid-facing, meaning it would be designed to provide power to the public power grid, but would also be designed to provide continuous power to MCB Camp Pendleton in contingency situations, such as during a regional electrical grid failure. The proposed project would allow the Applicant to construct, operate, and eventually decommission the battery energy storage system at the end of the lease term with MCB Camp Pendleton.

The battery system would be made up of multiple individual battery cubes, each standing approximately 7 feet tall. They are connected by sheet metal cub connectors as shown in Figure 4-3. About 16 cells make up an energy storage block, which is about 20 feet long and 7 feet tall/wide in size. The cube includes zinc bromine 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 blend of water, halides, additives, and buffering agents. Like most aqueous batteries, zinc hybrid batteries create a small amount of hydrogen while charging. In the proposed 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 upwards of 80 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). Zinc cathode chemistry is extremely stable. The electrolyte used in the installed batteries is a water-based zinc bromine solution, which is considered non-hazardous and is non-flammable. Due to the non-flammable electrolyte in the batteries, they are not subject to thermal runaway.

The HERC would include 608 power cubes. These cubes are then assembled into a cluster called a power block. Each power block contains 16 cubes as shown in Figure 43. The cubes are painted white. Additionally, each power block would include 1 auxiliary enclosure to support DC power and communications combining equipment. The auxiliary enclosures are the equivalent of a home power panel and would be painted white to match the cubes and power block. Each power block would be connected to a bi-directional inverter, medium-voltage step-up transformer, having a height around 15 feet.

Figure 4-4 displays the proposed site plan for the HERC. The site plan is based on preliminary engineering design. The layout will be finalized at the time MCB Camp Pendleton issues the final permit for the approved site plan. Road segments stem from the on-site central access road and would be constructed to extend from the existing onsite road to provide access to the storage system. The batteries would be connected to pad-mounted switchgear and transformers located no more than 500 feet from each unit. From the pad-mounted switchgear, distribution and transmission lines will be extended to the Pendleton Substation 12-kilovolt (kV) and 69kV tap, both via underground duct banks and overhead conductors. The energy storage system and ancillary equipment will be surrounded by a 6-foot-tall chain-link security fence to restrict public access during construction and operation.

Figure 4-3: Eos Energy Storage System

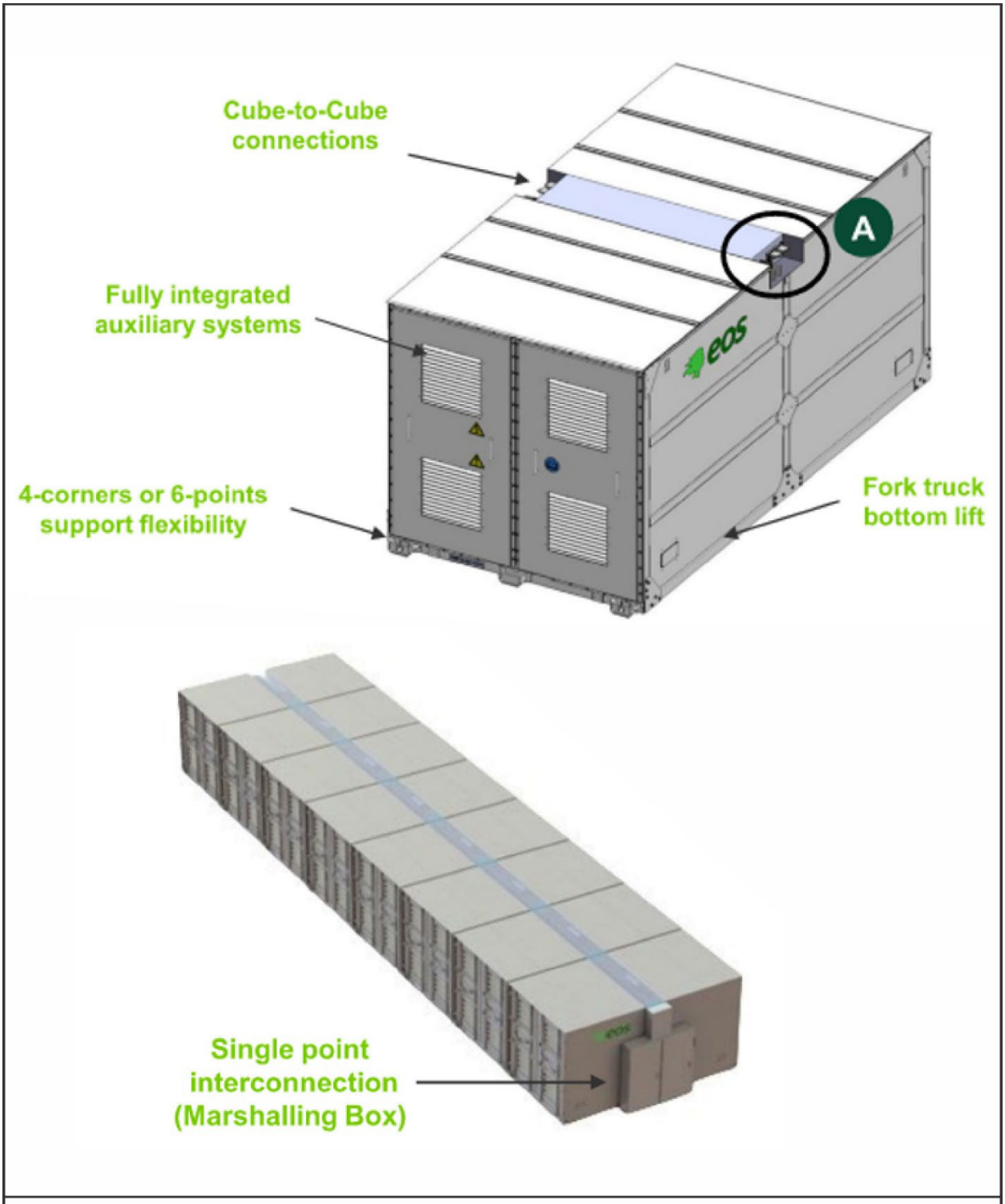
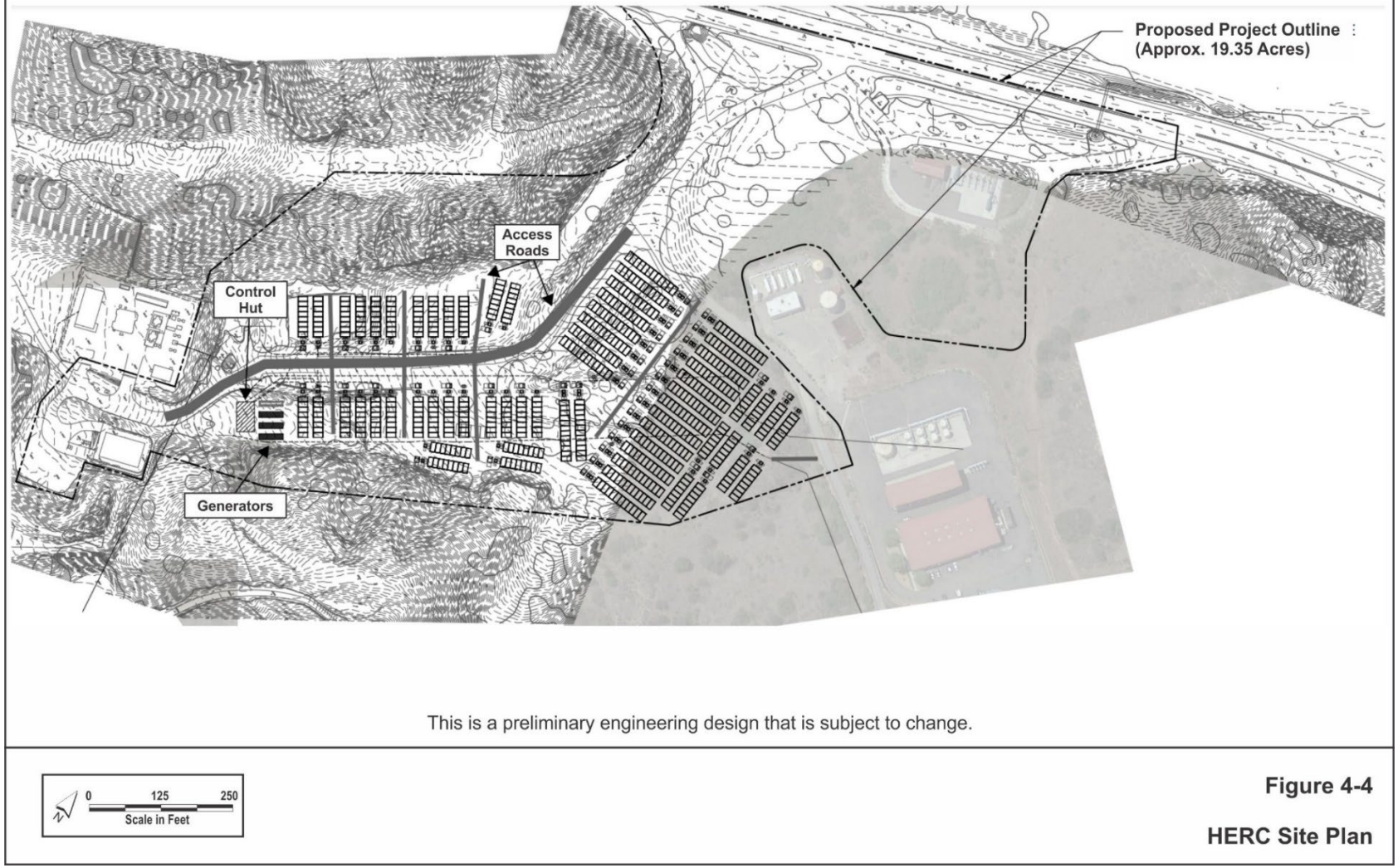


Figure 4-3

Eos Energy Storage System

Figure 4-4: HERC Site Plan



This multi-day energy storage facility would have a large, 486-MWh storage capacity with the ability to charge and discharge energy over extended evening periods. For example, the batteries can charge during periods of excess renewables on the grid, and then discharge when renewables are waning or unavailable. During operation of the project, the Applicant would use system forecasts and dispatch software to estimate optimal dispatch cycles.

The HERC would operate for at least twenty years, during which time it would receive quarterly maintenance by local 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 486 MWh 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.

The site would consist of 608 Eos z3.4 energy cubes arranged in power blocks consisting of 16 cubes each spread across the site. The proposed installation would include 44 transformers and 88 inverters. A small masonry building would be constructed of no more than 2,500 sf for operations and controls.

The entire HERC LDES system would be connected to the local existing 69-kV transmission line during normal operations, and then 'behind the meter' to the installation 12kV infrastructure during times of grid outage. At the onset of construction, overhead lines will be relocated underground within the site footprint.

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

- Approximately 608 battery cubes, and over 100 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.
- 12kV and 69kV interconnections.
- 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.
- Electrical cable installed in a trench and backfilled to connect the batteries, transformers, and switchgear.

- Rerouting of approximately 2000 linear feet of 12kV overhead distribution lines to be placed underground in ductbanks.
- Road segments and on-site access roads would be constructed to extend from the existing onsite road to provide access to both the energy storage system and substation. Road segments to batteries will be new and on newly graded pads. The main access road is existing, but will be demolished and rebuilt with new paving.
- Site grading and temporary construction facilities (e.g., fencing, construction trailers, material laydown—to be removed at the end of construction).
- Chain-link security fencing and minimal downward directed and shielded lighting.

Generally, the 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 hours of charging, the electricity supplied by SDG&E would be most likely to include a high proportion of renewable resources. Because this long-duration energy storage facility would have a large, 486-MWh storage capacity, it would be able to charge and discharge energy for extended periods. The Applicant would use system forecasts and dispatch software to estimate optimal dispatch cycles for the stored energy.

Separately from the proposed project, Marine Corps Air Station (MCAS) Camp Pendleton, a separate military installation with the boundaries of MCB Camp Pendleton, plans to install up to three 2-MW diesel generators in Haybarn Canyon near the Pendleton Substation. The generators would provide emergency backup power for MCAS Camp Pendleton in the event of a grid failure. Locations for these generators have been incorporated into the site plan for the HERC as shown in Figure 4-4. The emergency generators are part of a previously approved project in Haybarn Canyon. The HERC and the generators are separate projects with separate owners, operators, and control systems. There is no direct electrical interconnection between the two systems and the generators are not intended for charging the battery energy storage system. The MCAS Camp Pendleton emergency generators are being funded by the Department of Defense and were previously reviewed under the National Environmental Policy Act (NEPA). The generators are incorporated in the consideration of cumulative effects related to the proposed project's impacts.

4.9 Facility Construction

Schedule

Project construction is anticipated to start in 2025. The construction sequence would begin with relocation of existing utilities such as communications and civil features as well as electrical lines. From there it would move to minor demolition (rock and a concrete swale) and clearing and then move into underground stabilization, earthwork, underground utility services and infrastructure, foundations, vertical masonry, and then

roofing and completing structures. In parallel battery energy storage and electrical equipment would be installed as well as final trenches to interconnection locations. Once all wires are pulled, terminated, and tested the entire system will go through a lengthy startup, testing, and commissioning sequence culminating in commercial operation with the grid.

Construction of the battery energy storage system would in two successive phases. The first phase would involve substation upgrades and electrical interconnection work and installation of power blocks for 6 MW (48 MWh) of energy storage. The remainder of the power blocks would be installed in a second phase to bring the total energy storage to full planned capacity (50 MW, 486 MWh).

Construction would be organized into the following activities:

- Construction Preparation and Site Grading (6 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 Vandegrift. Scrapers, dozers, and front-end loaders would be required for this work.
- Excavation and Undergrounding (18 weeks)
    - Excavation and trenching for installation of conduit and underground utility ductbanks followed by backfill. Excavators and dump trucks would be required for this work.
- Foundation Installation (12 weeks)
    - Installation of foundations for batteries and balance-of-plant equipment, including slope retaining features such as jute netting and keystone walls. 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 battery areas.
- Electrical Work (20 weeks)
    - Cable installation and terminations for all major equipment.
    - Substation and interconnection work.
- Battery Installation & Wiring (20 weeks)
    - Drop batteries.
    - Install electrical equipment.
    - Pull and terminate wiring.
- Commissioning (15 weeks)
    - Minor system adjustments to ensure the project is operating properly.

Phase One is projected to come online in June 2026, and Phase Two is projected to be completed by June 2027. All noise-producing, construction-related activities would comply with local noise ordinances (see **Section 5.12, Noise**, for details).

Workforce

The average daily construction workforce would vary between 25 and 50 construction workers, with a peak workforce of up to 100 workers. During commissioning, some project workers and SDG&E personnel would be required to connect the HERC to the SDG&E substation and ensure it is functioning properly. The commissioning workforce would be on site for up to 15 weeks. Parking for the construction workforce would be located in the construction laydown area.

The worker vehicle trips generated from project construction assumes 100 employees would commute individually for a total of 100 daily round trips. Additionally, construction activity trips would include several trucks arriving and departing the site each day to deliver materials, supplies, and equipment. An estimated maximum of 15 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.

Staging

Construction equipment and materials would be staged within the project site at a former parking lot approximately one mile north of the project site on Vandegrift Road.

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 Vandegrift 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.

The project will require the removal of a sizable portion of non-native eucalyptus trees and medium sized native shrubs. The rough locations of all foundations, trenches, roads, fences, retention walls, and equipment would be surveyed and marked. The existing 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 project would comply with all standards required by the San Diego County Air Quality Management District (SDCAQMD) to minimize fugitive dust, PM10 emissions, and other construction-related pollutants. See **Section 3.1, Air Quality**, for discussions of applicable regulatory requirements.

Drainage Improvements

Small area drains would be installed to collect surface water runoff, which would be piped via a 4" and 6" pipes into a main storm drainpipe (around 12" to 24" in diameter) down the center of the site. Inlets/catch basins would be installed throughout the site to intercept larger water flows, which would be piped (~12") to the main storm drainpipe. The main drainpipe would be directed to a basin/underground cistern for water quality treatment. Water would then be piped into the bypass storm drain for off-site flows that would continue north to Vandegrift Boulevard and enter the existing storm drain system.

System Installation

Grading, excavation, and trenching would be required for the installation of piping, electrical conduit and utility ductbanks, 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 SDG&E's Pendleton Substation and electrical distribution system.

Substation Upgrades

Although SDG&E has not completed its engineering analysis, it is anticipated that various interconnection and/or system upgrades would be required for the HERC to interconnect with SDG&E's Pendleton Substation and distribution system. Distribution upgrades would include the installation of relays, a transmitter, telecommunication equipment, and 12-kV line extensions and connections from the project's pad-mounted switchgear. For the interconnection facilities, upgrades would include installing a receiver, meter, disconnect switch, and Supervisory Control and Data Acquisition (SCADA) recloser. Substation work will be done by both subcontractors of the Applicant and SDG&E.

Commissioning

At the conclusion of construction, the HERC would go through a commission phase to ensure it is operating properly. SDG&E personnel would be required to connect the HERC to the SDG&E substation and the Applicant's workers would modify the system to ensure

it is functioning properly. The commissioning workforce would be onsite for up to 15 weeks.

4.10 Facility Operation

The proposed HERC would operate for at least twenty years, during which time it would receive quarterly preventative maintenance and system refurbishments.

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 120 work hours would be required for quarterly maintenance of the site using two to three workers. The Applicant 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 local staff. Quarterly maintenance would also include servicing the 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 battery enclosures
- Auxiliary electrical connections and equipment from the auxiliary transformers or main auxiliary panel to the battery enclosures
- 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.

The energy storage system would be accessed by spurs off the unnamed access road that serves the SDG&E material storage yard and substation. The energy storage system would have on-site perimeter and center line compacted and graveled dirt roads for emergency access and facility operations (Figure 2-4). The HERC 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 HERC is greater than twenty years; however, the facility could stay online past the initial 20-year period if commercially optimal to continue operation. Once the battery energy storage facility has reached its end of life, it would be decommissioned and the electrical connections to the SDG&E substation would be safety capped for potential Base utilization in the future. Demolition would take six to nine months. All project aboveground facilities and structures would be removed except those desired to remain by the Base. Underground cables would be removed or abandoned in place, as part of the demolition.

Demolition would likely involve a combination of salvage or disposal work performed in accordance with applicable federal, state, and local regulations. The battery platform is composed of standard recyclable commodity materials. The Applicant 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 batteries maintain a useful life beyond twenty years so they would be removed and reused for another long duration energy storage system. Auxiliary equipment would be processed for scrap metal.

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 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 was prepared in compliance with the requirements of CEQA and the State CEQA Guidelines. The CEC will use this Initial Study in support of its discretionary decision to grant or deny LDES program funding for the project. The CEC will use this Initial Study to make a determination as to whether the proposed project has the potential to result in significant impacts to the physical environment.

In developing this Initial Study, CEC staff consulted with tribes requesting such engagement and with the U.S. Marine Corps.

4.13 References

Newsom 2021 – Proclamation of a State of Emergency (Emergency Proclamation). Issued by Governor of California Gavin Newsom on July 30, 2021. Accessed on May 23, 2023. Available online at: https://www.gov.ca.gov/wp-content/uploads/2021/07/Energy-Emergency-Proc-7-30-21.pdf

Section 5.01

Aesthetics

5.1 Aesthetics

This section describes the environmental setting and regulatory background and discusses impacts pertaining to aesthetics associated with the construction and operation of the project 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

The proposed project is within the perimeter of Marine Corps Base (MCB) Camp Pendleton in San Diego County. The project site is located in Haybarn Canyon. Interstate 5 (I-5) runs through Camp Pendleton along the west side of the Base. This portion of I-5 is designated as "eligible" as a State Scenic Highway by Caltrans (Caltrans 2023). State Route (SR) 76 runs south of the base, connecting I-5 from the southwest part of MCBCP to I-15 to the east of the base. SR 76 is also designated as eligible as a State Scenic Highway (Caltrans 2023). The southwest corner of the base is approximately 0.5 miles from SR 76.

The Haybarn Canyon site is located on previously disturbed land that is partially paved and graded, with coastal scrub and riparian scrub outside of the graded area. The Haybarn site is relatively flat, with hills immediately surrounding it to the south, east, and west. Vandegrift Boulevard is blocked by a hillside to the northwest. The SDG&E Pendleton Substation and MS1 metering station are adjacent to the site. The existing lighting at the Haybarn Site for the SDG&E Pendleton Substation and MS1 is a wall-

mounted, full cutoff, 42-watt, compact-fluorescent sconce fixture controlled with a photocell (U.S. Department of the Navy and U.S. Marine Corps 2020).

A construction laydown site would be located at a former parking lot located approximately one mile north of the project site on Vandegrift Boulevard. The parking lot site is relatively flat and bound by hillsides to the northeast and east, Vandegrift Boulevard to the northwest and west, and open undeveloped land to the south.

Regulatory

Federal

Federal Coastal Zone Management Act of 1972. The U.S. Congress passed the Coastal Zone Management Act (CZMA) in 1972. This act, administered by NOAA, provides for the management of the nation's coastal resources, including the Great Lakes. The goal is to "preserve, protect, develop, and where possible, to restore or enhance the resources of the nation's coastal zone." MCBCP is not included in the "coastal zone," as defined in Section 304, where it states, "Excluded from the coastal zone are lands the use of which is by law subject solely to the discretion of or which is held in trust by the Federal Government, its officers or agents (15 USC 1453(1))." However, MCB Camp Pendleton recognizes that actions outside the coastal zone may affect land or water uses, or natural resources along the coast and, therefore, are subject to the provisions of the Act.

State

State Scenic Highway Program. The State Scenic Highway Program was established by the Legislature as Article 2.5 (commencing with Section 260) of the Streets and Highways Code. Beginning in 1964, the State Scenic Highway Program was intended for the development of a state scenic highway system for the protection and enhancement of the state's natural scenic beauty by identifying those portions of the state highway system that, together with the adjacent scenic corridors, require special scenic conservation treatment.

Local

County of San Diego General Plan. The County of San Diego General Plan was most recently updated in 2011. The General Plan applies to the unincorporated area of the county. Within the unincorporated area, the County's land-use jurisdiction is limited by Tribal lands, and State and Federally owned lands, and military installations including Marine Corps Base Camp Pendleton.

Policy COS-11.1. Protection of Scenic Resources. Require the protection of scenic highways, corridors, regionally significant scenic vistas, and natural features, including prominent ridgelines, dominant landforms, reservoirs, and scenic landscapes.

Policy COS-11.3. Development Siting and Design. Require development within visually sensitive areas to minimize visual impacts and to preserve unique or special visual features, particularly in rural areas, through the following:

- Creative site planning
- Integration of natural features into the project
- Appropriate scale, materials, and design to complement the surrounding natural landscape
- Minimal disturbance of topography
- Clustering of development so as to preserve a balance of open space vistas, natural features, and community character
- Creation of contiguous open space networks

Policy COS-11.5. Collaboration with Private and Public Agencies. Coordinate with the California Public Utilities Commission, power companies, and other public agencies to avoid siting energy generation, transmission facilities, and other public improvements in locations that impact visually sensitive areas, whenever feasible. Require the design of public improvements within visually sensitive areas to blend into the landscape.

Policy COS-11.7. Underground Utilities. Require new development to place utilities underground and encourage "undergrounding" in existing development to maintain viewsheds, reduce hazards associated with hanging lines and utility poles, and to keep pace with current and future technologies.

County Zoning Ordinances. Section 5200 through 5299 are the Scenic Area Regulations. The purpose of these provisions is to regulate development in areas of high scenic value to assure exclusion of incompatible uses and structures and to preserve and enhance the scenic resources present in adjacent areas.

5.1.2 Environmental Impacts

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

Construction and Operation

Less than Significant. The construction and operation of the proposed project would not have a substantial effect on a scenic vista. The General Plan identifies policy COS-11.1 *Protection of Scenic Resources*, stating its purpose to "Require the protection of scenic highways, corridors, regionally significant scenic vistas, and natural features, including prominent ridgelines, dominant landforms, reservoirs, and scenic landscapes." Scenic highways are listed in the General Plan; however, scenic vistas are not specifically defined (San Diego County, 2011). The California Energy Commission has used the following definition of a "scenic vista" in a number of its decisions: "a distant view of high pictorial

quality perceived through and along a corridor or opening." Staff reviewed aerial and street view imagery (Google Earth) and concluded the project would be surrounded on three sides by natural topography that would shield it from sensitive receptors; however, there are no sensitive receptors in the vicinity of the battery energy storage facility. The site is on an active military installation, and not within a scenic vista as defined. Therefore, impacts from construction and operation would be less than significant.

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

Neither CEQA nor the State CEQA Guidelines provide a clear-cut definition of what constitutes a scenic resource. A scenic resource may be explained as a widely recognized natural or man-made feature tangible in the landscape (e.g., a scenic resource designated in an adopted federal, state, or local government document, plan, or regulation, a landmark, or a cultural resource [historic values, however, differ from aesthetic or scenic values]). This analysis evaluated whether the project would substantially damage—eliminate or obstruct—the public view[1] of a scenic resource, and whether the project is situated so that it changes the visual aspect of the scenic resource by being different or in sharp contrast.

Construction and Operation

Less than Significant. The construction and operation of the proposed project would not substantially damage a scenic resource. The Haybarn Canyon site is located on previously disturbed land controlled by an active military installation. There are no scenic resources at the project site (trees, rock outcroppings, or historic buildings) that could be damaged or otherwise affected by the proposed project. The project would be located approximately 6 miles from I-5, and 5 miles from SR 76, both of which are eligible scenic highways. There are no officially designated scenic highway segments within MCB Camp Pendleton or proximate to the project site (Caltrans 2023). As described in Section 4.8, the battery energy cubes are approximately 7 feet tall, and each power block would be connected to a bi-directional inverter, medium-voltage step-up transformer, having a height around 15 feet. Considering the height of the proposed project, the distance of the eligible scenic highways, and the hillside topography to the south, east, and west of the project, the project components are not likely to alter the to alter the existing visual character and/or visual quality of the environment as seen from the highways.

The proposed project would occur on land that has been previously developed with utility uses or previously identified for utility uses. There would be a visual change from the

[1] A public view can be defined as the visible area from a location where the public has a legal and physical right of access to real property (e.g., city sidewalk, public park, town square, state highway). State CEQA Guidelines Appendix G Environmental Checklist Form, I. Aesthetics, c. states "Public views are those that are experienced from publicly accessible vantage point."

planned battery energy storage facility, but it is similarly visually industrial. Impacts would be less than significant.

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 and Operation

No Impact. The proposed project is on an active military installation, which is not considered an urbanized area nor a public area. There are no known public vantage points surrounding the project site. No impacts would occur.

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 and Operation

Less than Significant. 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 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. No substantial light or glare would be created as a result of the proposed project. The impact would be less than significant.

5.1.3 Mitigation Measures

None required.

5.1.4 References

Caltrans 2023 – California Department of Transportation. Scenic Highways. Accessed on: October 16, 2023. Available online at: https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways

San Diego County 2011 – General Plan. Adopted August 3, 2011; Amended February 10, 2023. Accessed on: March 26, 2024. Available online at: https://www.sandiegocounty.gov/pds/generalplan.html

United States Department of the Navy and United States Marine Corps 2020 – Final Supplemental Environmental Assessment for Construction, Operation, and

Decommissioning of Photovoltaic and Natural Gas Energy Generation Facilities at Marine Corps Base Camp Pendleton, California.

Section 5.02

Agriculture and Forestry

5.2 Agriculture and Forestry

This section describes the environmental setting, regulatory background, and impacts associated with construction and operation 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

The project site, located adjacent to Oceanside within the county of San Diego, would be located within the perimeter of MCB Camp Pendleton in Haybarn Canyon. The Haybarn Canyon site is currently disturbed and is partially paved and graded with coastal scrub and riparian scrub outside of the graded area. The site is fully on federal military land. The site is zoned as Rural Residential. There is currently no active agriculture at MCB Camp Pendleton.

Per the Department of Conservation (DOC)'s farmland mapping and monitoring program (FMMP), there are three different designations within MCB Camp Pendleton, including Farmland of Local Importance, Urban and Built-Up Land, and Other Land (DOC 2023a). The Haybarn Canyon site as well as the Parking Lot site are identified by the DOC as Other Land (DOC 2023a). Farmland of Local Importance is defined as "land of importance to the local agricultural economy as determined by each county's board of supervisors and a local advisory committee." Urban and Built-Up Land are defined as "occupied by structures with a building density of at least 1 unit to 1.5 acres, or approximately 6 structures to a 10-acre parcel." Other Land is defined as "vacant and nonagricultural land surrounded on all sides by urban development and greater than 40 acres." The closest Farmland of Local Importance is approximately 300 feet from the project site. It is not currently used for agriculture.

Williamson Act contracts are dispersed throughout San Diego County, with the nearest Williamson Act contracts located in Oceanside just outside of MCB Camp Pendleton, approximately 4 miles to the south and approximately 4 miles to the east of the project site (DOC, 2023b). There are no Williamson Act contracts within MCB Camp Pendleton.

Regulatory

Federal

No federal regulations relating to agriculture and forestry resources have been identified that are applicable to the project.

State

Farmland Mapping and Monitoring Program. The California Department of Conservation (DOC 2023a) established the Farmland Mapping and Monitoring Program (FMMP) in 1982 to assess the location, quantity, and quality of agricultural lands and conversion of those lands to other uses. The FMMP identifies and maps agricultural lands as Prime Farmland, Farmland of Statewide Importance, Unique Farmland, Farmland of Local Importance, and Grazing Land (DOC 2023a).[1] Non-agricultural land that is occupied by

[1] Prime Farmland: Farmland with the best combination of physical and chemical features able to sustain long-term agricultural production.

Farmland of Statewide Importance: Similar to Prime Farmland but with greater slopes or less ability to store soil moisture.

structures is classified as Urban and Built-Up Land.[2] Land not included in any other mapping category is categorized as Other Land.[3]

Williamson Act. The California Land Conservation Act of 1965, or Williamson Act, is the principal method for encouraging the preservation of agricultural lands in California (Gov. Code, § 51200 et seq.). It enables local governments to enter into contracts with private landowners who agree to maintain specified parcels of land as agricultural or related open space use in exchange for tax benefits.

Local

San Diego County General Plan and Zoning Ordinance. The project site is in an area zoned as Rural Residential (RR). The RR Use Regulations are intended to create and enhance residential areas where agricultural use compatible with a dominant, permanent residential use is desired. Typically, the RR Use Regulations would be applied to rural or semi-rural areas where urban levels of service are not available and where large lots are desired. Various applications of the RR Use Regulations with appropriate development designators can create buffers between residential and agricultural uses, family or small farm areas, or large lot rural residential developments.

The San Diego County General Plan designates the project area as Public Agency Lands. Under this category, the entire MCB Camp Pendleton is designated in the sub-category of "Military Installations." The General Plan applies to the unincorporated area of the county. Within the unincorporated area, the County's land-use jurisdiction is limited by Tribal lands, and State and Federally owned lands, and military installations, including Marine Corps Base Camp Pendleton.

5.2.2 Environmental Impacts

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

Unique Farmland: Lesser quality soils used for the production of the state's leading agricultural crops.

Farmland of Local Importance: Land of importance to the local agricultural economy as determined by each county's board of supervisors and a local advisory committee.

[2] Urban and Built-Up Land: Occupied by structures with a building density of at least 1 unit to 1.5 acres, or approximately 6 structures to a 10-acre parcel. Examples include residential, industrial, commercial, institutional facilities, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, and water control structures.

[3] Common examples include low-density rural developments; brush, timber, wetland, and riparian areas not suitable for livestock grazing; confined livestock, poultry or aquaculture facilities; strip mines, borrow pits; and water bodies smaller than forty acres. Vacant and nonagricultural land surrounded on all sides by urban development and greater than 40 acres is mapped as Other Land.

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.

a. 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 and Operation

No Impact. There are no agricultural activities or DOC-designated Farmland at the project site. The project site is designated by the DOC as "Other Land." There is no active agricultural land within MCB Camp Pendleton. Therefore, the project would not convert Farmland to a non-agricultural use.

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

Construction and Operation

No Impact. The project is site is zoned RR on land designated as Military Installation. There are no Agricultural zoning districts within MCB Camp Pendleton. The base does not contain any Williamson Act contracts. Therefore, the project would not conflict with zoning for agricultural use or a Williamson Act contract, and no impact would occur.

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 and Operation

No Impact. The proposed project site is zoned RR and on land designated as a Military Installation. There are no land use types or zoning designations within MCB Camp Pendleton for forest land, timberland, or timberland production. Therefore, project construction and operation would not create an impact on such lands or uses.

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 proposed project site does not contain forest land and is not in an area where forest land is present; therefore, project construction and operation would cause no loss of forest land, and no impact would occur.

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 and Operation

No Impact. As discussed above, there is no evidence of historic agricultural activities or DOC-designated farmland at the project site. According to staff's review of Important Farmland maps that date back to 1984, the project site has been designated as Other Land. Therefore, neither project construction nor operation could convert farmland to a non-agricultural use.

Furthermore, there are no land use types or zoning designations within MCB Camp Pendleton specific to forest land, timberland, or timber production. Neither project construction nor operation would cause a change in the environment that could convert forest land to non-forest use. Therefore, no impact would occur.

5.2.3 Mitigation Measures

None required.

5.2.4 References

DOC 2023a – Department of Conservation. California Important Farmland Finder. Accessed on: September 20, 2023. Available online at: https://maps.conservation.ca.gov/DLRP/CIFF/

DOC 2023b – Department of Conservation. California Williamson Act Enrollment Finder. Accessed on: September 20, 2023. Available online at: https://maps.conservation.ca.gov/dlrp/WilliamsonAct/

Section 5.03

Air Quality

5.3 Air Quality

This section describes the environmental setting and regulatory background and discusses impacts specific to air quality associated with the construction, operations, maintenance, and eventual decommissioning and demolition of a battery energy storage system on Marine Corps Base (MCB) Camp Pendleton. As part of a separate project, up to three 2-MW diesel generators are proposed to be installed in Haybarn Canyon to provide emergency backup power for Marine Corps Air Station (MCAS) Camp Pendleton.

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 MCB Camp Pendleton energy storage facility would be in the San Diego air basin in the jurisdiction of the San Diego County Air Pollution Control District (SDAPCD), which regulates sources of air pollution and the programs to improve air quality in the region. The climate in San Diego County is mild and temperate.

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.

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. San Diego County is in nonattainment for the State 8-hour Ozone, 1-hour Ozone, PM10, and PM2.5 standards, and the Federal 8-hour Ozone standard. The current attainment status for NAAQS and CAAQS in the San Diego Air Basin are shown in Table 5.3-1.

Table 5.3-1. National and California Ambient Air Quality Attainment Status

Criteria Pollutant	Federal Designation	State Designation
Ozone (8-Hour)	Nonattainment	Nonattainment
Ozone (1-Hour)	Attainment	Nonattainment
Carbon Monoxide	Attainment	Attainment
PM10	Unclassifiable	Nonattainment
PM2.5	Attainment	Nonattainment
Nitrogen Dioxide	Attainment	Attainment
Sulfur Dioxide	Attainment	Attainment
Lead	Attainment	Attainment
Sulfates	No Federal Standard	Attainment
Hydrogen Sulfide	No Federal Standard	Unclassified
Visibility	No Federal Standard	Unclassified

Source: SDAPCD, 2024.

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 since its operations have no emissions.

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 rural land. The nearest sensitive receptor is a Chapel approximately 0.36 miles (585 meters) from the proposed project. All other sensitive receptors are over 0.5 miles from the project site.

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 SDAPCD 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

County of San Diego Guidelines for Determining Significance and Report Format and Content Requirements, Air Quality. San Diego County 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 75 pounds per day (lb/day) of volatile organic compounds (VOC);
- Emit more than 250 lb/day of nitrogen oxides (NOx);
- Emit more than 250 lb/day of sulfur oxides (SOx);
- Emit more than 550 lb/day of carbon monoxide (CO);
- Emit more than 100 lb/day of PM10; or
- Emit more than 55 lb/day of PM2.5 from exhaust. (San Diego County, 2007).

San Diego County does not have numerical significance thresholds for operational phase emissions.

San Diego Regional Air Quality Strategy (RAQS). The RAQS was revised in December 2016 and outlines APCD's plans and control measures designed to attain the State air quality standards for ozone. In addition, the APCD relies on the SIP, which includes the APCD's plans and control measures for attaining the ozone NAAQS. These plans accommodate emissions from all sources through implementation of control measures, where feasible, on stationary sources to attain the standards (San Diego County, 2016). Mobile sources are regulated by the United States EPA and the California ARB, and the emissions and reduction strategies related to mobile sources are considered in the RAQS and the SIP.

SDAPCD Rules and Regulations

SDAPCD Rule 55 Fugitive Dust Control. The SDAPCD uses Rule 55 to prevent unnecessary amounts of particulate matter to become airborne by minimizing visible roadway dust from transport trucks and track out. Control measures that apply to the project or operation include: track-out grates or gravel beds at each egress point, soil binders, chemical soil stabilizers, and using secured tarps or cargo covering, watering, or treating of transported material.

SDAPCD Rule 20.2 New Source Review Non-Major Stationary Sources. For each new, modified, replacement, or relocated emission unit and project which results in an emissions increase equal to or greater than any of the Air Quality Impact Analysis (AQIA) Trigger Levels described below, the applicant shall demonstrate to the satisfaction of the Air Pollution Control Officer through an AQIA that such emissions increase will not: (1) cause a violation of a national ambient air quality standard anywhere that does not already exceed such standard, nor (2) cause additional violations of a national ambient air quality standard anywhere the standard is already being exceeded, nor (3) prevent or interfere with the attainment or maintenance of any national ambient air quality standard. The AQIA Trigger Levels for new stationery sources are as follows:

- Emit more than 250 lb/day or 40 tons/year of nitrogen oxides (NOx);
- Emit more than 250 lb/day or 40 tons/year of sulfur oxides (SOx);
- Emit more than 550 lb/day or 100 tons/year of carbon monoxide (CO);
- Emit more than 100 lb/day or 15 tons/year of PM10; or
- Emit more than 67 lb/day or 10 tons/year of PM2.5 from exhaust. (SDAPCD, 2020).

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

Less than Significant. The SDAPCD 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 2016 Regional Air Quality Strategy is the SDAPCD's current plan to achieve the state air quality standards for Ozone. The proposed project construction activities would be required to follow the applicable SPAPCD Rules and Regulations and would not conflict with, or obstruct, implementation of the applicable air quality plan.

Operation

Less than Significant. Operation of the site would occur remotely with minimal water delivery and maintenance. The operation of the batteries does not directly cause emissions of any regulated air pollutants during the charging or discharging phase. The project would be operated to charge during periods of excess grid 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. Therefore, the project would not conflict with, or obstruct, 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

Less than Significant. The construction, commissioning and demolition-related increase in air pollutant emissions would occur in the regional context of the San Diego air basin that is currently designated as "nonattainment" for PM10, PM2.5 and ozone. 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. Project 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 5.3-2.

Construction is estimated to take approximately 18 months and demolition is expected to take approximately six to nine months. Commissioning is expected to take 15 weeks. The peak number of construction personnel would be 100 workers, and traffic to and from the site during construction would not exceed approximately 200 trips per day. Demolition of the project after its 20-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.

Table 5.3-2. Estimated Maximum Daily Construction Emissions (lbs/day)

	VOC	NOx	CO	SO_2	PM10	PM2.5
2025 Construction Emissions	4.17	32.50	39.10	0.06	35.20	10.40
2046 Demolition Emissions	1.64	11.80	14.50	0.05	50.80	10.80
Maximum Daily Construction Emissions	4.17	32.50	39.10	0.06	50.80	10.80
Threshold of Significance	75	250	550	250	100	55
Exceedance?	No	No	No	No	No	No

Source: Appendix A, Air Quality and GHG Emissions. San Diego County 2007.

Table 5.3-2 shows that project construction and demolition would not exceed the threshold for significant construction impacts. All emissions are below the threshold of significance without mitigation, and so impacts are less than significant.

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 nonattainment, 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. 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.

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

	VOC	NOx	CO	SO_2	PM10	PM2.5
Proposed Project Operation: Battery Energy Storage System O&M	6.23	0.32	37.90	< 0.005	0.07	0.05
Threshold of Significance	75	250	550	250	100	55
Exceedance?	No	No	No	No	No	No

Source: Appendix A, Air Quality and GHG Emissions. San Diego County 2007.

Cumulative

Less than Significant. While up to three emergency backup diesel generators are planned for the site in a future unrelated project, the operation of the battery system and the emergency generators will not result in cumulative impacts. This is primarily because any corresponding emissions associated with the battery project's operations are from transporting a limited number of workers, on an infrequent basis, to the facility for inspection and maintenance. Emissions from transportation are not expected to combine with emissions from backup generator testing even if inspection of the battery system occurs on the same day as other workers are testing the backup generators. Emissions associated with the readiness testing and emergency use of the generators would have maximum daily emissions described in Table 5.3-4.

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

	VOC	NOx	CO	SO_2	PM10	PM2.5
Proposed Project Operation	6.23	0.32	37.90	< 0.005	0.07	0.05
MCAS Diesel Generators: Maintenance and Readiness Testing	14.50	61.67	33.73	12.04	1.93	1.93
MCAS Diesel Generators Emergency Use (24 hours per day)	348.05	1480.09	809.42	288.87	46.25	46.25
Combined Emissions: Proposed Project plus MCAS Diesel Generators: Maintenance and Readiness Testing	20.73	61.99	71.63	12.04	2.00	1.98
SDAPCD Rule 20.2 Thresholds	--	250	550	250	100	67
Exceedance?	NA	No	No	No	No	No

Source: Appendix A, Air Quality and GHG Emissions. SDAPCD 2020.
Note: Combined emissions include the proposed project's operational emissions and maximum emissions associated with testing the generators. Emergency generator emission usage is not included in the combined emissions total.

While there are no air quality operational cumulative impacts, for informational purposes, separate emission estimates are presented for use of the generators in emergency

situations. To estimate maximum daily use in an emergency situation such as grid failure, the three generators were assumed to run for 24 hours. The California Airborne Toxic Control Measure (ATCM) for Stationary Compression-Ignition Engines and SDAPCD air permitting requirements would limit emergency standby engine testing and maintenance to 50 hours a year. Emissions associated with testing and maintenance include 50 hours per year of testing, with up to 1 hour of testing per generator per day. While the number of hours of engine use in emergency scenarios would not be limited, daily maintenance usage of the generators would be subject to SDAPCD limits and thresholds.

Table 5.3-4 shows that daily maximum emissions associated with the maintenance of the backup generators would not exceed the threshold for significant impacts, nor would the combined emissions from operations of the proposed project and the cumulative project exceed significance thresholds. All emissions are below the threshold of significance without mitigation, and so impacts are less than significant.

c. Expose sensitive receptors to substantial pollutant concentrations?

Construction

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 receptor is the Ranch House Chapel approximately 605 meters from the proposed project boundary.

Short-term emissions associated with construction, commissioning and demolition would occur on site 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 18 months. Demolition would be approximately six to nine months. Commissioning would occur over a 15-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 Rule 55 Fugitive Dust Control, which would minimize the emissions of dust, from track out. This would ensure that receptors would not be exposed to substantial concentrations. Impacts 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.

Cumulative

For the reasons stated in section (b), there would be no cumulative impacts from the operations of the battery system and the testing of the backup generators on any sensitive receptors.

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

Construction

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

No Impact. 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.

5.3.3 Mitigation Measures

None required.

5.3.4 References

SDAPCD, 2020 – SDAPCD. Rules and Regulations. Available online at: https://www.sdapcd.org/content/sdapcd/rules.html. Accessed on June 4, 2023.

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_____. 2016 – County of San Diego. 2016 Revision of The Regional Air Quality Strategy for San Diego County. Available online at: https://www.sdapcd.org/content/dam/sdapcd/documents/grants/planning/2016%20RAQS%20(1).pdf. Accessed on June 4, 2023.

Section 5.04

Biological Resources

5.4 Biological Resources

This section describes the environmental setting and regulatory background and discusses potential impacts associated with the construction, operation, and decommissioning of the 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 Haybarn Energy Reliability Center (HERC or project) is approximately 19 acres in size at Haybarn Canyon and approximately 4.5 acres at the offsite staging/laydown area and occurs within the Marine Corps Base (MCB) Camp Pendleton that extends across 125,000 acres in

northwestern San Diego County, California (**Section 4, Project Description**, Figure 4-1). Specifically, the project occurs on the southeast side of Vandegrift Boulevard, northeast and adjacent to the existing San Diego Gas & Electric (SDG&E) Pendleton Substation in Haybarn Canyon. Any construction equipment and materials would be staged at the offsite staging/laydown area approximately one mile north-eastward along Vandegrift Boulevard west of the intersection with Santa Margarita Road. (**Section 4, Project Description**, Figure 4-2). Access to the project will be from Vandegrift Boulevard.

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. The project site includes two areas (1) at Haybarn Canyon, and (2) at a parking lot located approximately one mile north-east of Haybarn Canyon that may be used as a staging area. The Haybarn Energy Reliability Center is proposed at Haybarn Canyon, and a staging/laydown site at the nearby parking lot during the construction and demolition of the project. The area is approximately 19.35 acres in size within Haybarn Canyon and 4.5 acres in size at the offsite staging/laydown area. The project site includes approximately 12 acres of permanent impacts from the development of the 608 energy cubes (each cube will be approximately 7 feet tall), associated electrical work required to connect the energy cubes to the existing 12-kV distribution line and to the 69-kV bulk power grid via underground duct banks and overhead conductors, the relocation of power poles, an 6-foot chain-link security fence, the undergrounding of open drainage channel, and possible water quality basins. At the Haybarn Canyon site, approximately 3.4 acres of temporary impacts would occur from the grading of slopes for retaining walls and site pad, reconstruction of current roads, and operation of construction vehicles and equipment. At the offsite staging/ laydown area, approximately 4.5 acres of temporary impacts would occur to mostly developed and disturbed habitat for the storage of equipment during the construction/demolition phase of the project.

- **Study Area:** The study area is defined as the project site plus a 500-foot buffer. This area is approximately 94.5 acres in size at Haybarn Canyon and approximately 43 acres at the offsite staging/laydown area.

Existing Physical Environment

- Per the *Final Joint Integrated Natural Resources Management Plan* prepared by the U.S. Department of the Navy (USDON 2018), the MCB Camp Pendleton is located within three geomorphic regions including coastal plain, coastal valley, and mountain. The climate is characterized by warm, dry summers and mild, wet winters of a semiarid Mediterranean climate. The MCB Camp Pendleton is located at the southern end of the Santa Ana Mountains which are part of the Peninsular Range located within southwestern California. Specifically, the MCB Camp

Pendleton is within the southern foothills of the Santa Margarita Mountains, part of the larger Santa Ana Mountains, and the coastal plains to the south. The region has been shaped by natural erosive processes to form a collection of southwest-trending stream valleys within the northwest-trending hills and mountains (USDON 2018). The project site is located in the foothills region inland and east of the coastal plains and on the eastern side of the valley carved out by the Santa Margarita River.

- The soils within MCB Camp Pendleton include those primarily composed of poorly consolidated marine sediments in the coastal plains region and granitic soils containing some metasedimentary and metavolcanic inclusions in the foothill region. The study area contains two mapped soil series: Linne clay loam, 30 to 50 percent slopes, and Tujunga sand, 0 to 5 percent slopes (USDA NRCS 2023). The majority of the project site contains the Linne clay loam soil series, transitioning to the Tujunga sand soil series towards Vandegrift Boulevard. The Linne clay loam series has a parent material of residuum weathered from calcareous sandstone and shale and has a well-drained drainage class. The Tujunga sand series has a parent material of alluvium derived from granite and has a somewhat excessively drained drainage class. Neither soil series is considered hydric.

There are three major hydrologic units present within the MCB Camp Pendleton, and the project site is located within the Santa Margarita River Basin portion of the Ysidora hydrologic area within the Santa Margarita hydrologic unit (USDON 2018). The Santa Margarita River is located approximately 0.3-mile northwest of the project site and flows to the Pacific Ocean located approximately 7 miles southwest of the project site.

- The topography of the project site is uneven as it is nestled within the hills rising up from the river valley. The study area extends northwestward into the broad historic floodplain of the Santa Margarita River and southwestward upslope into the foothills. The elevation within the project site ranges from approximately 94 feet above mean sea level (amsl) to approximately 235 feet amsl.

Existing Vegetation and Habitat

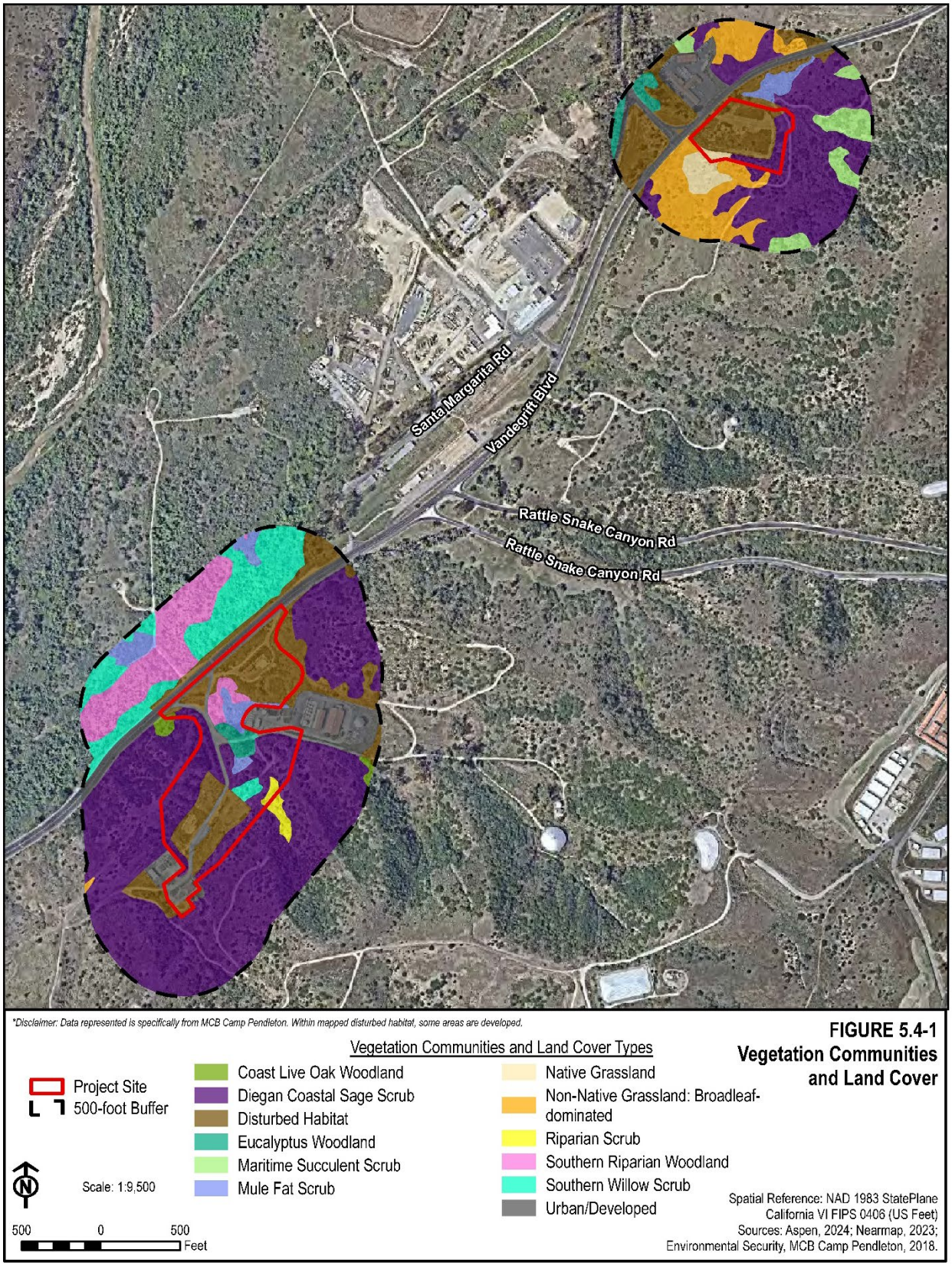
The MCB Camp Pendleton contains a diverse range of regional habitats and vegetation communities (USDON 2018). The nomenclature and classification system used by *Final Environmental Assessment for the Proposed Construction, Operation, and Decommissioning of a Solar Photovoltaic System at Marine Corps Base Camp Pendleton* (USDON 2015), is based on *Draft Vegetation Communities of San Diego County* (Oberbauer et al 2008), which was developed for use in San Diego County based on a Preliminary Descriptions of the Terrestrial Natural Communities of California prepared by R.F Hollard (1986) classification system. The MCB Camp Pendleton geographic information system (GIS) data layers (MCB Camp Pendleton 2019) classification align with Oberbauer et al 2008. However, the nomenclature and classification system used by *Final Supplemental Environmental Assessment for Construction Operation, and Decommissioning of Photovoltaic*

and Natural Gas Energy Generation Facilities at Marine Corps Base Camp Pendleton, California [USDON (2020)] in describing the project site generally follows the U.S. National Vegetation Classification (USNVC 2019). The GIS layers were used for analysis of impacts to vegetation communities and land covers; therefore, the vegetation communities are described and analysis based on Oberbaurer et al. 2008.

The broader study area supports a variety of native vegetation communities, patches of non-native vegetation, and other land cover types, including previously disturbed and developed areas. Riparian communities, such as southern willow scrub, southern riparian woodland, and mulefat scrub characterize the study area north of Vandegrift Boulevard at Haybarn Canyon. The study area at Haybarn Canyon south of Vandegrift Boulevard is dominated by Diegan coastal sage scrub and previously disturbed and developed areas, including existing structures and access roads. The southern half of the study area at the offsite staging/laydown area is dominated by Diegan coastal sage scrub while the remainder of the study area at that site is comprised of a mosaic of native and non-native vegetation communities.

At a finer scale, the project site at Haybarn Canyon predominantly supports Diegan coastal sage scrub and previously disturbed and developed areas. Smaller patches of native riparian vegetation, including southern riparian woodland, southern willow scrub, and mulefat scrub comprise the central portion of the project site at Haybarn Canyon and are associated with a northeast trending drainage the flows to the Santa Margarita River north of the study area. The offsite staging/laydown area is dominated by previously disturbed and developed land cover associated with the existing parking area. The eastern and southern edges of the offsite staging/laydown area consist of Diegan coastal sage scrub and a small area of native grassland also occurs along the southern edge. Vegetation communities and other land cover types for the study area and project site are presented in Figure 5.4-1.

Figure 5.4-1. Vegetation Communities and Land Cover



Coastal sage scrub communities. Coastal scrub community (Diegan Coastal Sage Scrub and Maritime Succulent Scrub) is located on the slopes of the foothills adjacent to the more level/flat terrain within the study area at Haybarn Canyon and adjacent to the offsite staging/laydown area. Coastal scrub community occurs on dry slopes with clay-rich soils and is characterized by sparsely populated small trees and shrubs. Diegan Coastal Sage Scrub is the dominant scrub community in coastal southern California, occurring on dry slopes with clay-rich soils and is typically dominated by California sagebrush (*Artemesia californica*) and California buckwheat (*Eriogonum fasciculatum*), together with and other drought-tolerant low, soft-woody shrubs such as coyote brush (*Baccharis pilularis*), , laurel sumac (*Malosma laurina*), Menzies' goldenbush (*Isocoma menziesii*), California sunflower (*Encelia californica*), and sages (*Salvia* spp.). This community typically intergrades with grassland communities at lower elevations and chaparral communities at higher elevations. Maritime Succulent Scrub is a slow scrub dominated by drought deciduous shrubs found on thin, rocky or sandy soils. Characteristic species include, but are not limited to, California sagebrush (*Artemisia californica*), California sunflower (*Encelia californica*), coast prickly pear (*Opuntia littoralis*), coastal cholla (*O. prolifera*), lemonade berry (*Rhus integrifolia*), and others. USDON (2018, 2020) has documented occupied habitat for coastal California gnatcatcher (*Polioptila californica californica*) in coastal scrub habitat within and immediately adjacent to the southern end of the project site.

Riparian communities. Riparian scrub and riparian woodland are the two natural vegetation communities dominating the study area on the northwest side of Vandegrift Boulevard. Both communities are also present within the project site in smaller patches, primarily of riparian scrub, on the east side of Haybarn Road. Riparian scrub community present within MCB Camp Pendleton, as described in USDON (2020), mostly occurs in major river systems such as the Santa Margarita River located northwest of the study area. Riparian Scrub zones are dominated by small trees or shrubs (*willows [Salix* spp.*] and mulefat [Baccharis salicifolia]*) and lack taller riparian trees. Mulefat scrub and southern willow scrub are a sub-set of Riparian scrub. Mulefat scrub is dominated by mulefat (*Baccharis salicifolia*). Southern willow scrub is dominated by several willow species and often merges with other riparian or marsh habitats. In the action area, this community is dominated by willows and mulefat. Southern Riparian Woodland Riparian Woodland is a medium-density riparian woodland community dominated by small trees or shrubs, with scattered taller riparian tree species. This community is often found in conjunction with other wooded riparian communities along major river systems and smaller tributaries. Characteristic species in the project survey area include California sycamore (*Platanus racemosa*), willows, mulefat, and blue elderberry (*Sambucus nigra* ssp.). USDON (2018 2020) has documented breeding habitat for arroyo toad (*Anaxyrus californicus*) in the riparian scrub and riparian woodland habitat located in the study area on the northwest side of Vandegrift Boulevard. Least Bell's vireo have been documented in riparian habitats in the north-west of the project site, and numerous occurrences occur on the northwest side of Vandegrift Boulevard within the Santa Margarita River. Riparian

vegetation communities in the study area also support suitable habitat for birds and could support roosting bats if roost features are present.

Coast live oak woodland. Coast live oak woodland is located adjacent to and outside the project site just southwest of the substation access road at Vandegraft Boulevard. Coast Live Oak Woodland is characterized by an upland tree canopy with dominate or co-dominate species of coast live oak (*Quercus agrifolia*) and other species with shrub layers. The community is found in canyon bottoms, and slopes, and flat areas.

Native grassland. Native grassland is located within and immediately south of the offsite staging/laydown area. Native grassland includes three sub-sets of grassland including Valley Needlegrass Grassland, which is dominated by perennial bunchgrasses. This community usually occurs on fine-textured (often clay) soils. Native and introduced annual grasses usually occur between the perennials, often exceeding the bunchgrasses in total cover. Native and non-native herbs are typically present in native grasslands as well. The percentage cover of native species at any one time may be quite low but this is considered native grassland if 20% aerial cover of native species is present. Characteristic species include purple needlegrass (*Stipa pulchra*), snakeroots (*Sanicula* spp.) goldfields (*Lasthenia* spp.), brome grasses (*Bromus* spp.), California melic grass (*Melica californica*), and others.

Non-native vegetation communities. Non-native grassland is located immediately west of the substation and within the Haybarn study area. It also occurs in the offsite staging/laydown area. Non-native grassland is dominated by non-native annual grasses and weedy herbaceous forbs including ripgut brome (*Bromus diandrus*), red brome (*Bromus rubens*), wild oats (*Avena* spp.), soft chess brome (*Bromus hordeaceus*), and filaree (*Erodium* spp.). Non-native mustards including shortpod mustard (*Hirschfeldia incana*) and black mustard (*Brassica nigra*) are also present.

Broadleaf-dominated non-native grassland is a sub-set of non-native grassland, which is dominated by one or several non-native broadleaf species. This community usually occurs in areas that experience frequent disturbance and are near an exotic seed source. The dominant exotic species include black mustard, shortpod mustard, common fennel (*Foeniculum vulgare*), and tocalote (*Centaurea melitensis*). Non-native forbs in the survey area consisted of shortpod mustard, common fennel, and tocalote.

Eucalyptus woodland is located within the project site adjacent to the east side of the substation road approximately 250 feet southeast of Vandegraft Boulevard. Eucalyptus Woodland is a non-native woodland dominated by large naturalized blue and/or red gum trees (*Eucalyptus* spp.). Eucalyptus trees present within the project site could support nesting birds and roosting bats.

Previously disturbed and developed. The majority of the level terrain located within the project site at Haybarn Canyon and the offsite staging/laydown area is heavily disturbed and/or developed. This includes the existing paved access roads to the substation,

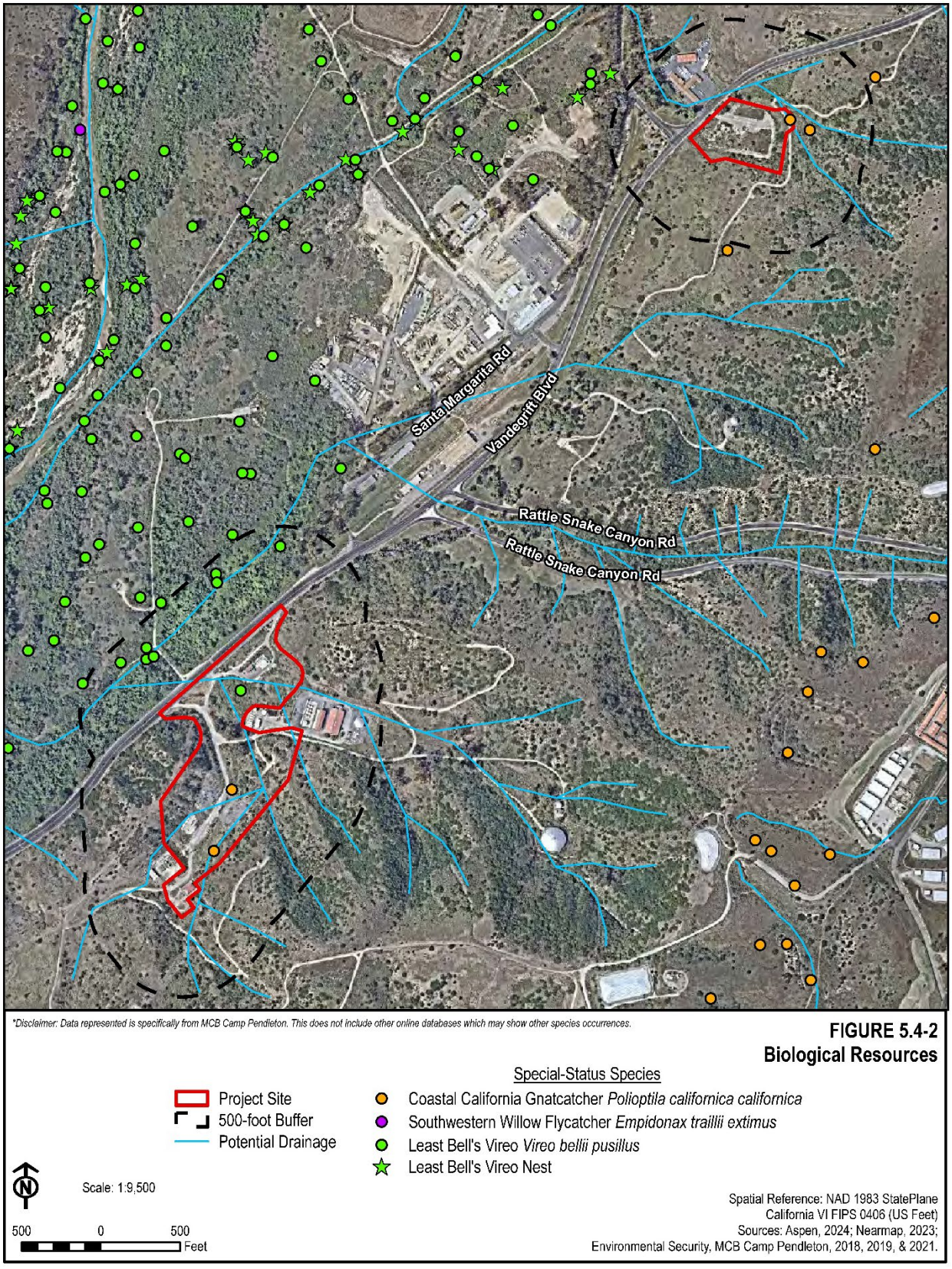
metering station, and other facilities within Haybarn Canyon. In addition, the project site includes an area currently used as a parking lot located to the east and south of Vandegrift Boulevard. Most of the offsite staging/laydown area consists of old and cracked asphalt with disturbed habitat.

Potential Jurisdictional Water Features

There are no streams mapped in the National Hydrography Dataset (USEPA 2023), U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory Wetlands Mapper (USFWS 2023), or U.S. Geological Survey (USGS) Morro Hill 7.5-minute quadrangle within the project site. A non-tidal freshwater wetland (PFOC) is mapped on the northwest side of Vandegrift Boulevard within the study area, characterized by a dominance of woody shrubs and/or trees and seasonal flooding within the growing season (USFWS 2023). The extent of the mapped wetland generally matches the extent of riparian woodland community mapped by the USDON (2020) as previously described. The active channel of the Santa Margarita River is located approximately 0.3-mile northwest of the study area.

A formal preliminary assessment of jurisdictional waters was not conducted for the proposed project; however, an assessment including review of maps and field review was conducted for potentially jurisdictional areas under Section 404 of the Clean Water Act (CWA), Section 401 of the CWA and the Porter-Cologne Act, or pursuant California Fish and Game Code §1602. Several stormwater ditches and potential streams are located along the perimeters of the SDG&E substation and metering station and the MCB Camp Pendleton 24 Area (See Figure 5.4-1.) These human-made and natural ditches/swales were identified during field reconnaissance survey on April 18, 2024. The flow of water near the near the existing substation is directed under the concrete pad and a metal culvert terminates near the chain link fence. The water is conveyed through vegetated areas to the Santa Margarita River via a series of culverts and under crossings. The vegetated channels have hydrological connection to the Santa Margarita River. These hydrological connections include a stream with bed and bank that support riparian scrub habitat. Based on the reconnaissance level surveys, no navigable waters of the U.S. or other jurisdictional areas defined as "waters of the U.S." are present. These areas are not anticipated to be Waters of the U.S. based on *Sacket v. EPA*, final rule tributaries of water "are relatively permanent, standing or continuously flowing bodies of water". However, areas that are likely considered streams under Fish and Game Code Section 1602 are present in the project site.

Figure 5.4-2. Biological Resource Assessment



Sensitive Habitats

The current vegetation communities present in the project area were not mapped according to the *A Manual of California Vegetation* (CNPS 2023, Sawyer et al. 2009) which is the system currently used to evaluate rarity and threats in California. However, the California Department of Fish and Wildlife (CDFW) generally considers Diegan Coastal Sage Scrub, Maritime Succulent Scrub), Southern Riparian Woodland, Southern Willow Scrub, and Southern Coast Live Oak Woodland as Sensitive Natural Communities under the California Natural Diversity Database (CNDDB) (CDFWa).

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 started with incorporating special-status species from Appendix H Plant Species on Camp Pendleton, Appendix I Wildlife Species on Camp Pendleton, and Appendix O State Listed and Other Species of Special Concern on Camp Pendleton in the *Final Joint Integrated Natural Resources Management Plan* (USDON 2018). Additionally, Table 3.3-1 Federally Listed Species Known to Occur on MCB Camp Pendleton in the *Final Supplemental Environmental Assessment for Construction, Operation, and Decommissioning of Photovoltaic and Natural Gas Energy Generation Facilities* (USDON 2020) was also referenced. A literature review was also conducted that consisted of queries from the USFWS Information for Planning and Consultation (IPaC) species list, CDFW CNDDB RareFind 5, California Native Plant Society (CNPS) Rare Plant Inventory, iNaturalist, and eBird.

Reconnaissance-level biological surveys were performed on April 18, 2024. The surveys included confirming vegetation communities 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.).

Per surveys conducted by USDON (2020), several observations of least Bell's vireo (*Vireo bellii pusillus*), a federally and state endangered species, have been documented within the study area between 2013 and 2019. In addition, least Bell's vireo was observed within the riparian vegetation north-west of the Water Treatment Plant on April 18, 2024. One observation of coastal California gnatcatcher (*Polioptila californica californica*), a federally threatened species and CDFW species of concern, has been documented within the project site in 2019 (USDON 2020).

A total of 116 special-status species known to occur in the region were assessed due to their potential to occur within the study area. These include 36 plant, 2 invertebrate, 3 amphibian, 12 reptile, 49 bird, and 14 mammal species. Appendix D provides the full list and assessment of the special-status species that have either a low, moderate, or high potential to occur within the study area. No special-status plant species were detected during the surveys on April 18, 2024.

5.4.2 Regulatory

Federal Integrated Natural Resources Management Plan (INRMP) (16 United States Code (U.S.C.) § 670a *et seq*. – Sikes Act, DoD Instruction 4715.03 – Environmental Conservation Program; Marine Corps Order P5090.2A CH 3 and 32 Code of Federal Regulation Part 190 – DoD Natural Resources Management Program). The Sikes Act is the primary federal statue requiring natural resource management on military installations. An Integrated Natural Resources Management Plan (INRMP) (2018; draft revision 2023) has been prepared to assist the Commanders to conserve a rehabilitate natural resource while ensuring the preparedness of the Armed Forces. Resource-specific programs have been developed to address relevant natural resources issues at Camp Pendleton. The INRMP was developed through cooperation with individuals and organizations on and off Camp Pendleton Marine Corps Base.

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 U.S. 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, and 2081.15). 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). California Senate Bill 147 (signed by Governor Newsom July 2023) amends 3511, 4700, 5050, and 5515 and

Section 395, and adds Section 2081.15 to the Fish and Game Code. Through these amendments, CDFW is authorized to issue a permit under CESA that would authorize the take of fully protected species resulting from impact attributable to the implementation of specified projects if certain conditions are met. This remains in effect until December 31, 2033. 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.

5.4.3 Environmental Impacts

This section assesses impacts based on the results of literature review and reconnaissance level biological site on April 18, 2024 (see Appendix D).

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. Direct and indirect impacts to special-status species and habitat could occur during construction and demolition of the project at Haybarn Canyon and the offsite staging/laydown area. Potential impacts to native vegetation communities that could support special-status species along with special-status plants and wildlife are discussed below.

Native Vegetation Communities

The project site in Haybarn Canyon consists of developed and disturbed areas with coastal and riparian scrub dominating the native vegetation surrounding the developed and disturbed areas. Coastal scrub dominates the north-west and south-east slopes. To the north-east of Haybarn Canyon Road, the site primarily consists of riparian scrub and eucalyptus woodland (USDON 2020). The proposed project site also includes an area currently used as a parking lot located approximately one mile northward of Haybarn Canyon. The parking lot area is largely characterized as developed and disturbed bounded by coastal scrub along the eastern edge and coastal scrub and a patch of native grassland along the southern edge. Direct impacts to native vegetation communities would occur from the removal of approximately 11 acres of upland and riparian vegetation during construction of the battery storage facilities and rebuilding of the main access road (Haybarn Canyon Road). Table 5.4-1 below provides a summary of the permanent and

temporary impacts to vegetation communities within the project site (both Haybarn Canyon and the offsite staging/laydown site).

Some of the coastal sage scrub and riparian vegetation communities that occur within and adjacent to the project site are considered sensitive by CDFW due to their limited distribution across the state and/or their potential to support special-status species. Oak woodlands and native grasslands within and adjacent to the project site support suitable habitat for a variety of common and special-status species, including nesting birds and raptors. The permanent removal of oak woodlands is not anticipated to occur as part of the project.

Approximately 7.7 acres of non-native vegetation would be permanently removed during construction. Generally, non-native vegetation communities and developed or disturbed land cover types do not typically provide optimal habitat for special-status species. .

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

Vegetation Community and Other Land Cover Types	Haybarn Canyon (permanent impacts) acres	Haybarn Canyon (temporary impacts) acres	Staging Area (temporary impacts only) acres	Total acres
Native Vegetation Communities				
Diegan Coastal Sage Scrub	5.32	1.18	0.99	7.49
Mule Fat Scrub	0.25	0.6	0	0.85
Riparian scrub	0.21	0	0	0.21
Southern Riparian Woodland	1.02	0.75	0	1.77
Southern Willow Scrub	0.35	0	0	0.35
Native Grassland	0.00	0	0.2	0.20
Non-native Vegetation Communities				
Eucalyptus Woodland	0.74	0.03	0	0.77
Non-Native Grassland: Broadleaf-dominated	-	0	0.04	0.04
Disturbed Habitat[1]	3.06	0.56	3.26	6.88
Land Covers				
Urban/Developed	1.02	0.25	0	1.27
Total acres	**11.98**	**3.37**	**4.49**	**19.84**

1 - Disturbed Habitat includes areas that are Developed

Direct impacts to native vegetation communities and habitat could also include exposure to fugitive dust, erosion and sedimentation, and hazardous materials spills during construction. Temporary impacts to coastal scrub and riparian habitats, would be minimized

by using the parking lot as the laydown or storge areas during construction/demolition. As described in **Section 5.3, Air Quality**, construction activities would be required to follow the San Diego County Air Pollution Control District (SPAPCD) Rules and Regulations for fugitive dust control. These regulations include such measures as stabilizing ingress and egress points and applying soil binders or stabilizers if applicable. Measures to control and suppress dust include minimizing vehicle speed to 10 miles per hour. As described in **Section 5.10, Hydrology and Water Quality**, grading activities associated with construction would temporarily increase the potential for localized erosion until site stabilization activities are completed. The proposed project would require a Storm Water Pollution Prevention Plan (SWPPP) that would include standard measures and Best Management Practices (BMPs) to reduce potential impacts resulting from increased erosion and sedimentation (SWRCB 2010). As described in **Section 5.9, Hazards and Hazardous Materials**, standard construction BMPs and a Solid Waste Management Plan would be implemented to minimize the potential for improper handling and disposal of hazardous materials.

Indirect impacts to vegetation communities and habitat could include alterations to long-term hydrology and degradation of habitat from the introduction and proliferation of noxious and invasive weeds. As discussed in **Section 5.10, Hydrology and Water Quality**, the project would modify existing surface drainage patterns in Haybarn Canyon by drainage improvements with the battery energy storage system, which would be designed to avoid producing excess erosion and sedimentation. Erosion and hazardous materials control measures (including obtaining a permit under the California Construction General Permit and implementing a Storm Water Pollution Prevention Plan) would be used throughout construction/demolition to reduce potential impacts. The SWPPP would include standard erosion control measures and BMPs to reduce potential impacts resulting from erosion (SWRCB 2010).

Mitigation measures (MMs) BIO-1 (Implement Worker Environmental Awareness Program), BIO-2 (Conduct Biological Monitoring and Reporting), and BIO-3 (Habitat Restoration), include worker training, delineation of project work limits, work and staging areas, speed limits to control dust, soil bonding agents for dust suppression, secure water sources on project site, litter and trash management, weed-free and non-plastic netting, vehicle and equipment cleaning; monitoring and reporting requirements; and on-site restoration of temporarily disturbed areas. In addition, mitigation measures described for special-status species below include compensatory mitigation for direct impacts to native vegetation communities. The implementation of these measures would reduce impacts to less than significant.

Plants

Although no special-status plants were observed during April 18, 2024, reconnaissance level surveys, a formal floristic botanical survey was not conducted. However, based on the results of the literature review, on-line database review, and MCB Camp Pendleton Geographic Information System (GIS) data layers (MCB Camp Pendleton 2019), 34

special-status plant species (CDFW 2023a, CNPS 2023, iNaturalist 2023, USFWS 2023) have the potential to occur in suitable habitats within the study area.

Appendix D-1 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:

- desert sand verbena (*Abronia villosa* var. *aurita*) – CNPS California Rare Plant Rank (CRPR) List 1B.1, State Rank (SR) S2 species
- San Diego thornmint (*Acanthomintha ilicifolia*) – CNPS CRPR 1B.1, SR S1
- San Diego ambrosia (*Ambrosia pumila*) - CNPS CRPR 1B.1, SR S1
- Aphanisma (*Aphanisma blitoides*) - CNPS CRPR 1B.2, SR S2
- Parish's broomrape (*Aphyllon parishii* ssp. *brachylobum*) - CNPS CRPR 4.2, SR S3
- San Diego sagewort (*Artemisia palmeri*) - CNPS CRPR 4.2, SR S3?
- western spleenwort (*Asplenium vespertinum*) - CNPS CRPR 4.2, SR S4
- thread-leaved brodiaea (*Brodiaea filifolia*) – Federal Endangered (FE), State Endangered (SE), CNPS CRPR 1B.1, S1
- Brewer's calandrinia (*Calandrinia breweri*) – CNPS CRPR 4.2,SR S4
- Catalina mariposa lily (*Calochortus catalinae*) - CNPS CRPR 4.2, SR S3S4
- Lewis' evening-primrose (*Camissoniopsis lewisii*) - CNPS CRPR 3, SR S4
- Payson's wild cabbage (*Caulanthus simulans*) - CNPS CRPR 4.2, SR S4
- knotweed spineflower (*Chorizanthe polygonoides*) - CNPS CRPR 1B.2, SR S3
- seaside calandrinia (*Cistanthe maritima*) - CNPS CRPR 4.2, SR S3
- San Diego tarweed (*Deinandra paniculate*) - CNPS CRPR 4.2, SR S4
- western ponysfoot (*Dichondra occidentalis*) - CNPS CRPR 4.2, SR S3S4
- many stemmed dudleya (*Dudleya multicaulis*) - CNPS CRPR 1B.2, SR S2
- coast wallflower (*Erysimum ammophilum*) - CNPS CRPR 1B.2, SR S2
- Palmer's grapplinghook (*Harpagonella palmeri*) - CNPS CRPR 4.2, SR S3
- graceful tarplant (*Holocarpha virgata* ssp. *elongate*) - CNPS CRPR 4.2, SR S3
- decumbent goldenbush (*Isocoma menziesii* var. *decumbens*) - CNPS CRPR 1B.2, SR S2
- southern California black walnut (*Juglans californica*) - CNPS CRPR 4.2, SR S4

- Robinson's pepper grass (*Lepidium virginicum* var. *robinsonii*) - CNPS CRPR 4.2, SR S3
- California desert thorn (*Lycium californicum*) - CNPS CRPR 4.2, SR S4
- Douglas' silverpuffs (*Microseris douglasii* ssp. *platycarpha*) - CNPS CRPR 4.2, SR S4
- California adder's tongue (*Ophioglossum californicum*) - CNPS CRPR 4.2, SR S4
- golden chaetopappa (*Pentachaeta aurea* ssp. *aurea*) - - CNPS CRPR 4.2, SR S3
- Brand's phacelia (*Phacelia stellaris*) - CNPS CRPR 1B.1, SR S1
- Cooper's rein orchid (*Piperia cooperi*) - CNPS CRPR 4.2, SR S3S4
- white cudweed (*Pseudognaphalium leucocephalum*) - CNPS CRPR 2B.2, SR S2
- Nuttall's scrub oak (*Quercus dumosa*) - CNPS CRPR 1B.1, SR S3
- Engelmann oak (*Quercus engelmannii*) - CNPS CRPR 4.2, SR S3
- Coulter's matilija poppy (*Romneya coulteri*) - CNPS CRPR 4.2, SR S4
- mesa spike-moss (*Selaginella cinerascens*) - CNPS CRPR 4.1, SR S3

Much of the project site has been subject to historic and ongoing disturbance, limiting the potential for special-status plants to occur. However, portions of the project site and study area consist of native vegetation communities that provide suitable habitat for some special-status plant species, including the federally listed as endangered thread-leaved brodiaea. Although this species has been observed at several locations near the study area, the project site does not support suitable habitat for this species.

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 Guidelines 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 the removal of a small number of plants would not jeopardize the overall occurrence of the plant region-wide and/or would not result in a trend towards further listing, impacts to CRPR List 4, if present, would be considered less than significant.

Direct impacts to the remaining special-status plant species, if present during construction/demolition, could include destruction or damage that reduces viability and reproductive success. Direct impacts could also include exposure to fugitive dust, excess erosion and sedimentation, and hazardous materials from spills or equipment leaks. Dust

can have deleterious physiological effects and may affect plant productivity and nutritional qualities (Sharifi et al. 1997). Prolonged exposure may also affect natural plant processes such as photosynthesis, respiration, and transpiration, and allow the penetration of phytotoxic gaseous pollutants (Farmer 1993). As described in **Section 5.3, Air Quality**, construction activities would be required to follow the SPAPCD Rules and Regulations for fugitive dust control. These regulations include such measures as stabilizing ingress and egress points and applying soil binders or stabilizers if applicable. Measures to control and suppress dust include minimizing vehicle speed to 10 miles per hour. As described in **Section 5.10, Hydrology and Water Quality**, grading activities associated with construction would temporarily increase the potential for localized erosion until site stabilization activities are completed. The proposed project would require a SWPPP that would include standard measures and (BMPs to reduce potential impacts resulting from increased erosion and sedimentation (SWRCB 2010). As described in **Section 5.9, Hazards and Hazardous Materials**, standard construction BMPs and a Solid Waste Management Plan would be implemented to minimize the potential for improper handling and disposal of hazardous materials.

Indirect impacts to special-status plants could include the degradation of habitat from long-term alterations to hydrology and the proliferation of invasive and noxious weeds. As discussed in **Section 5.10, Hydrology and Water Quality**, the project would modify existing surface drainage patterns in Haybarn Canyon by drainage improvements with the battery energy storage system, which would be designed to avoid producing excess erosion and sedimentation. Erosion and hazardous materials control measures (including obtaining a permit under the California Construction General Permit and implementing a Storm Water Pollution Prevention Plan) would be used throughout construction/demolition to reduce potential impacts. The SWPPP would include standard erosion control measures and BMPs to reduce potential impacts resulting from erosion (SWRCB 2010).

Any direct or indirect impacts to special-status plant species would be considered significant without mitigation. The implementation of MMs BIO-1 through BIO-3, and BIO-4 (Conduct Surveys for Special-Status Plants and Implement Avoidance Measures), include worker training, delineation of project work limits, work and staging areas, speed limits to control dust, soil bonding agents for dust suppression, weed-free and non-plastic netting, vehicle and equipment cleaning; monitoring and reporting requirements; on-site restoration of temporarily disturbed areas; and conduct a floristic botanical survey and the establishment of avoidance buffers if rare plants are detected, and reporting requirements, would be required. Implementation of these measures would reduce impacts to less than significant.

Wildlife

Appendix D-2 provides a detailed analysis of the special-status wildlife that were considered for the proposed project. The on-line databases review identified 28 special-status wildlife species with the potential to occur within or adjacent to the project site (MCB

Pendleton 2019, CDFW 2023a, eBird 2023, iNaturalist 2023, USFWS 2023a). Several of these species were recorded within or near the survey area. Special-status wildlife was observed during the April 18, 2024, reconnaissance level surveys including least Bell's vireo (vireo) within the riparian scrub habitat southeast of Vandegrift Boulevard and northwest of the Water Treatment Facility. The location is within the general area of the vireo documented in 2019 (USDON 2020). In addition, breeding habitat for least Bell's vireo and arroyo toad is known to occur in the Santa Margarita River adjacent to the project site. Coastal California gnatcatcher occupied habitat and individuals have been documented within and near the study area. Previous projects (e.g., water treatment plant at Haybarn Canyon) and proposed projects have provided biological information for the study area (USDON 2020). Database information review included GIS information from MCB Camp Pendleton. Focused or protocol level surveys of specials-status species were not conducted because this species is known to be present at or near this location. Given the project size and location and the extensive database information a comprehensive understanding of the potential impacts can be obtained without protocol-level surveys.

Invertebrates

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

- Crotch's bumble bee (*Bombus crotchii*) – CESA candidate for Endangered listing, State Rank (SR) S1S2
- Monarch butterfly (*Danaus plexippus plexippus*) – Federal listing candidate, SR S2

Crotch's bumble bee often nests underground in abandoned holes made by a wide range of species, including insects, ground squirrels, mice, and rats. They can also nest in tufts of grass, old bird nests, and manmade structures. Like all bumble bees, Crotch's bumble bee colonies depend on floral resources for their nutritional needs and are generalist foragers, meaning they gather pollen and nectar from a wide variety of flowering plants. Suitable nesting and foraging habitat for Crotch's bumble bee occurs throughout native and non-native upland vegetation at and adjacent to the project site.

The current ranges, distribution, and abundance of Crotch's bumble bee are poorly understood (CDFW 2019; Xerces Society 2018); however, the project site is located within the historic range for this species (CWHR 2023). Crotch's bumble bee has been documented within approximately one mile of Haybarn Canyon (iNaturalist 2024). Therefore, Crotch's bumble bee has a high potential to occur. Direct impacts to this species could occur if present from grading, trenching, excavation, and equipment and vehicle staging if nest sitesare abandoned or destroyed.

Adult monarch butterflies roost in wind-protected tree groves, primarily preferring eucalyptus trees. Although the project site supports a small eucalyptus woodland, it is outside of the known overwintering range for the species. Monarch butterfly larvae require milkweeds (*Asclepias* spp.) as a host plant; however, none were identified in or

adjacent to the study area during April 18, 2024, reconnaissance-level surveys. Additionally, the project site has been subject to historic and ongoing disturbance, including the active military base. Although suitable habitat is limited, there are numerous recent verified records of the species occurring in the general region. As such, there is a moderate potential for monarch butterfly to occur during migration to preferable overwintering sites along the coast.

Direct impacts to special-status invertebrates, if present, could include removal of suitable foraging and nesting habitat, mortality or injury from crushing or trampling, and increased exposure to fugitive dust, erosion and sedimentation, hazardous materials, and noise, and vibration during construction/demolition.

As described in **Section 5.3, Air Quality**, construction activities would be required to follow the SPAPCD Rules and Regulations for fugitive dust control. These regulations include such measures as stabilizing ingress and egress points and applying soil binders or stabilizers if applicable. Measures to control and suppress dust include minimizing vehicle speed to 10 miles per hour. As described in **Section 5.10, Hydrology and Water Quality**, grading activities associated with construction would temporarily increase the potential for localized erosion until site stabilization activities are completed. The proposed project would require a SWPPP that would include standard measures and BMPs to reduce potential impacts resulting from increased erosion and sedimentation (SWRCB 2010). As described in **Section 5.9, Hazards and Hazardous Materials**, standard construction BMPs and a Solid Waste Management Plan would be implemented to minimize the potential for improper handling and disposal of hazardous materials. 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 and vibration generated from construction/demolition activities would be localized and temporary in nature. Regular aircraft activity in the vicinity would continue to dominate the noise environment.

Indirect impacts to special-status invertebrates could include the degradation of habitat from long-term alterations to hydrology and the proliferation of invasive and noxious weeds. As discussed in **Section 5.10, Hydrology and Water Quality**, the project would modify existing surface drainage patterns in Haybarn Canyon by drainage improvements with the battery energy storage system, which would be designed to avoid producing excess erosion and sedimentation. Erosion and hazardous materials control measures (including obtaining a permit under the California Construction General Permit and implementing a Storm Water Pollution Prevention Plan) would be used throughout construction/demolition to reduce potential impacts. The SWPPP would include standard erosion control measures and BMPs to reduce potential impacts resulting from erosion (SWRCB 2010). 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 habitats that support foraging resources for special-status invertebrate species.

Any direct or indirect impacts to sensitive invertebrates would be considered significant without mitigation. The implementation of MMs BIO-1 through 3, and BIO-5 (Conduct Protocol Surveys for Crotch's Bumble Bee and Implement Avoidance Measures), and BIO--6 (Conduct Pre-construction Surveys for Special-Status Wildlife), include worker training, delineation of project work limits, work and staging areas, speed limits to control dust, and soil bonding agents for dust suppression; monitoring and reporting requirements; on-site restoration of temporarily disturbed areas; focused surveys for Crotch's bumble bee prior to any ground-disturbing work activities, the establishment of avoidance buffers around bumble bee nesting sites; and conducting preconstruction survey for special-status wildlife (including monarch butterflies) would be required. In addition, mitigation measures described for special-status species below include compensation mitigation for direct impacts to native vegetation communities. Implementation of these measures would reduce impacts to Crotch's bumble bee and monarch butterfly, if present, to less than significant.

Fish

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

- steelhead trout – (*Oncorhynchus mykiss*) Southern California Distinct Population Segment (DPS) – Federally Endangered, State Candidate for listing as endangered, SR (State Rank) S1

The project site does not support suitable habitat for any common or special- status fish species. The small drainage in the project site is ephemeral and lacks continuous surface flows to the Santa Margarita River. Although the species is found in the Santa Margarita River (INRMP 2023), the main stem of the river is 0.3 miles from the project site. Fish species are not likely to occur in or adjacent to the study area.

Amphibians and Reptiles

The following special-status amphibian and reptiles' species have the potential to occur in the study area:

- southwestern pond turtle (*Actinemys marmorata*) – Federal candidate for listing, CDFW Species of Special Concern (SSC), SR S3
- arroyo toad (*Anaxyrus californicus*) – Federal Endangered (FE), CDFW SSC, SR S2
- southern California legless lizard (*Anniella stebbinsi*) – SSC, SR S3
- California glossy snake (*Arizona elegans occidentalis*) – SSC, SR S2
- orange-throated whiptail, (*Aspidoscelis hyperythra*) – CDFW Watch List (WL), SR S2S3
- coastal whiptail, (*Aspidoscelis tigris stejnegeri*) – SSC, SR S3
- San Diego banded gecko (*Coleonyx variegatus abbotti*) – SSC, SR S1S2

- red-diamond rattlesnake (*Crotalus ruber*) – SSC, SR S3
- San Diego ringneck snake (*Diadophis punctatus similis*) – SR S2?
- coast horned lizard (*Phrynosoma blainvillii*) – SSC, SR S4
- Coronado skink (*Plestiodon skiltonianus interparietalis*) –CDFW WL, SR S2S3
- coast patch-nosed snake (*Salvadora hexalepis virgultea*) – CDFW SSC, SR S3
- two-striped gartersnake (*Thamnophis hammondii*) – CDFW SSC, SR S3
- western spadefoot toad (*Spea hammondii*) – Federal listing candidate, CDFW SSC, SR S3S4
- coast range newt (*Taricha torosa*) – CDFW SSC, SR S4

Although no special status amphibians or reptiles were observed during April 2024, the project site and study area consists of riparian and upland vegetation communities that could support these species during foraging, aestivation, or dispersal. During the field surveys in April 2024, the culverts under Vandegrift Boulevard were approximately half filled with sediment and could be used by small species to cross under Vandegrift Boulevard. Coast horned lizard is known to occur in a variety of habitats throughout the region and several occurrences have been documented on the MCB Camp Pendleton. Similarly, red diamond rattlesnakes could forage throughout the survey area and utilize open areas such as access roads for basking. Riparian habitats associated with Santa Margarita River and smaller drainages provide suitable habitat for species such as two-stripe garter snake.

USFWS proposes to list northwestern pond turtle (*Actinemys marmorata*) and the south-western pond turtle (*Actinemys pallida*), as threatened species under the ESA (USFWS 2023). The western pond turtle is on the Department of Defense at-risk herpetofauna species priority list (DoD 2020). The DoD report provide BMPs intended to provide guidelines and information for regulatory processes such as National Environmental Policy Act (NEPA) and documented in IRMPs to prevent pond turtle's continued decline and preclude its listing under ESA (DoD 2020). Pond turtles are known to occur on MCB Camp Pendleton (INRMP 2018, USDON 2020).

The southwestern pond turtle occurs from central and southern California and Baja California, Mexico. Western pond turtle required aquatic and upland habitats (as summarized USFWS 2023; Thomson et al. 2016) includes various types of aquatic habitats including slow moving rivers, ponds, streams, and other aquatic habitats. Basking sites are required and upland habitat adjacent to the aquatic habitats for nesting, overwintering,aestivation, and dispersal. One study found this species may require a long relatively wide corridor of habitat that may extend at least up to 0.5 km on each side of the water courses (Rathburn, et al. 1992).

The project site lacks the suitable aquatic habitat but contains suitable upland habitat within the typical dispersal distance for this species. Pond turtles are known to occur within the Santa Margarita River; however, this species would be required to either cross over Vandegrift Boulevard or through the drainage culvert to enter the project sites. While possible, there is a low chance for this species to occur in most of the project area. If present, direct impacts could occur to southwestern pond turtle individuals from trampling or crushing during construction/demolition activities.

No western spadefoot toads were observed during field surveys on April 18, 2024. The species is most common in grasslands with vernal pools or mixed grassland/coastal sage scrub areas; however, riparian habitats with suitable water resources may also be used (Holland and Goodman 1998). The species aestivates in upland habitats near potential breeding sites in burrows approximately one meter in depth and adults emerge from underground burrows during relatively warm rainfall events to breed. The riparian scrub and other vegetation could provide suitable habitat; however, no pools were observed during field surveys, which were conducted after a season of heavy rainfall. Therefore, western spadefoot has a low potential to occur within the project site.

No arroyo toad species were observed during daytime surveys April 18, 2024, and no historical observations are recorded within the project site. However, arroyo toads are known to occur on MCB Camp Pendleton, and the Santa Margarita River supports a large breeding population. Although Vandegrift Boulevard is a barrier from the riparian habitat in the Santa Margarita River to the riparian scrub and upland habitat, this species could potentially reach the project site for aestivation. During the field surveys in April 2024, the culverts that allow flow of water from Haybarn Canyon to the river are approximately half filled with sediment and could be used by small species to cross under Vandegrift Boulevard. Generally, this species remains on upper stream terraces; however, they can forage across a broad area and have some potential to occur within the project site where friable soils are present. Direct impacts could occur to arroyo toad individuals, if present, from trampling or crushing during construction/demolition activities, and handling of individuals during relocation, if necessary.

In 2020, MCB Camp Pendleton consulted with USFWS for previously proposed project that included a Natural Gas Energy Generation Facility at Haybarn Canyon (USDON 2020). Several Conservation Measures were proposed include Arroyo Toad Conservation Measures. Many of the conditions for the previous project, including compensatory mitigation for potential impacts to arroyo toad habitat, are included in Mitigation Measure BIO-10 (Conduct Surveys for Arroyo Toad and Implement Avoidance Measures) as described in Section 5.4.5, Mitigation Measures.

Direct impacts to special-status amphibians and reptiles, if present, could include removal of suitable foraging and nesting habitat, mortality or injury from crushing or trampling, and increased exposure to fugitive dust, erosion and sedimentation, hazardous materials, and noise, and vibration during construction/demolition. This species would be particularly at risk at night.

As described in **Section 5.3, Air Quality**, construction activities would be required to follow the SPAPCD Rules and Regulations for fugitive dust control. These regulations include such measures as stabilizing ingress and egress points and applying soil binders or stabilizers if applicable. Measures to control and suppress dust include minimizing vehicle speed to 10 miles per hour. As described in **Section 5.10, Hydrology and Water Quality**, grading activities associated with construction would temporarily increase the potential for localized erosion until site stabilization activities are completed. The proposed project would require a SWPPP that would include standard measures and BMPs to reduce potential impacts resulting from increased erosion and sedimentation (SWRCB 2010). As described in **Section 5.9, Hazards and Hazardous Materials**, standard construction BMPs and a Solid Waste Management Plan would be implemented to minimize the potential for improper handling and disposal of hazardous materials. 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 and vibration generated from construction/ demolition activities would be localized and temporary in nature. Regular aircraft activity in the vicinity would continue to dominate the noise environment.

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 introduction of noxious and invasive weeds.

Any direct or indirect impacts to sensitive amphibians and reptiles would be considered significant without mitigation. The implementation of MMs BIO-1 through 3, BIO-6, BIO--7 (Construction, Operation, and Demolition Nighttime Lighting), BIO-8 (Install and Maintain Wildlife Exclusion Fencing), BIO-9 (Conduct Pre-construction and Biological Monitoring Surveys for Arroyo Toad and Implement Avoidance Measures), and BIO-10 (Provide Evidence of Applicable Jurisdictional Waters) include worker training, delineation of project work limits, work and staging areas, speed limits to control dust, soil bonding agents for dust suppression, secure water sources on project site, litter and trash management, measure to avoid wildlife entrapment, weed-free and non-plastic netting to avoid wildlife entanglement, vehicle and equipment cleaning, no pets, and reporting if injured or dead wildlife is found; restoration of temporarily disturbed areas; conduct preconstruction survey for special-status wildlife; avoid nighttime activities, lighting shall be shielded and directed downward to avoid illuminating adjacent native habitats; installation of silt fence to prevent terrestrial wildlife from entering the work area; focus surveys and monitoring for arroyo toad, if present, biologist authorized by USFWS would move individuals, gather data on individuals prepare reports for USFWS, and compensatory mitigation; and compliance with applicable laws and regulations including obtain an necessary permits for impacts to potential jurisdictional waters, would be required. Implementation of these measures would avoid impacts to special-status amphibian and reptiles and reduce impacts to less than significant.

Birds

The following special-status avian species have the potential to occur in the study area:

- Cooper's hawk (*Accipiter cooperii*) - CDFW Watch List (WL), State Rank (SR) S4
- tricolored blackbird (*Agelaius tricolor*) – State Threatened, CDFW SSC, USFWS Bird of Conservation Concern (BCC), and SR S2
- southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*) – CDFW WL, SR S4
- grasshopper sparrow (*Ammodramus savannarum*) – CDFW SSC, SR S3
- golden eagle (*Aquila chrysaetos*) – CDFW Fully Protected (FP), SR S3
- great egret (*Ardea alba*) – SR S4
- great blue heron (*Ardea herodias*) – SR S4
- Bell's sage sparrow (*Artemisiospiza belli belli* (*=Amphispiza belli belli*)) – CDFW WL SR S3
- short-eared owl, (*Asio flammeus*) – CDFW SSC, USFWS BCC, SR S2
- long-eared owl (*Asio otus*) – CDFW SSC, USFWS BCC, SR S2
- burrowing owl (*Athene cunicularia*) – CDFW SSC, USFWS BCC, SR S2
- oak titmouse (*Baeolophus inornatus*) _ USFWS BCC
- ferruginous hawk (*Buteo regalis*) – CDFW WL, SR S3S4
- Swainson's hawk (*Buteo swainsoni*) – State Threatened, SR S4
- Costa's hummingbird (*Calypte costae*) – USFWS BCC, SR S4
- Coastal cactus wren (*Campylorhynchus brunneicapillus sandiegensis*) – CDFW SSC, USFWS BCC, SR S2
- northern cardinal (*Cardinalis cardinalis*) – CDFW WL, SR S1
- Vaux's swift (*Chaetura vauxi*) – CDFW SSC, SR S3
- wrentit (*Chamaea fasciata*) – USFWS BCC
- northern harrier (*Circus hudsonius*) – CDFW SSC, USFWS BCC, SR S3
- western yellow-billed cuckoo (*Coccyzus americanus occidentalis*) – FT, SE, SR S1
- black swift (*Cypseloides niger*) – CDFW SSC, USFWS BCC, SR S3
- snowy egret (*Egretta thula*) – SR S4
- white-tailed kite (*Elanus leucurus*) – CDFW FP, USFWS BCC, SR S3S4

- southwestern willow flycatcher (*Empidonax trailli extimus*) – FE, SE, SR S3
- California horned lark (*Eremophila alpestris actia*) – CDFW WL, SR S4
- merlin (*Falco columbarius*) – CDFW WL, SR S3S4
- American peregrine falcon (*Falco peregrinus anatum*) – Federally and State-delisted, SR S3S4
- yellow-breasted chat (*Icteria virens*) – CDFW SCC, SR S4
- Bullock's oriole (*Icterus bullockii*) – USFWS BCC
- loggerhead shrike (*Lanius ludovicianus*) – CDFW SSC, SR S4
- California gull (*Larus californicus*) – CDFW Watch List, USFWS BCC, SR S4
- Lucy's warbler (*Leiothlypis luciae*) – CDFW SSC, SR S3
- black-crowned night heron (*Nycticorax nycticorax*) – SR S4
- Nuttall's woodpecker (*Picoides nuttallii*) – USFWS BBC
- coastal California gnatcatcher (*Polioptila californica californica*) – FT, CDFW SSC, SR S2
- Oregon vesper sparrow (*Pooecetes gramineus affinis*) – CDFW SSC, SR S3
- vermilion flycatcher (*Pyrocephalus rubinus*) – CDFW SSC, SR S2S3
- bank swallow (*Riparia riparia*) – ST SR S3
- rufous hummingbird (*Selasphorus rufus*) – USFWS BCC, SR S1S2
- yellow warbler (*Setophaga petachia*) – CDFW SSC, SR S3
- red-breasted sapsucker (*Sphyrapicus ruber*) – SR S4
- Lawrence's goldfinch (*Spinus lawrencei*) – USFWS BCC, SR S4
- black-chinned sparrow (*Spizella astrogularis*) – USWS BCC
- Brewer's sparrow (*Spizella breweri*) – SR S4
- California spotted owl (*Strix occidentalis occidentalis*) – CDFW SSC, USFWS BCC, SR S2
- California thrasher (*Toxostoma redivivum*) – USFWS BCC
- least Bell's vireo (*Vireo bellii pusillus*) – FE, SE, SR S3

Least Bell's vireo and wrentit were observed in the project site during the surveys (April 2024). Nesting bird surveys were not conducted; however, species such as song sparrow, house wren, spotted towhee, California towhee, house finch, Anna's hummingbird,

bushtit, California quail, and turkey vulture were observed. Some birds are expected to nest within the native habitat and existing structures in and around the study area.

Wrentit is known to occur in coastal and riparian scrub and several occurrences have been documented on MCB Camp Pendleton. Although other special-status species were not observed, the project site and study area consist of riparian and upland vegetation communities that could support foraging, dispersal, and nesting habitat for avian species. For example, the south facing slope within the project site lacks tall or batches of Opuntia preferred nesting habitat of the coastal cactus wren; however, numerous records of this species are documented within several miles of the project site.

Coastal California gnatcatcher (gnatcatcher) are known to occur within the project site and study area. A sloped area within the project site has been mapped as gnatcatcher habitat with observations of the species within the project site (USDON 2020). Several observations of this species occur within and adjacent to the project study area (USDON 2018, 2020). Gnatcatchers breed in coastal sage scrub, although may occur in riparian or chaparral habitats adjacent to coastal sage scrub during non-breeding season (Atwood 1988). The species is a non-migratory bird where the fledglings disperse in the late summer and fall (Mock, 2004). Both permanent and temporary impacts to coastal scrub vegetation are anticipated, including 5.32 acres of permanent and 1.18 acres of temporary impacts at Haybarn Canyon and 0.99 temporary impacts at the offsite staging/laydown area.

In 2020, MCB Camp Pendleton consulted with United States Fish and Wildlife Service (USFWS) for a previously proposed project that included a Natural Gas Energy Generation Facility at Haybarn Canyon (USDON 2020). Several Conservation Measures were proposed. Many of the conditions for the previous project are included in Mitigation Measure BIO-12 (Conduct Pre-construction and Biological Monitoring Surveys for Coastal California Gnatcatcher and Implement Avoidance Measures) as described in Section 5.4.5, Mitigation Measures.

Least Bell's vireo (vireo) were observed during field reconnaissance surveys on April 18, 2024. Historically, vireos have been documented within the project site in several years including in 2000, 1996-1998 (USDON 2020; MCB Camp Pendleton GIS 2019). The observations have been documented in the riparian habitat northwest of the Water Treatment Plant. Numerous occurrences over many years are documented north of the project site within the Santa Margarita River (CDFW 2023a; MCB Camp Pendleton GIS 2019). During the breeding season, least Bell's vireo is a low-elevation riparian obligate that inhabits dense, willow-dominated habitats with lush understory vegetation and in the immediate vicinity of water. Most areas that support viable populations are in early stages of succession where most woody vegetation is between five and ten years old (Gray and Greaves 1984). Within MCB Camp Pendleton, least Bell's vireo were found in a number of different habitats with the majority of vireo territories in mixed willow riparian habitat and some found in drier habitats characterized by a mix of sycamore and oaks or upland scrub (Lynn et al. 2016). Both permanent and temporary impacts are expected to occur

to the riparian habitats in Haybarn Canyon, including approximately 1.8 acres of permanent and 1.4 acres of temporary impacts to riparian communities. The areas temporarily impacted would be restored on site. Permanent impacts to these and other habitats would be mitigated per resource agency permits (both USFWS and CDFW) and are anticipated to be mitigated off site but within MCB Camp Pendleton.

In 2020, MCB Camp Pendleton determined that the project is a Class III activity per the Riparian Biological Opinion 1995 *Biological Opinion for Programmatic Activities and Conservation Plans in Riparian and Estuarine/Beach Ecosystems on Marine Corps Base, Camp Pendleton*. Many of the conditions for the previous project at the project site are included in Mitigation Measure BIO-13 (Conduct Pre-construction and Biological Monitoring Surveys for Least Bell's Vireo and Implement Avoidance Measures) as described in Section 5.4.5, Mitigation Measures (MMs).

Direct impacts would occur if nests or eggs of any bird protected under the Migratory Bird Treaty Act (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.

As described in **Section 5.3, Air Quality**, construction activities would be required to follow the SPAPCD Rules and Regulations for fugitive dust control. These regulations include such measures as stabilizing ingress and egress points and applying soil binders or stabilizers if applicable. Measures to control and suppress dust include minimizing vehicle speed to 10 miles per hour. As described in **Section 5.10, Hydrology and Water Quality**, grading activities associated with construction would temporarily increase the potential for localized erosion until site stabilization activities are completed. The proposed project would require a SWPPP that would include standard measures and BMPs to reduce potential impacts resulting from increased erosion and sedimentation (SWRCB 2010). As described in **Section 5.9, Hazards and Hazardous Materials**, standard construction BMPs and a Solid Waste Management Plan would be implemented to minimize the potential for improper handling and disposal of hazardous materials. 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 and vibration generated from construction/demolition activities would be localized and temporary in nature. Regular aircraft activity in the vicinity would continue to dominate the noise environment.

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 introduction of noxious and invasive weeds.

Any direct or indirect impacts to sensitive avian species would be considered significant without mitigation. The implementation of MMs BIO-1 through 3, and BIO-6, BIO-7, BIO--10 (Conduct Preconstruction Surveys for Nesting Birds and Raptors and Implement

Avoidance Measures), BIO-11 (Conduct Pre-construction and Biological Monitoring Surveys for Coastal California Gnatcatcher and Implementation Avoidance Measures), BIO--12, (Conduct Pre-construction and Biological Monitoring Surveys for Least Bell's Vireo and Implementation Avoidance Measures), BIO-13 (Noise Minimization Plan), and BIO--14 (Provide Evidence of Applicable Jurisdictional Waters) include worker training, delineation of project work limits, work and staging areas, speed limits, soil bonding agents for dust suppression, litter and trash management, measure to avoid wildlife entrapment, weed-free and non-plastic netting to avoid wildlife entanglement, vehicle and equipment cleaning, and reporting if injured or dead wildlife is found; on-site restoration of temporarily disturbed areas; conduct preconstruction survey for special-status wildlife; avoid nighttime activities, lighting shall be shielded and directed downward; nesting bird season shall be avoided, if work is conducted during nesting bird season, surveys shall be conducted for nesting birds, buffers shall be established as needed; focus surveys for gnatcatchers, buffers, reporting requirements, and compensatory mitigation for loss of coastal sage scrub habitat; focused surveys for vireo, buffers, reporting requirements, and compensatory mitigation for loss of riparian habitats; noise monitoring plan requirements; and compliance with applicable laws and regulations including obtaining necessary permits for impacts to potential jurisdictional waters, would be required. Implementation of these measures would avoid impacts to special-status avian species and reduce impacts to less than significant.

Mammals

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

- pallid bat (*Antrozous pallidus*) – CDFW SSC, SR S3
- ringtail (*Bassariscus astutus*) – State Fully Protected
- Dulzura pocket mouse (*Chaetodipus californicus femoralis*) – SR S3S4
- northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*) – SR S3S4
- Townsend's big-eared bat (*Corynorhinus townsendii*) - CDFW SSC, SR S2
- western mastiff bat (*Eumops perotis californicus*) – CDFW SSC, SR S3S4
- western red bat (*Lasiurus frantzii* (*= Lasiurus blossevillii*)) – CDFW SSC, SR S3
- San Diego black-tailed jackrabbit (*Lepus californicus bennettii*) – SR S3S4
- yuma myotis (*Myotis yumanensis*) – SR S4
- San Diego desert woodrat (*Neotoma lepida intermedia*) – CDFW SSC, SR S3S4
- pocketed free-tailed bat (*Nyctinomops femorosaccus*) – CDFW SSC, SR S3
- southern grasshopper mouse (*Onychomys torridus ramona*) –CDFW SSC, SR S3

- Mountain lion (*Puma concolor*) – CDFW Evolutionarily Significant Unit (ESU) - candidate
- American badger (*Taxidea taxus*) – CDFW SSC, SR S3

Although no special status mammal species were observed during the April 2024 surveys, the project site and study area consists of riparian and upland vegetation communities that could support these species during various life stages or activities, such as foraging, breeding, or dispersal. During the surveys, common species including mule deer and coyote were observed. Riparian habitats associated with Santa Margarita River provide suitable habitat for several species including foraging and roosting habitat for bats. Mountain lions are documented in general vicinity and ringtail, American badger, northwestern San Diego pocket mouse, and Dulzura pocket mouse are known to occur on MCB Camp Pendleton. Although no records of ringtail occur within the study area, suitable riparian habitat is present. Similarly, no records of American badger occur; however, they could use the coastal scrub habitat within the study area. These species if present, are likely to use the open space areas surrounding the study area for foraging or movement. Suitable coastal sage scrub habitat for northwestern San Diego pocket mouse and Dulzura pocket mouse is present within the study area.

Several species of bats may forage within the project site and study area, including along the Santa Margarita River. Suitable roosting sites for some bats may include the eucalyptus woodland area because these large trees include exfoliating bark and appear to have cervices that could be used by bats. If present, bats could use the project site for roosting, but are more likely to use the project site and surrounding vegetation communities for foraging.

Mountain lions are known to occur on MCB Camp Pendleton, including numerous occurrences along the Santa Margarita River within a few miles of the project site. Mountain lions exist at naturally low population densities, but they are very territorial and require large swaths of intact wilderness. In southern California, mountain lions have been found to utilize different habitats within a 24-hour period (Dickson and Beier 2002, Dickson et al. 2005). Mountain lions are mostly active during dusk and dawn, but their peak activity will shift to nocturnal patterns when closer to human developments. During daylight hours, mountain lions were frequently found in riparian habitats, suggesting that they prefer to rest in areas with dense understory vegetation for cover (Dickson and Beier 2002, Dickson et al. 2005). Mountain lion movement patterns tend to follow the distribution and abundance of deer, a common food source of southern California/Central Coast ESU populations (Grigione et al. 2002). While hunting, mountain lions prefer to stalk and pursue their prey along canyon bottoms and gentle slopes (Dickson and Beier 2006). Mountain lions will feed on steeper slopes in habitats with dense understory vegetation for cover (Benson et al. 2016). Although they will travel through open or human-disturbed habitat, they prefer expansive, intact, heterogeneous habitat (Dickson and Beier 2002, Dickson et al. 2005). Mountain lions, and their prey (deer), would be expected to avoid the developed areas and use the open areas surrounding the project site for

foraging. Direct impacts to individual mountain lions are not likely to occur because individuals are likely to avoid the project site.

As described in **Section 5.3, Air Quality**, construction activities would be required to follow the SPAPCD Rules and Regulations for fugitive dust control. These regulations include such measures as stabilizing ingress and egress points and applying soil binders or stabilizers if applicable. Measures to control and suppress dust include minimizing vehicle speed to 10 miles per hour. As described in **Section 5.10, Hydrology and Water Quality**, grading activities associated with construction would temporarily increase the potential for localized erosion until site stabilization activities are completed. The proposed project would require a SWPPP that would include standard measures and BMPs to reduce potential impacts resulting from increased erosion and sedimentation (SWRCB 2010). As described in **Section 5.9, Hazards and Hazardous Materials**, standard construction BMPs and a Solid Waste Management Plan would be implemented to minimize the potential for improper handling and disposal of hazardous materials. 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 and vibration generated from construction/ demolition activities would be localized and temporary in nature. Regular aircraft activity in the vicinity would continue to dominate the noise environment.

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 introduction of noxious and invasive weeds.

Any direct or indirect impacts to sensitive mammals be considered significant without mitigation. The implementation of MMs BIO-1 through 3, and BIO-6 through BIO-8, BIO--10 and BIO-15 (Preconstruction Bat Survey and Implement Avoidance Measures) include worker training, delineation of project work limits, work and staging areas, speed limits to control dust, soil bonding agents for dust suppression, secure water sources on project site, litter and trash management, measure to avoid wildlife entrapment, weed-free and non-plastic netting to avoid wildlife entanglement, vehicle and equipment cleaning, no pets, and reporting if injured or dead wildlife is found; monitoring and reporting requirements; on-site restoration of temporarily disturbed areas; conduct preconstruction survey for special-status wildlife; avoid nighttime activities, lighting shall be shielded and directed downward; compliance with applicable laws and regulations for impacts to potential jurisdictional waters, and surveys for bats, if present, a Bat Mitigation and Monitoring Plan shall be prepared detailing the species found, location, removal procedures (if needed), compensatory mitigation for permanent impacts, and monitoring to asses bat use of mitigation areas, would be required. Implementation of these measures would reduce impacts to these species to less than significant.

Operation

Less than Significant with Mitigation Incorporated. 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 and would visit the site quarterly to perform routine maintenance. Vegetation is anticipated to be trimmed and controlled with herbicides around power poles and other structures.

Direct impacts to special-status species, if present during operations, could include exposure to increased levels of human presence, hazardous material, stormwater runoff and pollutants to surface waters, and herbicides, noise, and nighttime lighting.

As described in **Section 5.9, Hazards Hazardous Materials**, operation of the battery storage systems would be operated and managed in accordance with applicable regulations, including Resource Conservation and Recovery Act (RCRA) and the California Hazardous Waste Control Law, and an operational SWPPP and BMPs would further minimize potential hazards. As described in **Section 5.10, Hydrology and Water Quality**, the operation would be in accordance with the applicable MCB Camp Pendleton stormwater criteria for Low Impact Development (LID) and the MCB Camp Pendleton Stormwater Management Plan (MCBCP 2019). Maintenance activities, including potential use of herbicides for vegetation control, would be conducted in accordance with applicable regulations and MCB Camp Pendleton's Integrated Pest Management Plan to prevent runoff into nearby watercourses (NAVFAC SW 2017). Direct impacts to special status species, if present during operation, could also include exposure to increase level of noise. As described in **Section 5.13, Noise**, the battery energy storage system and upgraded electrical equipment at the adjacent substation are not anticipated to generate significant noise levels beyond those of the existing substation. The proposed battery energy storage system would generate noise in the range of 50 to 65 dBA leq. Ecological significant levels could be considered at 60 dBA leq (USDON 2015); however, species within the project site are likely to be more habituated to noise. Although noise contour modeling was not completed for the project, the surrounding habitat is likely to be less than 65 dbA leq. Additionally, regular aircraft activity in the vicinity would continue to dominate the noise environment. Therefore, direct impacts from noise would be considered less than significant.

Minimal lighting would be used for operations and would be limited to the safety and security functions. The Biological Opinion issued in 2020, lighting that produces a green-colored beam with automatic dusk to dawn sensor would be incorporated. All lighting would be directed downward and shielded to focus illumination on the desired areas only and avoid the surrounding areas with native vegetation. 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. The implementation of MM BIO-7, avoidance of nighttime activity and lighting restrictions, would reduce the impacts to less than significant.

Indirect impacts could include the degradation of adjacent habitats from long-term alterations to hydrology, use of herbicides for vegetation management, and the introduction and spread of invasive and noxious weeds. As described in **Section 5.10, Hydrology and Water Quality**, the proposed project would result in the increase in impervious

surfaces, which could contribute additional stormwater runoff and pollutants to surface waters. However, the additional stormwater generated would be collected on site in compliance with LID requirements (DoD 2015, DoD 2023). Maintenance activities are anticipated to include vegetation clearance buffers around the battery storage facility including utility poles, which are likely to require the use of use of herbicides for vegetation control, would be conducted in accordance with applicable regulations and MCB Camp Pendleton's Integrated Pest Management Plan to prevent runoff into nearby watercourses (NAVFAC SW 2017). Operational activities would be limited to existing access roads and facilities and would therefore minimize the risk of introducing noxious and invasive weeds. Therefore, because of the MCB Camp Pendleton requirements, 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

Less than Significant with Mitigation Incorporated. The project would permanently remove approximately 5.32 acres of coastal scrub and temporarily impact approximately 2.17 acres of this community. Grading impacts to riparian habitats (e.g., riparian scrub, mule fat scrub, southern willow scrub and southern willow scrub) would be approximately 1.83 acres (permanent) and 1.35 acres (temporary). To minimize impacts to riparian habitats within Haybarn Canyon, the laydown (or temporary staging area) would be in a disturbed area currently used as a parking lot approximately one mile eastward near the Vandegrift Boulevard and Santa Margarita Road intersection. During the demolition temporary impacts to riparian scrub could occur within the project site.

Vandegrift Boulevard is a heavily used road that is a barrier between the smaller riparian habitat within the project site to the large riparian corridor of the Santa Margarita River. Because the project site is located on MCB Camp Pendleton, the project would be consistent with the Final Joint Integrated Natural Resource Management Plan (INRMP) for Marine Corps Base and Marine Corps Air Station Camp Pendleton, CA Revision 2018. The riparian and other habitats within the project site are not a part of any other local or regional plan.

Direct impacts to riparian habitats and/or other sensitive vegetation community could also include exposure to fugitive dust, erosion and sedimentation, and hazardous materials spills during construction/demolition.

As described in **Section 5.3, Air Quality**, construction activities would be required to follow the SPAPCD Rules and Regulations for fugitive dust control. These regulations include such measures as stabilizing ingress and egress points and applying soil binders or stabilizers if applicable. Measures to control and suppress dust include minimizing vehicle speed to 10 miles per hour. As described in **Section 5.10, Hydrology and**

Water Quality, grading activities associated with construction would temporarily increase the potential for localized erosion until site stabilization activities are completed. The proposed project would require a SWPPP that would include standard measures and BMPs to reduce potential impacts resulting from increased erosion and sedimentation (SWRCB 2010). As described in **Section 5.9, Hazards and Hazardous Materials**, standard construction BMPs and a Solid Waste Management Plan would be implemented to minimize the potential for improper handling and disposal of hazardous materials. 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.

With the implementation of incorporated air quality, hydrology, and water quality measures and applicable permit conditions to control erosion and sedimentation, and the implementation MMs BIO-1 through 4, BIO-9, BIO-10, and BIO-13 include worker training, delineation of project work limits, work and staging areas, speed limits to control dust, soil bonding agents for dust suppression, litter and trash management, weed-free and non-plastic netting, and vehicle and equipment cleaning; restoration of temporarily disturbed areas; surveys for special-status plants; compensatory mitigation for arroyo toad habitat; compliance with applicable laws and regulations including obtain an necessary permits for impacts to potential jurisdictional waters; and compensatory mitigation for least Bell's vireo, impacts would be reduced to less than significant.

Indirect impacts to riparian habitat and other sensitive habitats could include alterations to long-term hydrology and degradation of habitat form the introduction and proliferation of noxious and invasive weeds. As discussed in **Section 5.10, Hydrology and Water Quality**, the project would modify drainage patterns and would result in the increase in impervious surfaces, which could contribute additional stormwater runoff and pollutants to surface waters. However, the additional stormwater generated would be collected on site in compliance with LID requirements (DoD 2015, DoD 2023). Although the project site includes developed and disturbed areas that are subject to historic and ongoing disturbance from activities associated the Substation, switching station and other activities, including staging of equipment and vehicles, indirect impacts would occur if new sources of weeds (i.e., seeds or plant parts) are introduced to the project site. If allowed to proliferate, new weed sources could reduce the quality of habitat in adjacent woodland and riparian habitats.

Any direct or indirect impacts to riparian and other sensitive communities would be considered significant without mitigation. The implementation of MMs BIO-1 through 3, BIO-9, BIO-10, and BIO-13 include worker training, delineation of project work limits, work and staging areas, speed limits to control dust, soil bonding agents for dust suppression, litter and trash management, and vehicle and equipment cleaning; restoration of temporarily disturbed areas; on-site restoration of temporarily disturbed areas; compensatory mitigation for arroyo toad habitat; compliance with applicable laws and regulations including obtain an necessary permits for impacts to potential jurisdictional waters; and compensatory mitigation for least Bell's vireo habitat, would reduce impacts to less than significant.

Operation

Less than Significant with Mitigation Incorporated. Operation of the HERC facility would be adjacent to the riparian areas south-west of Vandegrift Boulevard, and north of the Water Treatment Plant; and coastal scrub surrounds a large portion of the project site. Currently, Vandegrift Boulevard, the access road, water treatment plant and other facilities surround most of the riparian habitat. Operation of the battery storage facilities would not include any ground-disturbing activities; however, if water quality basins are constructed, it is anticipated that the basins would require monitoring and maintenance, which may include removal of vegetation and sediment.

Direct impacts to the riparian and coastal scrub habitats near Haybarn Canyon Road would occur from the removal of vegetation, including trimming of vegetation and use of herbicide within the project site. Vegetation is likely to be removed around the HERC structures and utility poles for maintenance and safety concerns. Additional impacts that could occur from exposure to fugitive dust, and erosion and sedimentation. As described in **Section 5.9, Hazards Hazardous Materials**, operation of the battery storage systems would be operated and managed in accordance with applicable regulations, including RCRA and the California Hazardous Waste Control Law, and an operational SWPPP and BMPs would further minimize potential hazards. As described in **Section 5.10, Hydrology and Water Quality**, the operation of the HERC would be in accordance with the applicable MCB Camp Pendleton stormwater criteria for LID and the MCB Camp Pendleton Stormwater Management Plan (MCBCP, 2019). The increase in impervious surfaces, which could contribute additional stormwater runoff and pollutants to surface waters would be collected on site in compliance with LID requirements (DoD 2015, DoD 2023). Maintenance activities, including potential use of herbicides for vegetation control, would be conducted in accordance with applicable regulations and MCB Camp Pendleton's Integrated Pest Management Plan to prevent runoff into nearby watercourses (NAVFAC SW 2017). As such, impacts would be considered less than significant.

Indirect impact could include the degradation of adjacent habitats from long-term alterations to hydrology and introduction and spread of invasive and noxious weeds. As described in **Section 5.10, Hydrology and Water Quality**, operation would result in an increase in impervious surfaces, which could contribute additional stormwater runoff and pollutants to surface waters. However, operation would be in accordance with the applicable MCB Camp Pendleton stormwater criteria for LID and the MCB Camp Pendleton Stormwater Management Plan (MCBCP 2019). Maintenance activities would include the removal of vegetation around some structures including utility poles, which may include potential use of herbicides for vegetation control, would be conducted in accordance with applicable regulations and MCB Camp Pendleton's Integrated Pest Management Plan to prevent runoff into nearby watercourses (NAVFAC SW 2017). Compliance with these measures 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. On April 18, 2024, a preliminary assessment of the areas that could potentially meet the requirements of Sections 401 and 404 of the Clean Water Act and per Section 1600 *et seq*. of the California Fish and Game Code were identified within and immediately adjacent to the project site during the preliminary assessment and recognizance field review. However, these areas are not anticipated to be Waters of the U.S. based on Sacket v. EPA, final rule tributaries of water "are relatively permanent, standing or continuously flowing bodies of water". The riparian area and channels within the project site lack do not meet this standard. The previously proposed project, Natural Gas Energy Generation Facility, (USDON 2020) determined there were no jurisdictional wetlands or other waters of the U.S. within the proposed project area. Although the footprint of the current battery energy storge facility is greater than the previously proposed project; Waters of the US are not anticipated. State Wetland Definition and Procedures for the Discharge of Dredged or Fill Material to Waters of the State (Dredge or Fill Procedures) was adopted by the California Water Board in 2019 (as describe in SWRCB 2023), which includes a definition of state wetlands. Although project may not be within the jurisdiction of the Clean Water Act, the applicant may need to comply with waste discharge requirements from the San Diego Regional Water Board pursuant to Porter-Cologne. Under Porter-Cologne, "waters of the state" are broadly defined to include "any surface water or groundwater, including saline waters, within the boundaries of the state." (Wat. Code, § 13050(e) (SWRCB 2023).

A formal preliminary assessment will be required prior to any project activities that could potentially impact features within or immediately adjacent to the project site that meet the requirements of various resource agency jurisdiction. If the formal preliminary assessment determines that any features that could be potentially impacted by 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 may be required.

Currently, there is a small channel that conveys flow through vegetated areas to the Santa Margarita River via a series of culverts and under crossings. The vegetated channels have hydrological connection to the Santa Margarita River.

The project is anticipated to result in approximately 0.03 acres of permanent impacts and 0.01 acres of temporary impacts to vegetated channels supporting riparian habitats. Portions of the drainages would be subject to direct impacts from grading, trenching, road expansion, and development of the site for the HERC. Disruption of these existing stormwater conveyance features could result in direct impacts and contributing to the

degradation of water quality in the study area. Although the roadside ditch along Vandegrift Boulevard is not anticipated to be graded, and the Santa Marguerita River is outside the project site, these features could be subject to direct impacts if sediment or hazardous materials are transported off site during construction/demolition. No direct impacts to drainages are anticipated at the offsite staging/laydown area.

Indirect impacts to vegetation communities and habitat could occur include alterations to long-term hydrology and degradation of habitat from the introduction and proliferation of noxious and invasive weeds. As discussed in **Section 5.10, Hydrology and Water Quality**, the project would modify existing surface drainage patterns in Haybarn Canyon by drainage improvements with the battery energy storage system, which would be designed to avoid producing excess erosion and sedimentation. Erosion and hazardous materials control measures (including obtaining a permit under the California Construction General Permit and implementing a SWPPP) would be used throughout construction/ demolition to reduce potential impacts. The SWPPP would include standard erosion control measures and BMPs to reduce potential impacts resulting from erosion (SWRCB 2010).

Any direct or indirect impacts to protected wetlands would be considered significant without mitigation. The implementation of MMs BIO-1 through 4, BIO-9, BIO-10, and BIO-13 include worker training, delineation of project work limits, work and staging areas, speed limits to control dust, soil bonding agents for dust suppression, litter and trash management, weed-free and non-plastic netting, and vehicle and equipment cleaning; clear delineation of disturbance limits; restoration of temporarily disturbed areas; surveys for special-status plants; compensatory mitigation for arroyo toad habitat; compliance with applicable laws and regulations including obtain any necessary permits for impacts to potential jurisdictional waters; and compensatory mitigation for least Bell's vireo habitat. The implementation of SWPPP, BMPs, and Mitigation Measures would reduce impacts to less than significant.

Operation

Less Than Significant with Mitigation Incorporated. Operations would not include ground-disturbing activities, except activities related to maintenance of potential water quality basins, if constructed. If water quality basins are constructed, the basins would likely require maintenance (e.g., vegetation and sediment removal). Direct impacts to wetland features would not be anticipated because if the water quality basins are constructed, these structures would likely lack features as defined as a State or Federal wetland.

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, noise and lighting. As described in **Section 5.10, Hydrology and Water Quality**, the project would result in the increase in impervious surfaces, which could contribute additional stormwater runoff and pollutants to surface waters. However, the operation would be in accordance with the applicable MCB Camp Pendleton stormwater criteria for LID and the MCB Camp Pendleton Stormwater Management Plan (MCBCP 2019). On-site

stormwater collection per LID requirements would minimize increases in surface runoff rates and amounts (DoD 2015, DoD 2023). Operational activities would be limited to access roads and facilities, which would prevent introducing noxious and invasive weeds. Because the HERC would operate in compliance with MBC Camp Pendleton LID and Stormwater Management Plan, the indirect impacts during operation would be reduced to 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 and Demolition

Less than Significant with Mitigation Incorporated. 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 proposed study area is not located within any Essential Habitat Connectivity Areas or Natural Landscape Blocks as identified in the California Essential Habitat Connectivity Project (Caltrans and CDFW 2010, NAS 2023). The California Essential Habitat Connectivity includes areas designated as Natural Landscape Blocks and Natural Small Areas that on north side of the Santa Margarita River, which are adjacent to and immediate north of the airfield. The Natural Landscape Blocks areas are divided from the study area by Vandegrift Boulevard and the Santa Margarita River. Additionally, the Santa Margarita River is identified in the Missing Linkages in California's Landscape with a portion of the corridor within MCB Camp Pendleton (BIOS [ds420] 2024).

At Haybarn Canyon, the area is designated as by CDFW as Area of Conservation Emphasis (ACE) Connectivity Rank of 3 (Connections with Implementation Flexibility) (BIOS ACE [ds2734] 2024) as part of the Terrestrial Connectivity dataset. The offsite staging/laydown area is at the edge of a polygon ACE Rank 4 (Conservation Planning Linkages) and adjacent to polygon ACE Rank 3. The native habitat to the south of the study area is ACE Rank 3. These contiguous blocks of habitat located to the south are likely used by common and special-status species.

If present, wildlife movement and/or dispersal through the project site could occur between (1) Haybarn Canyon and Santa Margarita River (crossing Vandegrift Boulevard), in a north-west and south-east direction, and (2) the open space adjacent to the project site north-east and south-west (southward of Vandegrift Boulevard). Currently, Vandegrift Boulevard is a partial barrier to wildlife movement because wildlife moving between the project site and Santa Margarita River must traverse over or under (via small metal drainage culverts).

Direct impacts to wildlife movement from construction/demolition in the project site could occur from noise, vibration, nighttime lighting, and increase human disturbance. Within the project site at Haybarn Canyon, existing facilities roads, and infrastructure (i.e.,

SDG&E Pendleton Substation and MS1 Metering Station) currently limit movement for some species. The parking lot is paved (old asphalt) and currently used to park vehicles. The project site is subject to human disturbance associated with the facilities and disturbed areas. As described in **Section 5.13, Noise**, the construction/demolition noise is anticipated to exceed the current noise levels, which could have an adverse effect on species, if present. Impacts from noise and construction-related ground vibration would be short-term and confined to the immediate work area. However, vibration and noise could cause species to avoid the project site. If species are present, nighttime lighting could have an adverse effect on species by increase predation or causing species to avoid areas. The increase in human disturbance could increase trash and other activity that could have an adverse impact on species movement.

Any direct or indirect impacts would be considered significant without mitigation. The implementation of MMs BIO-1 through 3, BIO-6 through BIO-8, BIO-10, BIO-11, and BIO-14 would include worker training, delineation of project work limits, work and staging areas, speed limits, soil bonding agents for dust suppression, secure water sources on project site, litter and trash management, measure to avoid wildlife entrapment, weed-free and non-plastic netting, vehicle and equipment cleaning, no pets, and reporting if injured or dead wildlife is found; on-site restoration of temporarily disturbed areas; surveys for special-status wildlife; avoid nighttime activities, lighting shall be shielded and directed downward; wildlife exclusion fence; compensatory requirements; compliance with applicable laws and regulations for impacts to potential jurisdictional waters; surveys and avoidance measures for nesting birds; and Noise Minimization Plan, would reduce impacts to less than significant.

Operation

Less Than Significant with Mitigation Incorporated. Operation of the battery storage facility could reduce wildlife movement and/or dispersal within the project site; however, connectivity of habitats in the adjacent areas would continue to allow movement and dispersal for species.

Direct impacts to any wildlife species movement, if present during operation, could include exposure to a 6-foot-high chain-link fence, increased night lighting, increased level of noise, and human presence. The HERC facility would be remotely monitored, and maintenance activity is anticipated to be conducted during the daytime; however, because of the existing facilities, the increase in human disturbance would be minimal. The chain-link fence surrounding the HERC would become a barrier to wildlife species. However, larger animals such as deer would move around the fence. Because the relatively small area compared to the larger open space, any change in movement is not likely to require larger animals to expend energy. Smaller species would be able to move through the fence but may choose to move around the fence to avoid the battery storage facility. The HERC would require an increase in lighting for safety purposes. The lighting would be directed downward to avoid illuminating the adjacent habitats. Light reduction technology such as light that produces a green-colored beam with automatic sensors

would be implemented. Direct impacts to special status species, if present during operation, could also include exposure to increased levels of noise. As described in **Section 5.13, Noise**, the battery energy storage system and upgraded electrical equipment at the adjacent substation are not anticipated to generate significant noise levels beyond those of the existing substation. The proposed battery energy storage system would generate noise levels in the range of 50 to 65 dBA leq. Ecological significant levels could be considered at 60 dBA leq (USDON 2015); however, species within the project site are likely to be more habituated to noise. Although noise contour modeling was not completed for the project, the surrounding habitat is likely to be less than 65 dbA leq. Additionally, regular aircraft activity in the vicinity would continue to dominate the noise environment. Therefore, direct impacts from the chain-link fence surrounding the HERC, noise or human presence would be considered less than significant. With the implementation of MM BIO-7, the direct impacts from lighting would be reduced to less than significant.

Indirect impacts to wildlife movement could include the degradation of adjacent habitats from long-term alterations to hydrology and the introduction and spread of invasive and noxious weeds. If small species are currently using the culverts under Vandegrift Boulevard, sediment filling the culverts would impede wildlife movement through the culverts that may cause species to attempt to cross over Vandegrift Boulevard. As described in **Section 5.10, Hydrology and Water Quality**, the project would result in the increase in impervious surfaces, which could contribute additional stormwater runoff and pollutants to surface waters. However, the operation of the HERC would be in accordance with the applicable MCB Camp Pendleton stormwater criteria for LID and the MCB Camp Pendleton Stormwater Management Plan (MCBCP 2019). The increase in impervious surfaces, which could contribute additional stormwater runoff and pollutants to surface waters would be collected on-site in compliance with LID requirements (DoD 2015, DoD 2023). On-site stormwater collection per LID requirements would minimize increases in surface runoff rates and amounts (DoD 2015, DoD 2023). Operational activities would be limited to existing access roads and facilities and would therefore minimize the risk of introducing noxious and invasive weeds. However, vegetation control around poles and other facilities is anticipated. Maintenance activities, including potential use of herbicides for vegetation control, would be conducted in accordance with applicable regulations and MCB Camp Pendleton's Integrated Pest Management Plan to prevent runoff into nearby watercourses (NAVFAC SW 2017). Because the HERC would operate in compliance with MBC Camp Pendleton LID, Stormwater Management Plan, and MCB Camp Pendleton's Integrated Pest Management Plan, the indirect impacts during operation would be considered 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, Operation, and Demolition

Less than Significant with Mitigation Incorporated. An Integrated Natural Resources Management Plans (INRMP) for Camp Pendleton has been updated and revised as required per the Sikes Act, which is the primary federal statue requiring natural resource management on military installations. Compliance with the INRMP and associated policies would be required prior to construction/demolition and operation activities.

As described in Impacts a through d, the proposed project would be consistent with the INRMP and all regulations through the implementation of mitigation measures MM BIO-1 through MM BIO-15, which would include worker training, delineation of project work limits, work and staging areas, speed limits, soil bonding agents for dust suppression, secure water sources on project site, litter and trash management, measures to avoid wildlife entrapment, weed-free and non-plastic netting, vehicle and equipment cleaning, no pets, and reporting if injured or dead wildlife is found; monitoring and reporting; on-site restoration of temporarily disturbed areas; surveys for special-status plants; surveys and for Crotch's bumble bee; surveys for special-status wildlife; avoid nighttime activities, lighting shall be shielded and directed downward; wildlife exclusion fence; surveys, monitoring, and compensatory mitigation for arroyo toad; compliance with applicable laws and regulations for impacts to potential jurisdictional waters; surveys and avoidance measures for nesting birds; surveys, monitoring, and compensatory mitigation for coastal California gnatcatcher; surveys, monitoring, and compensatory mitigation for least Bell's vireo; Noise Minimization Plan; and surveys and monitoring for bats.

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, Operation, and Demolition

No Impact. The project is in accordance with the Final Joint INRMP for Marine Corps Base and Marine Corps Air Station Camp Pendleton, CA Revision 2018, which meets the requirements of the Sikes Act [16 USC §670a *et seq*. In the INRMP (2018) and draft revised INRMP (2023)], MCB Camp Pendleton acknowledges the need to work cooperatively with jurisdictions with permitted or planned regional Habitat Conservation Plan (HCP) or Natural Community Conservation Plan (NCCP) that are in the vicinity of the Base. SDG&E holds leases/right-of-way within the MCB Camp Pendleton for transmission lines and various supporting facilities. MCB Camp Pendleton Environmental Security Planning Section reviews SDG&E lease agreements to ensure compliance with the MCB Camp Pendleton INRMP (INRMP 2023).

The project would not conflict with an adopted HCP, NCCP, or other local, regional, or state habitat conservation plans. Therefore, there would be no impacts.

5.4.4 Mitigation Measures

The following mitigation measures are recommended for the proposed project. MCB Camp Pendleton and CEC will need to coordinate to determine the enforceability of with some measures consistent with federal regulations. Specifically, this would include mitigation measures addressing state resources such as BIO-2 (Conduct Biological Monitoring and Reporting), BIO-4 (Conduct Surveys for Special-Status Plants and Implement Avoidance Measures), BIO-5 (Conduct Protocol Surveys for Crotch's Bumble Bee and Implement Avoidance Measures), and BIO-15 (Preconstruction Bat Survey and Implement Avoidance Measures).

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 MCB Camp Pendleton Environmental Security (ES) 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 in Proximity to Natural Habitat: Prior to any ground-disturbing activities, project work limits in proximity to the any water detention basins or areas that convey water, and coastal scrub and/or riparian areas to be avoided during construction and decommissioning 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 in the 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. If nighttime work is required, a maximum speed limit of 5 miles per hour shall be enforced in the work areas 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 part, or mud, 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.

- 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 MCB Camp Pendleton Environmental Security (ES) for coordination, as appropriate, with resource agencies 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 the MCB Camp Pendleton ES, 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 MCB Camp Pendleton ES for coordination, as appropriate, with USFWS and/or other agency. 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 MCB Camp Pendleton ES o resolve the situation.

BIO-2 **Conduct Biological Monitoring and Reporting.** A qualified biologist and a qualified biological monitor shall be retained to oversee project and to ensure compliance with biological resource mitigation measures and permit conditions.

Resumes of the Biological Monitoring Team shall be submitted to the MCB Camp Pendleton ES 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, the 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. When work is conducted during the nesting season, the monitor will be onsite as needed to ensure compliance with project mitigation measures and permit conditions.

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

- Serving as the primary point of contact for the MCB Camp Pendleton ES 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.
- Immediately notifying the MCB Camp Pendleton ES (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-15), including any required special-status species handling permits or monitoring (BIO-5, BIO-6 and BIO-9). Also notify the MCB Camp Pendleton ES of the circumstances and actions being taken to resolve the problem, as directed by the applicable mitigation measure or in consultation with MCB Camp Pendleton ES for coordination with MCB Camp Pendleton ES and/or USFWS.
- Conducting or overseeing the weekly site inspections during 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-15), including any required special-status species handling or permits (BIO-5, BIO-6 and BIO-9).
- Providing written Weekly and Monthly Biological Monitoring Reports to the MCB Camp Pendleton ES 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 through BIO-15).

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 requiring monitoring 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-15, including any required special-status species handling permits (BIO-5, BIO-6 and BIO-9). Work activities shall not commence at any work area requiring monitoring until the clearance survey has been completed and the biological monitor communicates to the contractor that work may begin.
- Conducting compliance monitoring during ground-disturbing project activities consistent with the timeline 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.
- 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. Handling, relocation, release from entrapment, or other interactions with wildlife shall only occur if authorized by MCB Camp Pendleton ES and performed consistent with species handling permits outlined in MM BIO-5, BIO-6 and BIO-9. 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 MCB Camp Pendleton ES for coordination with a wildlife rehabilitator, or other appropriate party to obtain aid for the animal, consistent with applicable mitigation measures and permit conditions.
- 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.

BIO-3 **Habitat Restoration.** Temporary impacts to native vegetation communities shall be restored in place with appropriate native vegetation. A restoration plan shall include (1) a map of current vegetation to be impacted and the native vegetation that will be restored, (2) methods to be used in restoration, (3) monitoring requirements and time periods, (4) success criteria, and (5) follow-up measures if needed. A minimum

5 -year plant establishment period shall be implemented that shall include exotic plant removal and re-application of native seed and/or replanting of container plants as necessary. The applicant shall submit the restoration plan to MCB Camp Pendleton ES for coordination and approval by USFWS, as deemed necessary in permits.

Areas of non-native vegetation communities will be hydroseeded with a hydroseed mix for erosion control purposes and weeded for three years. The hydroseed mix shall be native plant species, and use of local genetic stock, where feasible.

BIO-4 **Conduct Surveys for Special-Status Plants and Implement Avoidance Measures.** A qualified botanist shall conduct pre-construction surveys for State and federally listed Threatened and Endangered, Proposed, Petitioned, and Candidate plants and non-listed sensitive plants within the project site. The surveys shall be conducted during the appropriate blooming period(s) by an authorized plant ecologist/biologist according to established protocols, for example, USFWS, CDFW, and California Native Plant Society (CNPS). The résumé of the proposed biologists will be provided to the MCB Camp Pendleton ES for approval prior to ground disturbance.

All special-status plant species, including listed threatened or endangered, and those ranked CRPR 1A, 1B, 2, 3, and 4 that are subject to project disturbance will be documented during surveys using a precision GPS unit.

If CRPR 1A, 1B, 2, 3, and 4 plants are identified during surveys, the plant(s) or population(s) will be flagged for avoidance to the extent feasible. Implementation of the project shall not disturb more than 10 percent of the known occurrence of any CRPR 1A, 1B, and 2 plants species. If activities require the disturbance of more than 10 percent of a population(s), the plants will be allowed to set seed prior to implementation of activities. If ground-disturbance occurs after plants have set seed, the top four inches of soil will be stockpiled separately during excavations. Upon completion of ground-disturbing activities, the stockpiled soil will be replaced and compaction will be minimized to the extent consistent with utility standards.

All State and Federally listed plant species found shall be marked, avoided, and protected by a 50-foot buffer zone. No ground disturbance or vegetation modification will take place within this buffer until the MCB Camp Pendleton ES have determined the appropriate buffer size to avoid take.

A report will be prepared at the completion of surveys that includes names of surveyors, dates surveys were performed, survey location(s), maps, and a compendium of all plant species identified, and any avoidance buffers

established. Survey reports will be submitted to the MCB Camp Pendleton ES within 14 days of completion.

BIO-5 **Conduct Protocol Surveys for Crotch's Bumble Bee and Implement Avoidance Measures.** If project activities along the southeast side of the route for the underground distribution and communication lines or the battery storage area in the agricultural field are scheduled to begin or are ongoing during the active colony active period (April 1 through August 31), surveys for Crotch's bumble bee shall be conducted during the active colony active period by a qualified entomologist(s) or biologist(s) familiar with the life history and ecology of Crotch's bumble bee.

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

Surveys will cover all project work areas that support suitable habitat for colonies and along the southeast side of the route for the underground distribution and communication lines 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 2023b).

Survey methods shall 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 Crotch's bumble bees are detected during surveys, the qualified biologist shall notify CEC within 24 hours. If Crotch's 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 Crotch's 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 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.

BIO-6 **Conduct Preconstruction Surveys for Special-Status Wildlife.** No later than seven days prior to start of project construction activities, a qualified biologist shall conduct surveys for special-status wildlife. The names and credentials of the qualified biologist shall be submitted to the MCB Camp Pendleton ES 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 access is available. Surveys shall focus on terrestrial (including Monarch butterfly's) 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 sensitive species 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. Sensitive species will only be handled by qualified personnel as authorized by the appropriate resource agencies.

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 MCB Camp Pendleton ES, for coordination with the appropriate resource agency, within 24-hours for further direction.

Within 14 days of completion of the surveys, MCB Camp Pendleton ES 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 MCB Camp Pendleton ES.

BIO-7 **Construction, Operation, and Demolition Nighttime Lighting.** Construction, Operation, and Demolition activities shall avoid nighttime hours to the maximum extent practicable. If nighttime activity is required, lighting shall be shielded and directed downward to avoid illuminating adjacent native habitat. During construction/demolition and operation, any security lights shall be lighting that produces green colored beam with automatic dusk-to-dawn sensor switch to be incorporated. All lighting shall be the minimum necessary brightness consistent for worker safety.

BIO-8 **Install and Maintain Wildlife Exclusion Fencing.** Silt fencing shall be installed around the perimeter of the work area, to prevent terrestrial wildlife from entering the work area. The bottom of the fence will be buried to a depth of at least six inches and at be least 24 inches high. All fencing material will be removed following construction.

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 when allowed by regulations. Handling of any special-status wildlife species shall only be performed by a qualified biologist with the appropriate permits from the USFWS. If handling of listed species is required, the activity and biologist shall be pre-approved by USFWS. No handling of listed species shall be conducted without prior authorization.

BIO-9 **Conduct Pre-construction and Biological Monitoring Surveys for Arroyo Toad and Implement Avoidance Measures.** The applicant or its designee shall retain a qualified biologist with demonstrated experience with arroyo toads to conduct focused surveys and monitor construction/ demolition activities. This person will be approved by the MCB Camp Pendleton ES prior to the onset of ground-disturbing activities.

The authorized biologist will be responsible for overseeing construction/ demolition. The biologist will conduct pre-construction surveys, be onsite during vegetation removal, pre-project flagging, installation and removal of SWPPP fencing, and other construction/demolition activities with the potential to impact arroyo toads. A biologist will be onsite when the wildlife exclusionary fence is installed and will monitor the fencing to ensure arroyo toads are not entangled or trapped within the fencing. The authorized biologist will move any arroyo toad from within the fenced area to closest suitable habitat outside the fence. The date, time of capture, specific location of capture (using GPS), approximate size, age, and health of the individual will be recorded. Immediately following removal and translocation, the biological monitor will notify and provide all recorded information to MCB Camp Pendleton ES. Biologist will take measures to ensure disease is not transmitted by using clean equipment (e.g., boots), wearing gloves, and other protocols are followed.

To minimize construction/demolition and operation activities impacts to arroyo toads, temporary erosion control measures and permanent erosion control shall be implemented to avoid soil erosion, sedimentation and pollutant run-off.

Applicant shall coordinate with MCB Camp Pendleton ES for consultation with USFWS regarding potential impacts to arroyo toad habitat and obtain necessary permits. Permanent impacts may include funding a contract for the control of non-native aquatic predators if approved by USFWS. Refinement of mitigation based on pre-construction survey results and final mitigation land ratios shall be as approved by USFWS.

BIO-10 **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 project's access roads, as well as compliance with any additional conditions attached to any required permits and monitoring requirements (if any). If permits are needed, Applicant shall coordinate with MCB Camp Pendleton ES. Copies of all regulatory waters permits shall be submitted to MCB Camp Pendleton ES prior to ground-disturbing activities in areas supporting jurisdictional waters.

BIO-11 **Conduct Preconstruction Surveys for Nesting Birds and Raptors and Implement Avoidance Measures.** If project activities occur during the breeding season (February 1 through September 15), a preconstruction survey for nesting birds and raptors including white tailed kite, Swainson's hawk 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 MCB Camp Pendleton ES 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 three 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 MCB Camp Pendleton ES in consultation with other agencies, as appropriate.

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 MCB Camp Pendleton ES 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.

BIO-12 **Conduct Pre-construction and Biological Monitoring Surveys for Coastal California Gnatcatcher and Implementation Avoidance Measures.** A biologist familiar with gnatcatchers will be responsible for overseeing construction/demolition to ensure compliance with any permit conditions and the mitigation measures. The biologist will be on site during vegetation removal, pre-project flagging, and other construction/demolition activities with the potential to impact gnatcatchers.

All native vegetation typically used by gnatcatchers (i.e., coastal sage scrub) will be cleared outside of the gnatcatcher breeding season (February 15 through August 31).

To the maximum extent practicable, all construction-related activities will take place outside the gnatcatcher breeding season. To the maximum extent practicable, any nighttime work will be avoided.

The contractor will contact MCB Camp Pendleton ES at least three weeks prior to initiation of the action and provide biologist qualifications for review. The biologist must be approved by MCB Camp Pendleton ES prior to the start of construction.

The biologist will conduct pre-construction surveys for active gnatcatcher nests in and within 500 feet of the construction footprint (i.e., three surveys at least 1 week apart with the last survey conducted within 7 days of project initiation).

If no signs of gnatcatcher nest building or nesting are present, then work will continue. Surveys will continue on a weekly basis throughout the breeding season to monitor the status of any gnatcatcher pairs that may be present until either: (i) the project is completed, (ii) the breeding season has ended, or (iii) signs of nest building are observed.

If an active gnatcatcher nest (including nest building) is found within the 500-foot survey buffer, MCB Camp Pendleton ES will notify the USFWS immediately and provide the mapped location of the nest to the USFWS. If the nest is within 250 feet of ongoing project activities, project work will cease within 250 feet until the nest has failed or fledged, or until the USFWS and the MCB Camp Pendleton agree on appropriate avoidance measures to allow activities to continue.

After initial identification of the nest, the project biologist will not approach within 25 feet of the active nest. Nest monitoring will occur with binoculars from outside of the 25-foot buffer and only to confirm that the nest remains active during construction and other project-related activities.

If no nesting activity is observed, the nest may be approached to determine the status of the nest. Binoculars should be used to the greatest extent practical to confirm individuals are no longer exhibiting breeding behaviors or tending to the nest prior to approaching the nest directly to determine the nest's fate.

Construction noise levels will be monitored by the project biologist, and if construction levels exceed preconstruction ambient noise levels within the nesting territories during the breeding season, noise attenuation measures will be implemented in coordination with the USFWS.

The biologist will provide an electronic report of nest survey results to MCB Camp Pendleton ES within 7 days of survey completion. The biologist will

provide bi-weekly (every 2 weeks) biological monitoring reports (electronic versions only) for the duration that gnatcatcher monitoring is conducted. One final biological monitoring report will be provided to MCB Camp Pendleton ES upon completion of activities requiring monitoring. Upon receiving this final report, MCB Camp Pendleton ES will provide this report to the USFWS.

Applicant shall coordinate with MCB Camp Pendleton ES for consultation with USFWS regarding impacts to coastal sage, and potential impacts to gnatcatcher, and obtain necessary permits. Permanent impacts may include purchasing credits at a USFWS-approved conservation bank, or other mitigation refinements approved by USFWS.

BIO-13 **Conduct Pre-construction and Biological Monitoring Surveys for Least Bell's Vireo and Implementation Avoidance Measures.** A biologist familiar with vireos will be responsible for overseeing construction to ensure compliance with the Mitigation Measures. The biologist will be on site during vegetation removal, pre-project flagging, and other construction activities with the potential to impact vireos.

Riparian vegetation will be cleared outside of the vireo breeding season (March 15 through August 31.

To the maximum extent practicable, construction/demolition activities will take place outside vireo breeding season.

If construction/demolition activities must take place during the vireo breeding season (March 15 through August 31), then the applicant or its designee will employ a pre-approved, qualified biologist to ensue project activities avoid adverse impacts to this species.

The applicant or its designee will contact MCB Camp Pendleton ES at least three weeks prior to initiation of the action and provide biologist qualifications for review. The biologist must be approved by MCB Camp Pendleton ES prior to the start of construction.

The biologist will conduct pre-construction surveys for active vireo nests in and within 500 feet of the construction footprint (i.e., three surveys at least one week apart, with the last survey conducted within seven days of project initiation).

If no signs of vireo nest building or nesting are present, then work will continue. Surveys will continue on a weekly basis throughout the breeding season to monitor the status of any vireo pairs that may be present until either: (i) the project is completed, (ii) the breeding season has ended, or (iii) signs of nest building are observed.

If an active vireo nest (including nest building) is found within the 500-foot survey buffer, MCB Camp Pendleton ES will notify the USFWS imme-

diately and provide the mapped location of the nest to the USFWS. If the nest is within 250 feet of ongoing project activities, project work will cease within 250 feet until the nest has failed or fledged, or until the USFWS and the MCB Camp Pendleton ES agree on appropriate avoidance measures to allow activities to continue.

After initial identification of the nest, the project biologist will not approach within 25 feet of an active nest. Nest monitoring will occur with binoculars from outside of the 25-foot buffer and only to confirm that the nest remains active during construction and other project-related activities.

If no nesting activity is observed, the nest may be approached to determine the status of the nest. Binoculars should be used to the greatest extent practical to confirm individuals are no longer exhibiting breeding behaviors or tending to the nest prior to approaching the nest directly to determine the nest's fate.

Construction noise levels will be monitored by the project biologist, and if construction levels exceed preconstruction ambient noise levels within the nesting territories during the breeding season, noise attenuation measures will be implemented in coordination with the USFWS.

The biologist will provide an electronic report of nest survey results to MCB Camp Pendleton ES within seven (7) days of survey completion. The biologist will provide bi-weekly (every two weeks) biological monitoring reports (electronic versions only) for the duration that vireo monitoring is conducted. One final biological monitoring report will be provided to MCB Camp Pendleton ES upon completion of activities requiring monitoring. Upon receiving this final report, MCB Camp Pendleton ES will provide this report to the USFWS.

Applicant shall coordinate with MCB Camp Pendleton ES for consultation with USFWS regarding potential impacts to riparian vegetation, including habitat occupied by least Bell's vireo, and obtain necessary permits from USFWS and/or CDFW. Permanent impacts shall include funding a contract for the control of non-native aquatic predators, if approved by USFWS and/or CDFW. Final compensatory mitigation and approval shall be approved by USFWS and/or CDFW.

BIO-14 **Noise Minimization Plan.** If nesting birds are present, the Applicant or its contractor shall prepare a Noise Minimization Plan which shall identify expected noise levels within an appropriate buffer distance where sensitive bird species may breed/nest and shall describe all measures that will be implemented to minimize project-generated noise within those areas. The plan shall include:

Methods used to determine current baseline ambient noise levels within then nest buffer prior to construction/demolition activities.

A description of the basis for the expected noise levels at the nest buffer and identification of modeling methods used to determine those levels.

Identification of all measures to be implemented to reduce sound levels within those areas to no greater than 5 dBA above the baseline noise levels when active nests are present. Measures may include enclosing sound-generating sources within structures or temporary sound barriers, moving sound-generating sources to locations farther from these boundaries, reducing the number of concurrent sound generating activities, using sound baffles to redirect sound away from the nest buffer, timing restrictions, requiring the use of mufflers on heavy equipment, or other similarly effective measures needed to meet the no greater than 5 dBA above baseline ambient noise levels.

The location and a description of sound monitoring equipment that will allow continuous monitoring of sound levels during project activities.

A description of how monitoring data will be compiled and reported to allow confirmation that sound levels do not exceed 5 dBA above ambient levels within the nest/breeding areas when active nests are present.

The Noise Minimization Plan shall be submitted to MCB Camp Pendleton ES for review and approval in coordination with USFWS, a minimum of 60 days prior to start of the project.

BIO-15 Preconstruction Bat Survey and Implement Avoidance Measures. A qualified biologist shall conduct surveys for bats during the appropriate time of day to maximize detectability to determine if bat species are roosting in trees or other vegetation requiring removal or clearance pruning for the project. The name and credentials of the qualified biologist shall be submitted to the MCB Camp Pendleton ES no less than 14 days prior to the surveys for review and approval. The survey shall occur no less than 7 days and no more than 14 days prior to beginning tree or other vegetation removal or trimming activities. Survey methodology may include visual surveys for bats (e.g., observation of bats emerging from roosts to forage), inspection for suitable roost habitat, bat sign (e.g, guano), or use of ultrasonic detectors (e.g., Anabat, etc). Visual surveys shall include all trees or other vegetation requiring removal or clearance pruning for the project.

If evidence of bat use is observed, the approximate number and species of bats using the roost shall be determined. Bat detectors may be used to supplement survey efforts.

If roosts or a maternity colony are determined to be present, then a Bat Mitigation and Monitoring Plan (Plan) shall be prepared and implemented to mitigate for the loss of roosting habitat. The Plan shall include information pertaining to the species of bat and location of the roost, exclusion

methods and roost removal procedures, compensatory mitigation for permanent impacts (including specific mitigation ratios and location of proposed mitigation) and monitoring to assess bat use of mitigation areas. This Plan shall be submitted to the MCB Camp Pendleton ES for review and approval prior to project activities that could disturb roosting bats.

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Section 5.05

Cultural and Tribal Cultural Resources

5.5 Cultural and Cultural Tribal Resources

This section describes the environmental setting and regulatory background and discusses the impacts associated with the construction and operation of the proposed project with respect to cultural and tribal cultural resources. The information presented below is from Aspen Environmental Group (2024a; Appendix C) unless otherwise referenced.

Cultural and Cultural Tribal 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: Native American, 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:

- Native American archaeological, 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 Native American archaeological, 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.

Native American 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, Native American archaeology 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 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.

Native American Archaeological Context

Terminal Pleistocene (13,500–11,600 cal B.P.)

The Terminal Pleistocene Period, beginning with the first human occupation of the Western Hemisphere is, according to a widely accepted model, thought to have begun from northeastern Siberia beginning at some point between 15,000 and 12,000 calibrated years before present (cal B.P.). However, at this time there is little evidence suggesting human occupation in coastal southern California prior to 15,000 cal B.P., and there are currently no sites in southern California reliably dated to much earlier than 10,000 cal B.P.

Paleoindian Period (11,600 cal B.P.–8500 cal B.P.)

Based on work including Malcolm Rogers, Michael Moratto, Claude Warren et al. and D. J. Meltzer, the Paleoindian Period in the region of San Diego County is considered to date, from before 10,000 cal B.P. to 8500/7500 cal B.P. It begins with Clovis occupation. Noted for its distinctive tool kit characterized by fluted points, Paleoindian assemblages in southern California, including lithic scatter sites on the San Dieguito plateau of San Diego County, were discussed by Malcolm Rogers in 1939, when he first utilized the term San Dieguito. Subsequent fieldwork was carried out on San Dieguito type sites by Claude

Warren and Delbert True from 1958 until 1967. The absence of ground stone was considered by Warren as a distinction between San Dieguito and subsequent Archaic La Jolla occupations. This relationship, San Dieguito and La Jolla, has been the subject of considerable debate, with the key issue being which sites are chronologically earlier. This issue has not been fully resolved among archaeologists, due to a lack of sites with surface assemblages.

Paleoindian/Archaic Transition (8500–7500 cal B.P.)

Based on work including Michael Moratto, James Moriarity, Charles Bull, Dennis Gallegos, Claude Warren et al., D. J. True and Paul Bouey, and Micah Hale, the Paleoindian/Archaic Transition Period reflects attempts to define the difference between San Dieguito (Paleoindian) and La Jolla (Archaic) sites, with key issues being the presence of or lack of ground stone and whether flaked stone assemblages are truly different. A more recent model, the Milling Stone pattern, has been presented as a single widely practiced subsistence pattern with a flexible mobile/sedentary settlement strategy easily incorporating resources such as shellfish, small fish, and small game. Sites recorded in San Diego County appear to support the Milling Stone pattern with various assemblages dated between 9000 and 8000 cal B.P.

Archaic Period (7500 cal B.P.–1300–800 cal B.P.)

Based on work by a multitude of archaeologists and ethnographers, the Archaic Period has been defined as extending from 7500 cal B.P., until 1300 to 800 cal B.P. Some divide this period into early, middle, and late periods, and differentiate between coastal and inland occupations. Archaic assemblages are often highly visible with comparatively large quantities of ground stone, flaked cobble tools and cores, and large quantities of marine shell in certain areas. Major distinctions are made between Archaic shell midden sites near the coast, and Archaic non-shell midden sites inland. Coastal Archaic sites are often referred to as La Jolla Complex, while inland are often referred to as the Pauma Complex. Following a decline in shellfish resources, populations shifted inland.

Late Prehistoric Period (1300–800 cal B.P.–180 cal B.P.)

A majority of archaeologists and ethnographers agree that the Late Prehistoric Period in San Diego County begins in 1300 and 800 cal B.P. and ends with the start of the Ethnohistoric Period beginning with the arrival of Junipero Serra and the Spanish military, under the command of Gaspár de Portola in San Diego in July 1769. Scholars have defined and redefined Late Prehistoric materials in San Diego County into a variety of phases and/or complexes including but not limited to the San Luis Rey Complex in the north, the Cuyamaca Complex in the south. In the north, D. L. True et al., have created the San Luis Rey I and San Luis Rey II.

Ethnographic Context

Stephen Powers conducted ethnographic work in California in the early 1870s. At the turn-of-the century, Albert Kroeber and others began a decades-long systematic study of California tribal ethnographies, utilizing informants relating life before European contact.

Marine Corps Base (MCB) Camp Pendleton is a large region originally occupied at contact by Native American Uto-Aztecan Takic Speakers. These two Takic dialects are associated today with the Juaneño and Luiseño tribal nations, and these two tribal nations have traditionally inhabited areas including today's northern San Diego, southern Orange, and southwestern Riverside counties from pre-contact times to the present. The Juaneño and Luiseño are related to the Gabrielino, Cupeño, and Cahuilla, both linguistically and culturally as representative descendants of local Late-Prehistoric populations. It is believed these Takic speakers migrated from the Mojave Desert, possibly displacing the previous inhabitants, perhaps the ancestors of the Yuman speaking Kumeyaay (Ipai-Tipai), who lived south of the Takic speaking Juaneño and Luiseño during Ethnohistoric times.

Historic Context

Three major periods in California history define overarching periods of territorial control over the Project Study Area and surrounding vicinity. These are the Spanish Period from 1542 to 1821, the Mexican Period spanning 1821 to 1848, and the American Period prior to the establishment of MCB Camp Pendleton from 1848 to 1942. Finally, the history of MCB Camp Pendleton has been described as having six general periods of development: World War II (1942-1945), post-World War II (1946-1949), Korean War (1950-1953), post-Korean War (1954-1962), the Vietnam era (1963-1975), and the end of the Cold War (1976-1989).

Spanish Period (1769-1821)

In 1542, Spanish exploration of the California coast began with the expedition of Juan Rodríguez Cabrillo. Various early Spanish and other European voyages of exploration and terrestrial expeditions followed, and these made initial contact with local Native Californians. Spanish colonization did not fully commence, however, until the expeditions of the Franciscan administrator Junipero Serra and the Spanish military, under the command of Gaspár de Portola, arrived in San Diego in July 1769, and a presidio and mission in San Diego were established. A second mission was established in Monterey in 1770. The proximity of Native inhabitants was a crucial factor in locating all mission sites, offering opportunities for conversion and for labor.

The first Spaniards known to have entered the MCB Camp Pendleton region were a part of the expedition led by Portolá in 1769, with a second early expedition led by Anza in 1776. A diary kept on the Portolá expedition notes the proximity of the Luiseño rancherias to water. Miguel Costansó writes that a watering-place [presumed to be the Santa Margarita River] was ample and fresh, it stood in several pools, and that they were welcomed by "the natives" of near-by villages. MCB Camp Pendleton is, in fact, located on the traditional homelands of the Native people groups given the names "Luiseño" and "Juaneño" by Spanish missionaries. The Luiseño and Juaneño occupied villages called rancherias, most frequently located adjacent to rivers and streams. The territory surrounding each rancheria was used to support hunter-gatherer subsistence practices.

Key events during the Spanish Period on lands on or in the vicinity of MCB Camp Pendleton are summarized as follows:

- 1769: July 20–22, 1769: Portolá Expedition.
- 1776: November 1, 1776: Mission San Juan Capistrano founded.
- 1795: The MCB Camp Pendleton region was briefly considered as the site of a mission but was rejected after an inspection tour of Santa Margarita and Las Flores in August of 1795 reported a lack of reliable sources of water, and a lack of firewood.
- 1798: San Luis Rey Mission is founded on June 13, 1798.

The mission system relied heavily on ranching or the raising of livestock, and agriculture. During the Spanish Period these activities were carried out by both Mission San Juan Capistrano and Mission San Luis Rey, on lands currently under the control of MCB Camp Pendleton, although the extent and exact nature of each is difficult to establish.

During the Spanish Period, two early roadway alignments crossed property currently a part of MCB Camp Pendleton. An inland route was established following the 1769-1770 Portolá expeditions and a coastal route was developed between 1776 and 1823. The alignment of each of the routes was continually changing due to flooding, washouts, and changing transportation technologies. The coastal route, later known as El Camino Real or the "King's Highway," connected various components of the mission system. In the vicinity of today's MCB Camp Pendleton portions of this historic alignment would later become an automobile road, initially Route 2 and then Route 101, and finally a component of the Interstate 5 Freeway.

Mexican Period (1821-1848)

The year 1821 marks the beginning of the Mexican Period and is concurrent with Mexico's independence from Spain. Mexico became California's new ruling government, and at first little changed for California Native Americans. The Franciscan missions continued to utilize the unpaid labor the Native American's provided, despite the Mexican Republic's 1824 Constitution that declared Native American's to be Mexican citizens. This monopoly of Native American labor by a system that accounted for nearly one-sixth of the land in the state, angered the newly granted land-holding colonial citizens.

Agriculture and livestock ranching in the vicinity of MCB Camp Pendleton during the Mexican Period was primarily confined to areas surrounding the mission ranchos at Santa Margarita and Las Flores. Harvests were compromised by requirements to supply the military garrison at San Diego, and by dry conditions beginning in 1820.

The already compromised economic dominance of the missions was crippled by the passage of the Secularization Act in 1833, whereby the Mexican government began secularization of the missions and promoting settlement of Alta California through the issuance of land grants and liberal colonization laws, 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 and, if possible, access to the Pacific Ocean.

Key events during the Mexican Period on lands on or in the vicinity of MCB Camp Pendleton are summarized as follows:

- 1823: Las Flores Estancia founded.
- 1827: The first permanent structure on MCB Camp Pendleton property, a small adobe at what is now the Santa Margarita Ranch House, is described in an 1827 mission report.
- 1833: Mexican Secularization Act, August 17, 1833.
- 1833-1834 (Circa): Las Flores Pueblo granted.
- 1838: "Battle" of Las Flores, April 21–23, 1838.
- 1841: Rancho Santa Margarita granted, May 10, 1841.
- 1844: Las Flores Pueblo purchased by Pico, October 8, 1844, and Rancho Santa Margarita y Las Flores confirmed to Pio Pico in 1844. Pico makes a number of improvements at what is now called the Ranch House complex (CA-SDI-10,156/ 12,599/H), as the focal point of a viable livestock ranch.

During the Mexican Period development of land in the immediate vicinity of the PAA and Project Study Area, as depicted on historic maps, includes but is not limited to the following:

- 1840 (Circa): Diseño of Rancho de San Onofrio.
    - The overall map, likely prepared in the early 1840s, depicts Rancho de San Onofrio as granted to Pio Pico in 1836. Pico would later consolidate his interests in the region through receipt of the Rancho Santa Margarita y Las Flores grant in 1844. In the vicinity of the PAA, this map depicts the Santa Margarita River, a house (Margarita), a "puebla," and a route between San Onofrio and Santa Margarita. The Camino Real is depicted to the west of the PAA.
- 1844 (Circa): Taken from 1855: No. 700-1 Pio Pico et al, Diseño Del Rancho de Sta. Margarita.
    - The overall map depicts the entirety of Rancho Santa Margarita y Las Flores as confirmed to Pio Pico in 1844, along with various topographical features, roads, trails, rivers, streams, and valleys. Locations are approximate. In the general vicinity of the HERC PAA and Project Study Area, the Santa Margarita valley and river are depicted, along with several trails. To the south of the Santa Margarita River flow line, what appears to be an agricultural field, a fenced area, a circular corral, and a house location along with a trail identified as the "Camino de San Luis" are depicted. In addition, a "pueblita" is depicted to the south and west of the house and agricultural field, and a "Laguna" is depicted to the north and east.

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 U.S. The U.S. 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.

American Period (1848-1942)

In February 1848, California became a U.S. holding with the signing of the Treaty of Guadalupe Hidalgo. This treaty ended the Mexican American War and ceded much of the southwest (California, Nevada, Utah, and portions of Arizona, New Mexico, Colorado, and Wyoming) to the U.S. California became a state in 1850 and San Diego County was one of the original 27 counties of California.

Already, a veritable horde of gold-seekers were heading to California in late-1848 following the discovery of gold at Sutter's Mill in Sacramento. In general, settlers began arriving in the San Diego area in increasing numbers in the late-1860s, followed by completion of various railroads in the early to mid-1880s and an associated real estate boom, expanding an already healthy agricultural economy until the turn-of-the-century.

The early twentieth century brought change to San Diego. The military, including the U.S. Army and U.S. Navy, expanded their influence, supporting the regional economy through the effects of the Great Depression. The role of the automobile expanded, and agriculture continued as a vibrant economy. Early rancho properties were repeatedly sold and sub-divided as California's population increased. These general trends were felt across San Diego County, and Rancho Santa Margarita y Las Flores participated in these trends with a continued reliance on ranching. The establishment of Forster City and the beginning of irrigated agricultural areas aligned with the county-wide effort for town development. Unlike other parts of the county, the large rancho was not carved into parcels, and ranching continued to dictate how the land was used until the military purchased the property.

The history of the American Period across regional San Diego County is too complex and diverse to summarize here, so only those portions of that history impacting the region encompassing MCB Camp Pendleton are briefly highlighted below.

Key developments on Rancho Santa Margarita y Las Flores property during the American Period, encompassing today's Camp Pendleton, include the following:

- 1849: Pio Pico moves off Rancho Santa Margarita y Las Flores, a profitable cattle ranch, to Los Coyotes Rancho in Los Angeles. He cedes control of the ranch to his brother Andres, who immediately leaves for the gold fields, leaving management of the ranch to Pio Pico's older brother, Jose Antonio.

- 1864: By 1862, the Pico fortune had fallen into disrepair, and the family had sold part of the rancho to their brother-in-law, Juan Forster, to avoid losing it to creditors. Juan Forster receives rancho title, February 25, 1864.
- 1872-1873: Pico vs. Forster claims case. After an extended legal battle Don Juan Forster obtains title to the entire Rancho Santa Margarita y Las Flores. He makes a number of improvements.
- 1882: Forster dies in 1882, and the Forster family sells the rancho to James Flood and Richard O'Neill, February 22, 1882. Prior to his death, Forster grants right-of-way to the California Southern Railway in exchange for sidings built on the rancho to ship cattle. California Southern railroad stations and sidings across MCB Camp Pendleton in 1883 included San Luis Rey, Ysidora, and DeLuz. By 1889, the ranch house was also a stop on the Fallbrook Junction line.
- 1901: O'Neill was given one-half of the ranch by Flood's heirs, and he holds the property until it was acquired by the U.S. Marine Corps in 1942.
- 1848-1941: During the American Period, the Santa Margarita Ranch House is home to many notables including Pio Pico, the last governor of California during the Mexican Period, Don Juan Forster, various members of the O'Neill family, various members of the Flood family, and various members of the Baumgartner family.
- 1941: The Marine Corps, in concert with other branches of the military, selects the future site of MCB Camp Pendleton and begins purchase of the property.

Marine Corps Base Camp Pendleton (1942- Present)

MCB Camp Pendleton was established in 1942. Six major periods of construction have been identified as a thematic context. This includes World War II (1942-1945), post-World War II (1946-1949), Korean War (1950-1953), post-Korean War (1954-1962), the Vietnam era (1963-1975), and the end of the Cold War (1976-1989). These periods of development were developed by JRP Historical Consulting Services to establish a context for the identification and evaluation of buildings and structures at Camp Pendleton.

The December 7, 1941, the attack on Pearl Harbor created an immediate need for a West Coast training center. The site for what would become Camp Joseph H. Pendleton, the massive Rancho Santa Margarita y Las Flores, was selected for its varied and undeveloped inland terrain and miles of oceanfront ideal for amphibious exercises. "It was the government's goal to have the new Marine Corps training facility near Oceanside ready for occupancy and exercises in six months. J. E. Haddock, Ltd. of Pasadena and Engineers, Ltd., of Los Angeles and San Francisco oversaw construction projects, while Hunt, Chambers, and Ellingwood served as the base's original Architects. The original Bureau of Yards and Docks contract anticipated construction of 518 buildings, and the labor force had to work at a breakneck pace to transform the rugged rancho lands into a staging and training area for the influx of Marine recruits and draftees. More than anything, the urgent need for war support facilities dictated the construction of so many temporary buildings and structures. In 1946, after the end of WWII, General A. A. Vandegrift, Commandant

of the USMC, ordered that Camp Pendleton remain the center of all USMC activities on the West Coast" (ASM 2017, page 49).

From 1942 to the present, MCB Camp Pendleton has responded to ever-changing military needs and technologies. New MCB Camp Pendleton facilities have been built and existing facilities ae constantly upgraded.

Methods

The methods employed for the cultural resources analysis include determining the 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 and operate the proposed project. This includes the proposed site grading, construction, and installation of the battery energy storage system, staging areas, and access roads. The project description describes estimated excavation depths for the proposed project elements, such as grading, excavations and trenching of up to four feet deep, primarily for the installation of piping, electrical conduit and utility ductbanks, and foundations.

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 hospital campus. 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), and examination of pertinent literature concerning cultural resources in southeastern San Diego County.

On behalf of CEC, Aspen Environmental Group (Aspen) requested a records search on August 10, 2023, at the South Coast Information Center (SCIC) of the CHRIS. The SCIC is the State of California's official repository of cultural resource records, previous cultural resources studies, and historical information concerning cultural resources for five counties, including San Diego County. The records search area included the Project Site and a one-mile buffer. In addition to the SCIC 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 aerial photos, and topographic maps.

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 received three requests for formal notification from tribes that have traditional and cultural affiliation with the geographic area of the proposed project, the La Posta Band of Diegueno Mission Indians, the San Luis Rey Band of Mission Indians, and the Soboba Band of Luiseno Indians.

Additionally, consistent with the CEC tribal consultation policy (CEC 2024), Aspen, on behalf of CEC, contacted the NAHC on August 10, 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 September 8, 2023, and stated the Sacred Lands File search was positive and provided a list of 21 California Native American tribes to contact, listed below.

- Barona Group of the Capitan Grande
- Campo Band of Diegueno Mission Indians
- Ewiiaapaayp Band of Kumeyaay Indians
- Iipay Nation of Santa Ysabel
- Inaja-Cosmit Band of Indians
- Jamul Indian Village
- Juaneno Band of Mission Indians Acjachemen Nation - Belardes

- Juaneno Band of Mission Indians Acjachemen Nation 84A
- Kwaaymii Laguna Band of Mission Indians
- La Jolla Band of Luiseno Indians
- La Posta Band of Diegueno Mission Indians
- Manzanita Band of Kumeyaay Nation
- Mesa Grande Band of Diegueno Mission Indians
- Pala Band of Mission Indians
- Pauma Band of Luiseno Indians
- Pechanga Band of Indians
- Rincon Band of Luiseno Indians
- San Luis Rey Band of Mission Indians
- Soboba Band of Luiseno Indians
- Sycuan Band of the Kumeyaay Nation
- Viejas Band of Kumeyaay Indians

On behalf of CEC, Aspen staff mailed consultation letters to these 21 tribes on August 28, 2024, and followed up with email notifications with the attached consultation letter to those that have an email address on file with the NAHC on August 29, 2024. Follow up emails were also sent on September 12, 2024. See the following subsection, "Results," for tribal responses and lead agency follow-up.

Archaeological and Built Environment Survey

On April 18, 2024, an Aspen archaeologist surveyed the Project area for archaeological resources, which corresponds to the staff defined archaeological PAA as the Project Site.

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 historic architectural survey was also conducted by Aspen on April 18, 2024, inclusive of the one parcel band around the Project Site, the staff defined built environment 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 State 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:
    1. Included or determined to be eligible for inclusion in the CRHR.
    2. 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

The San Diego County General Plan, Chapter 5: Conservation and Open Space Element, Cultural Resources, contains the following cultural resources Goals and Policies relevant to the proposed project (County of San Diego 2011).

GOAL COS-7 – Protection and Preservation of Archaeological Resources. Protection and preservation of the County's important archeological resources for their cultural importance to local communities, as well as their research and educational potential.

COS-7.1 Archaeological Protection. Preserve important archaeological resources from loss or destruction and require development to include appropriate mitigation to protect the quality and integrity of these resources.

COS-7.2 Open Space Easements. Require development to avoid archeological resources whenever possible. If complete avoidance is not possible, require development to fully mitigate impacts to archaeological resources.

COS-7.3 Archaeological Collections. Require the appropriate treatment and preservation of archaeological collections in a culturally appropriate manner.

COS-7.4 Consultation with Affected Communities. Require consultation with affected communities, including local tribes to determine the appropriate treatment of cultural resources.

COS-7.5 Treatment of Human Remains. Require human remains be treated with the utmost dignity and respect and that the disposition and handling of human remains will be done in consultation with the Most Likely Descendant (MLD) and under the requirements of Federal, State and County Regulations.

GOAL COS-8 – Protection and Conservation of the Historical Built Environment. Protection, conservation, use, and enjoyment of the County's important historic resources.

COS-8.1 Preservation and Adaptive Reuse. Encourage the preservation and/or adaptive reuse of historic sites, structures, and landscapes as a means of protecting important historic resources as part of the discretionary application process and encourage the preservation of historic structures identified during the ministerial application process.

COS-8.2 Education and Interpretation. Encourage and promote the development of educational and interpretive programs that focus on the rich multicultural heritage of the County of San Diego.

Results

Record Search and Literature Review

The SCIC records search indicates that 105 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 which 31 crosses over into the PAA, which are shown in bold below. The SCIC also identified 65 previously recorded cultural resources within one mile of the Project Site, mostly consisting of built environment resources, one of which is within the PAA (Table 5.5-2), shown in bold below. No additional previously recorded resources were identified through reviews of any of the national or state registers.

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

Report #	Authors	Year	Report Title	Company
SD-00537	Cupples, Sue Ann	1977	An Archaeological Survey Report for a Proposed Truck Escape Ramp 11-IMP-8 pm R3.83/4.18 11359-131111	Sue Ann Cupples
SD-00660	**Ezell, Paul, Joseph G. Theskin, Cynthia Draper, and Stephen R. Van Wormer**	**1980**	**The 1978 Archaeological Survey Camp Pendleton**	**San Diego State University**
SD-01546	Tartaglia, Louis James	1984	Cultural Resource Survey Marine Corps Air Facility Camp Pendleton	Louis James Tartaglia Archaeological Consultant
SD-01800	**Welch, Patrick H.A.**	**1975**	**An Archaeological Survey of the Santa Margarita River Valley and Adjacent Areas, Camp Pendleton San Diego County, California**	**San Diego State University**
SD-01997	Murray, John	1981	An Archaeological Survey of an Inland Portion of Joseph H. Pendleton Marine Corps Base, San Diego County, California	California State University, Long Beach
SD-02254	Schaefer, Jerry	1991	Archaeological Testing and Evaluation of Subsurface Deposits at the Rancho Santa Margarita Chapel, Camp Pendleton, California.	Brian F. Mooney and Associates
SD-02947	Shaefer, Jerry and Stephen Van Wormer	1993	Archaeological Investigations at the Rancho Santa Margarita Chapel, Camp Pendleton, California	Brian F. Mooney and Associates
SD-03319	Phillips, Roxanna, Adella B. Schroth, and Dennis Gallegos	1997	Historical/Archaeological Eligibility Determination for the Atchison, Topeka and Santa Fe's Transconti-nental Railroad Route Within Camp Pendleton, San Diego, California	Gallegos and Associates
SD-03460	Strudwick, Ivan	1996	Results of Archaeological Significance Testing at Site CA-SDI-10156/12599H, MCAS Camp Pendleton, San Diego County, California	LSA Associates
SD-03629	York, Andrew L.	1999	Cultural Resources Phase I Survey Report for Northern Power Distribution System Transmission Line Project (P046) Marine Corps Base, Camp Pendleton, California	United States Marine Corps
SD-03655	Strudwick, Ivan and Steve Conkling	1994	Cultural Resources Testing Plan for Sites Ca-SDI-10156 (SDM-W-3553), SDI-10157 (W-3555) and SDI-I-91 (W-3554), MCAS Camp Pendleton, San Diego County, California	Marine Corps Air Station

Report #	Authors	Year	Report Title	Company
SD-03666	**Wahoff, Tanya and Rebecca McCorkle-Apple**	**1997**	**Cultural Resources Phase I Survey Report for Conforming Storage Facility (Hazardous Materials/ Waste at Marine Corps Base, Camp Pendleton, California**	**U.S. Department of the Navy**
SD-03668	Self, William	1999	Cultural Resources Assessment SFPP Camp Pendleton Pipeline Project, San Diego County, California	Dave Cornman
SD-03813	Pigniolo, Andrew R., Delman L. James, and Steven H. Briggs	1999	Archaeological Construction Monitoring, Evaluation, and Data Recovery Military Construction Projects Marine Corps Air Station, Camp Pendleton San Diego County, California	James and Brigg's Archaeological Services
SD-04231	Ainsworth, Peter	1974	An Archaeological Survey of TPM 10167 and TPM 10716	Office of Environmental Management
SD-04566	Strudwick, Ivan	1995	Final Report Results of Archaeological Significance Testing at Sites CA-SDI-10156, CA-SDI-10157 and CA-SDI-I-91 MCAS Camp Pendleton, San Diego County, California	LSA Associate, Inc.
SD-04567	Strudwick, Ivan	1995	Cultural Resource Testing Plan For SDI-10156 & SDI-12599 Camp Pendleton, San Diego County, California	LSA Associates
SD-06104	**Gallegos and Associates.**	**1995**	**The Milcon Project P010 Historical/ Archaeological Test Plan for Sites Within the Santa Margarita Flood Control Project**	**Gallegos and Associates**
SD-06246	Wahoff, Tanya and James H. Cleland	1997	Draft Cultural Resources Phase I Survey Report for the Fire Training Burn Pits at Marine Corps Base, Camp Pendleton, California	KEA Env., Inc.
SD-06901	Armas, Lupe E.	1996	Camp Pendleton-Milcon Project P-659	Lupe E. Armas
SD-06902	Widell, Cherilyn	1997	Conforming Storage Facility Construction Fiscal Year 2000, Camp Pendleton San Diego County	Cherilyn Widell
SD-06907	Berryman, Stanley	1998	New Housing Wine Mountain Site at Camp Pendleton, San Diego County	Stanley Berryman
SD-07316	York, Andrew and John Brogan	2000	Draft Report Archaeological Investigation in Support of Flood Repair Projects Marine Corps Air Station, Camp Pendleton.	Andrew York
SD-07317	Pigniolio, Andrew	1999	Archaeological Construction Monitoring, Evaluation, and Data Recovery Military Construction Projects	James and Brigg's Archaeological Services
SD-07391	Reddy, Seetha	2000	Archaeological Survey of Mike and November Training Areas on Camp Pendleton Marine Corps Base, San Diego County	ASM

Report #	Authors	Year	Report Title	Company
SD-08246	**Cheever, Dayle and Russel O. Collett**	**2002**	**Results of a Phase I Survey of Nine Cantonment Areas, USMCB Camp Pendleton, Oceanside, CA (Task Order No. 0008, Contract No. N68711-98-D-5763**	**RECON**
SD-09017	Wahoff, Tanya and Andrew L. York	2003	Construction Monitoring Program In Support of Flood Repair Projects Marine Corps Air Station Camp Pendleton San Diego County, California	EDAW, INC.
SD-09730	Glenn, Brian F.	2005	Construction Monitoring Report for MILCO P-068 Iron/Manganese phase II raw water collection line, Marine Corps Base Pendleton, California	Glenn, Brian F
SD-10183	Becker, Mark S. and Micah J Hale	2006	From the coast to the Inland: Prehistoric Settlement Systems Along the Las Pulgas Corridor, Camp Pendleton, California Volume I and II	ASM Affiliates
SD-10496	**U.S. Department of the Navy**	**2006**	**Final Results of the Condition Assessment, Site Monitoring, and Effects Treatment Program**	**N/A**
SD-11272	Various	N/A	Santa Margarita Ranch House	N/A
SD-11460	**Reddy, Seetha N.**	**2007**	**A Programmatic Approach for National Register Eligibility Determinations of Prehistoric Sites Within the Southern Coast Archaeological Region, California**	**Statistical Research, Inc.**
SD-11836	**Hale, Micah J. and Mark S. Becker**	**2007**	**An Archaeological Survey of Selected Areas for the Repair of 24 Access Roads to Training Ranges, Marine corps base, Camp Pendleton, San Diego County, California**	**ASM Affiliates**
SD-11973	**Berryman, Stanley**	**2008**	**Replace Existing Steel and Poly-Vinyl Chloride (PVC) Gas Lines with High Density Polyethylene (HDPE) Gas Lines in Various Areas of MCB Camp Pendleton**	**Marine Corps Base Camp Pendleton**
SD-12586	Bonner, Wayne, Marnie Aislin-Kay, and Kathleen Crawford	2009	Cultural Resource Records Search and Site Visit Results for AT&T Mobility, LLC Candidate SNDGCA0787 (Airstation Overlook), Vandegrift Boulevard and Powder Avenue, Camp Pendleton, San Diego County, California	Michael Brandman Associates
SD-12590	Bonner, Wayne, Marnie Aislin-Kay, and Kathleen Crawford	2009	Cultural Resource Records Search and Site Visit Results for Crickey Communications Facility Candidate SAN-169A (Rattlesnake Canyon), 2611 Vandegrift Boulevard, Camp Pendleton, San Diego County, California	Michael Brandman Associates

Report #	Authors	Year	Report Title	Company
SD-12896	United States Marine Corps	2004	Install Security Fence, 25 Area	United States Marine Corps
SD-13231	United States Marine Corps	2011	Section 106 Consultation for Construction of Bachelors Enlisted Quarters, 24 Area, Camp Pendleton	United States Marine Corps
SD-13265	**York, Andrew L.**	**2009**	**Cultural Resources Inventories in Support of the Environmental Impact Statement for Basewide Infrastructure Improvements, Marine Corps Base Camp Pendleton**	**AECOM, Inc.**
SD-13403	Tennesen, Kristin	2011	ETS #22023, Cultural Resources Survey for the Erosion Repair, TT10301, Z123360, Camp Pendleton Project, San Diego County, California (HDR #174728)	HDR, Inc.
SD-13496	**Byrd, Brian F. and Nathan Stevens**	**2011**	**Historic Properties Treatment Plan for the Initial Phase of Construction of the P-1093 and P-1094 Communications and Electrical Upgrade Projects, Marine Corps Base Camp Pendleton, Sand Diego Count, California**	**Far Western Anthropological Research Group, Inc.**
SD-13512	York, Andrew L.	2011	Supplemental Cultural Resources Survey for MILCON P-1094, Basewide Utility Infrastructure, Marine Corps Base Camp Pendleton	AECOM
SD-13514	United States Marine Corps	2012	Section 106 consultation for Replacing 5 Inch Natural Gas PVC Pipe with HDPE 13 Area to 27 Area	US Marine Corps
SD-13518	United States Marine Corps	2011	Section 106 Consultation for Replacement Warehouse (P-1037), 22 Area, Santa Margarita Watershed, Camp Pendleton	US Marine Corps
SD-13568	Whitaker, James E.	2010	ETS #20811, Cultural Resources Survey for the Pole Replacements P28495, P28496, P29152, P28611 CPEN Project, Marine Corps Base Camp Pendleton, San Diego County, California	HDR
SD-13583	Tennesen, Kristin	2012	ETS #21317, Cultural Resources Survey for the Pole Replacements Z123368 Project, Marine Corps Base Camp Pendleton, San Diego County, California	HDR
SD-13587	Morgan, Nichole B.	2011	ETS #21273, Cultural Resources Survey for the Transmission Pole Replacements Z564953 and Z29206 Project, Marine Corps Base Camp Pendleton, San Diego County, California	HDR

Report #	Authors	Year	Report Title	Company
SD-13623	Whitaker, James E	2011	Addendum to ETS #21192, Cultural Resources Survey for the Pole Replacement, Z28615 Project, Marine Corps Base Camp Pendleton, San Diego County, California	HDR
SD-13669	United States Marine Corps	2010	Section 106 Consultation of Two Air Traffic Control Transmitter and Receiver Sites, Area 32, Camp Pendleton	United States Marine Corps
SD-13832	United States Marine Corps	2012	Section 106 Consultation for Project Amendment to Gas Pipe Replacement, 13 Area to 27 Area, Camp Pendleton	United States Marine Corps
SD-13870	United States Marine Corps	2012	Section 106 Consultation for Boiler Retrofits in 15 Buildings, Camp Pendleton	United States Marine Corps
SD-14058	**Stringer-Bowsher, Sara and Dan Kelloren**	**2013**	**Historic Context Study for Marine Corps Base Camp Pendleton San Diego County, California**	**ASM Affiliates, Inc.**
SD-14059	**Daniel, James T., Megan Black, Tony Quach, and Mark S. Becker**	**2011**	**Final Results of the Condition Assessment, Site Monitoring, and Effects Treatment Plan (CASMET) Marine Corps Base Camp Pendleton, San Diego County, California**	**ASM Affiliates, Inc.**
SD-14096	**Becker, Mark S., Dave Iversen, Sarah Stringer-Bowsher, and Michelle Dalope**	**2012**	**Final Archaeological Survey for the Santa Margarita River Conjunctive Use Project, Marine Corps Base Camp Pendleton San Diego County, California**	**ASM Affiliates, Inc.**
SD-14100	**United States Marine Corps**	**2009**	**Draft Final Environmental Assessment Advanced Water Treatment Facility/Utility Corridor Project (P-113) at Marine Corps Base Camp Pendleton San Diego County, California**	**United States Marine Corps**
SD-14214	**Berg, John and Brian F. Byrd**	**2013**	**2012 Condition Assessment, Site Monitoring, and Effects Treatment (CASMET) Study, MCB Camp Pendleton, San Diego County, California**	**Far Western Anthropological Research Group, Inc.**
SD-14455	Page, Danielle M.	2013	Section 106 Consultation for Installation of Window Film in 33 Facilities, Camp Pendleton	United States Marine Corps
SD-14479	Page, Danielle M.	2013	Section 106 Consultation for Replacement of Water Valve and Pipe Inspection, Santa Margarita Ranch House, Camp Pendleton	United States Marine Corps
SD-14556	Page, Danielle M.	2013	Renew-Repair Portable Water Storage Tank Building 25191, Marine Corps Base Camp Pendleton	United States Marine Corps

Report #	Authors	Year	Report Title	Company
SD-14709	**Tennesen, Kristin**	**2014**	**Cultural Resources Inventory and Survey of the SDG&E Access Road Grading Project Marine Corps Base Camp Pendleton San Diego County, California**	**HDR, Inc.**
SD-14715	**Byrd, Brian F., John Berg, Michael Darcangelo, Hannah Sistruck, Rebecca Kellawan, and Adrian Whitaker**	**2014**	**Cultural Resources Data Recovery Investigations for the P-1048 Electrical Distribution Project, Marine Corps Base Camp Pendleton, San Diego County, California**	**Far Western Anthropological Research Group, Inc.**
SD-14847	York, Andrew L.	2012	Historic Properties Treatment Plan for Modifications to Taps 12 in Support of MILCON P-1043 and P-1093, Marine Corps Base Camp Pendleton, California	AECOM
SD-15198	Tennesen, Kristin	2012	ETS #22507, Cultural Resources Survey for the Transmission Pole Replacement, Z123367 Project, Camp Pendleton Project, San Diego County, California (HDR #184724)	HDR
SD-15445	Brian F. Byrd, Hannah Sistrunk, and Courtney Higgins	2015	Archaeological Monitoring Completion Report for the P-113 Advance Water Treatment Facility and Utility Corridor Project, Marine Corps Base Camp Pendleton, San Diego County, California	Far Western Anthropological Research Group, Inc.
SD-15836	D. M. Page	2014	CIS Facilities 27 Area Site (20130384)	US Marine Corps
SD-15839	D. M. Page	2014	Demolish Buildings 1331 and 13145 (20140072, 20140096)	US Marine Corps
SD-15984	**Hannah Sistrunk, Courtney Higgins, and Brian F. Byrd**	**2015**	**Archaeological Monitoring and Unanticipated Discoveries Evaluation Report for the P-1093 and P-1094 BUI Communications and Electrical Upgrades Projects, Marine Corps Base Camp Pendleton, San Diego County, California**	**Far Western Anthropological Research Group, Inc.**
SD-16002	Brian F. Byrd, John Berg, Michael Darcangelo, and Hannah Sistrunk	2015	Data Recovery Investigations at 15 Cultural Resources for the P-1093 and P-1094 BUI Communications and Electrical Upgrades Projects, Marine Corps Base Camp Pendleton, San Diego County, California, Volumes I and II	Far Western Anthropological Research Group
SD-16014	Far Western Anthropological Research Group	2013	Historic Properties Treatment Plan for the P-1044 Advanced Water Treatment Plant Project, Marine Corps Base Camp Pendleton, San Diego County, California	Far Western Anthropological Research Group, Inc.
SD-16027	D. M. Page	2015	Various Reports at Building 1133 (20150125)	United States Marine Corps

Report #	Authors	Year	Report Title	Company
SD-16031	D. M. Page	2015	Continuing Consultation Marine Corps Air Station Clear Zone (20110344)	United States Marine Corps
SD-16034	D. M. Page	2014	Amended Undertaking and 100 Percent Design, Basewide Utility Infrastructure Improvements P-1048 CERS 4	United States Marine Corps
SD-16070	D. M. Page	2013	Modification to Amendment and 100 Percent Design Plans for Undertaking for Base-Wide Utility Infrastructure (BUI) Improvements P-1093 CERS) Marine Corps Base, Camp Pendleton (20090278P1093E)	United States Marine Corps
SD-16098	**N/A**	**2013**	**Addendum 2: Historic Properties Treatment Plan for the Initial Phase of Construction of the P-1093 and P-1094 Communications and Electrical Upgrade Projects, Marine Corps Base Camp Pendleton, San Diego County, California**	**Far Western Anthropological Research Group, Inc**
SD-16106	**N/A**	**2012**	**Historic Properties Treatment Plan for Phase I Construction of the P-1048 Electrical Distribution Project, Marine Corps Base Camp Pendleton, San Diego County, California**	**Far Western Anthropological Research Group**
SD-16107	**D. M. Page**	**2012**	**Consultation on l100% Design Plan for Base-Wise Utility Infrastructure (BUI) Improvements (P-1048) Marine Corps Base Camp Pendleton (20090278P1048)**	**United States Marine Corps**
SD-16108	**Wayne Glenny**	**2013**	**Cultural Resources Evaluations OF CA-SDI-4427, -13931/H, and -16198 in Support of P-1093 CERS 2, P-1094 CERS 2, AND P-1094 CERS 3, Marine Corps Base Camp Pendleton, California**	**AECOM**
SD-16125	W. H. Berry	2012	Amended Undertaking and 100 Percent Design for Basewide Utility Infrastructure (BUI) Improvements (P-1094B), Marine Corps Base, Camp Pendleton	United States Marine Corps
SD-16375	Page, D.M.	2015	Building 22180 Eligibility Determination (20150302)	United States Marine Corps
SD-16474	Glenny, Wayne and Joy, Julie	2013	Cultural Resources Inventory in Support of P-1046 Sea Marine Corps Base Camp Pendleton, California	AECOM

Report #	Authors	Year	Report Title	Company
SD-16475	**Page, D.M.**	**2013**	**Addendum 2 Historic Properties Treatment Plan for the Base-Wide Utility Infrastructure (BUI) Improvements MILCONS P-1093 AND P-1094 CERS 3**	**United States Marine Corps**
SD-16493	**Page, D.M.**	**2013**	**Amended Undertaking And 100 Percent Design, Basewide Utility Infrastructure Improvements P-1048 CERS 3**	**United States Marine Corps**
SD-16508	Schroth, Adella B.	1996	Cultural Resource Inventory of the Santa Margarita River Valley, Camp Pendleton	Gallegos and Associates
SD-16570	**Page, D.M.**	**2016**	**Repair 24 Training Range Access Roads, MCB Camp Pendleton (PE19990010)**	**United States Marine Corps**
SD-16571	**Page, D.M.**	**2016**	**Additional Information For Repair 24 Training Range Access Roads, MCB Camp Pendleton (PE19990010)**	**United States Marine Corps**
SD-16737	Mattingly, Scott	2016	Cultural Resources Survey Report for the Potable Water Distribution System Repair Project (20090356b), Marine Corps Base Camp Pendleton, San Diego County, California	United States Marine Corps
SD-16807	Becker, Mark S. and Quach, Tony	2016	2015 Archaeological Survey of a 2,500-Acre Portion of the Basilone Complex Wildland Fire Marine Corps Base Camp Pendleton San Diego County, California: CA-SDI-4418, -10688, -10690, -10691, -10692, -10694, -10698, -10711, -13988, -13990, -13991, -13994, -13995, -14005, -14637, -14664, -14681, -14682, -14683, -14696, -14697, -14702, -14708, -14709, -14710, -14711, -14743, AND -19390	ASM Affiliates
SD-16809	Quach, Tony	2017	2015 Archaeological Survey of 5,000 Acres For 2014 Section 110 Compliance on Marine Corps Base Camp Pendleton, San Diego County, California: BWI-S-1, CA-SDI-4411, -4421, -4916, -5925, -5926, -9568, -9569, -9570, -9577, -10226, -10696, -12574, -12575, -13656, -13658, -13661, -13932, -13943, -13979, -13980, -13981, -13983, -13986, -13987, -13988, -13989, -13992, -13993, -13999, -14005, -14006, -14694, -14734, -15842, -16009, -14147, -19382, -19383, -19384, AND -19389	Quach, Tony

Report #	Authors	Year	Report Title	Company
SD-16846	Harvey, Stephen L.	2016	Archaeological Monitoring and Discovery Plan to Support MILCON P-1046 Reclaimed Water and Wastewater Conveyance Marine Corps Base Camp Pendleton San Diego County, California	ASM Affiliates, Inc
SD-16847	**Whitaker, James E. and Tennesen, Kristin**	**2016**	**Final Report Archaeological Monitoring for the P-1048 Project (Upgrades to Electrical Systems And Associated Facilities)**	**HDR Environmental, Operations and Construction, Inc.**
SD-17414	Tennesen, Kristin	2018	ETS #36694, Cultural Resources Survey for the L49-102 6 IN STL, Potential Shallow Areas Project, Marine Corps Base Camp Pendleton, San Diego County, California	HDR
SD-17830	Page, D.M.	2017	Consultation for Weekend of Service at Santa Margarita Ranch House, Chapel, and Grounds (PE20170047)	United States Marine Corps
SD-17977	Page, D.M.	2017	Consultation for Interim Roof Repair of Santa Margarita Bunkhouse Marine Corps Base, Camp Pendleton	United States Marine Corps
SD-18061	**Page, D.M.**	**2018**	**San Diego Gas and Electric Pole Inspection (20170138)**	**United States Marine Corps**
SD-18062	**Tennesen, Kristin**	**2017**	**Recommendations for Cultural Resources Protection and Avoidance for the Camp Pendle-ton Pole Inspections Project**	**HDR, Inc.**
SD-18066	Levi, Dean F.	2019	Consultation for Water Damage Repair at Santa Margarita Chapel Marine Corps Base, Camp Pendleton	United States Marine Corps
SD-18067	Page, D.M.	2010	Repairs to Lake O'Neill (20040021A)	Unites States Marine Corps
SD-18073	Page, D.M.	2011	Consultation of Post-Review Discovery for P-1093 Marine Corps Base, Camp Pendleton	United States Marine Corps
SD-18279	Mattingly, Scott, Kelli Brasket, and Sue Leary	2018	Archaeological Site Location Suitability Modeling Through GIS for the Impact Areas at Marine Corps Base Camp Pendleton	Marine Corps Base Camp Pendleton
SD-18377	Tennesen, Kristin	2018	ETS 39675: Cultural Resources Survey Report for the CMP Pole Replc. P196686 CPEN Project, Marine Corps Base Camp Pendleton, San Diego County, California	HDR
SD-18481	MCAS Camp Pendleton	2010	Marine Corps Base Camp Pendleton Integrated Cultural Resources Management Pan (ICRMP)	MCAS Camp Pendleton

Report #	Authors	Year	Report Title	Company
SD-19083	**Foglia, Alberto B.**	**2020**	**ETS 22247.01: Cultural Resources Monitoring Report for the TL6912 Wood to Steel & Reconductor Project**	**PanGIS**
SD-19818	Higgins, Courtney	2022	FINAL Cultural Resources Survey in Support of the Wildfire Prevention Plan in Accordance With Section 106 of the National Historic Preservation Act, MCB Camp Pendleton, San Diego County, California	Far Western Anthropological Research Group, Inc.
SD-19819	Higgins, Courtney and Brian F. Byrd	2022	Final Condition Assessment, Site Monitoring, and Effects Treatment (CASMET), Cycle 11 Field Inspection, Marine Corps Base Camp Pendleton, San Diego County, CA	Far Western Anthropological Research Group, Inc.

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

Primary No.	Trinomial	Age[1]	Description	Most Recent Recording Event	Previous CEQA Evaluation
P-37-004418	CA-SDI-004418	NA	Single bedrock milling station	2015 (ASM Affiliates)	Unknown
P-37-010156/ P-37-012599	CA-SDI-010156/ CA-SDI-012599	MC	Santa Margarita Ranch, and precontact village site, possibly the Luiseño village Topamai	2021 (Far Western)	Listed on NRHP, Listing No. 71000180
P-37-013969	CA-SDI-013931	MC	Sparse marine shell scatter, and historic artifact deposit.	2013 (Far Western)	Recommended ineligible
P-37-014028	CA-SDI-013982	NA	Ground stone scatter. Artifacts not relocated in updates.	2016 (ASM Affiliates)	Unknown
P-37-014032	CA-SDI-013986	NA	Habitation site	2021 (Far Western)	Recommended eligible
P-37-014033	CA-SDI-013987	MC	Precontact & Historic artifact scatter	2016 (ASM Affiliates)	Unknown
P-37-014034	CA-SDI-013988	NA	Three bedrock milling features & three cupules.	2016 (ASM Affiliates)	Unknown
P-37-014035	CA-SDI-013989	NA	Milling features, and artifact scatter; ground stone, lithic tools, debitage, and faunal remains.	2016 (ASM Affiliates)	Unknown

[1] NA = Native American, H = Historic, MC = Multi-Component, M = Modern

Primary No.	Trinomial	Age[1]	Description	Most Recent Recording Event	Previous CEQA Evaluation
P-37-014039	CA-SDI-013993	MC	Precontact milling features, ground stone, debitage, and faunal remains. Historic rock ring and associated cans.	2016 (ASM Affiliates)	Unknown
P-37-014051	CA-SDI-014005	H	California Southern Railroad -Atchinson, Topeka, and Santa Fe Railroad	2022 (Statistical Research, Inc.)	Determined Not Eligible for NRHP
P-37-014127	N/A	N/A	Shell scatter recorded as a "non-site," i.e., not cultural.	1995 (Gallegos and Associates)	N/A
P-37-014128	N/A	N/A	Shell scatter recorded as a "non-site," i.e., not cultural.	1995 (Gallegos and Associates)	N/A
P-37-014130	N/A	N/A	Shell scatter recorded as a "non-site," i.e., not cultural.	1995 (Gallegos and Associates)	N/A
P-37-015824	**N/A**	**H**	**Remnants of a laundry facility constructed in 1944**	**1997 (KEA)**	**Not evaluated, or needs re-evaluation**
P-37-016081	CA-SDI-014637	MC	Bedrock milling station & Owens-Illinois bottle	2015 (ASM)	Unknown
P-37-024416	N/A	NA	Isolated unifacial man2002 (RECON)	Not Eligible	
P-37-024417	CA-SDI-016196	NA	Lithic scatter	2002 (RECON)	Not evaluated, or needs re-evaluation
P-37-024425	CA-SDI-016204	NA	Lithic scatter	2002 (RECON)	Unknown
P-37-024566	N/A	NA	Isolated core or chopper	2002 (RECON)	Not Eligible
P-37-033795	CA-SDI-021232	H	Refuse scatter	2014 (Far Western)	Unknown
P-37-035746	N/A	NA	Isolated metavolcanic flake	2015 (ASM)	Not Eligible
P-37-035757	CA-SDI-021850	NA	Bedrock milling slick	2015 (ASM)	Unknown
P-37-035758	CA-SDI-021851	NA	Bedrock milling slick	2015 (ASM)	Unknown
P-37-035759	CA-SDI-021852	NA	4 bedrock milling slicks	2015 (ASM)	Unknown
P-37-035762	NA	H	Storage tank built between 1946 and 1953.	2015 (ASM)	Unknown
P-37-036361	N/A	NA	Redeposited shell scatter. Unlikely to be cultural.	2015 (ASM Affiliates)	Unknown
P-37-036375	CA-SDI-022024	NA	Lithic scatter	2015 (ASM Affiliates)	Unknown

Primary No.	Trinomial	Age[1]	Description	Most Recent Recording Event	Previous CEQA Evaluation
P-37-036383	CA-SDI-022032	H	Fragmented glass and ceramic deposit	2015 (ASM Affiliates)	Unknown
P-37-037835	N/A	H	Storage facilities at USMC Base Camp Pendleton	2014 (HDR Inc.)	Recommended Not Eligible for NRHP
P-37-037836	N/A	H	BEQ buildings at USMC Base Camp Pendleton	2014 (HDR Inc.)	Recommended Not Eligible for NRHP
P-37-037837	N/A	H	Storage facilities at USMC Base Camp Pendleton	2014 (HDR Inc.)	Recommended Not Eligible for NRHP
P-37-037849	N/A	H	Gymnasium at USMC Base Camp Pendleton	2014 (HDR Inc.)	Recommended Not Eligible for NRHP
P-37-037856	N/A	M	Hobby Shop and storage shelters at USMC Base Camp Pendleton	2014 (HDR Inc.)	Recommended Not Eligible for NRHP
P-37-037859	N/A	H	Miscellaneous small buildings at USMC Base Camp Pendleton	2014 (HDR Inc.)	Recommended Not Eligible for NRHP
P-37-037860	N/A	H	Officer's Field Mess Group at USMC Base Camp Pendleton	2014 (HDR Inc.)	Recommended Not Eligible for NRHP
P-37-037929	N/A	H	Warehouse at USMC Base Camp Pendleton	2014 (HDR Inc.)	Recommended Not Eligible for NRHP
P-37-037933	N/A	H	Bus shelters at USMC Base Camp Pendleton	2014 (HDR Inc.)	Recommended Not Eligible for NRHP
P-37-037934	N/A	H, M	Fire Station at USMC Base Camp Pendleton	2014 (HDR Inc.)	Recommended Not Eligible for NRHP
P-37-037937	N/A	H, M	Small Shop Buildings at USMC Base Camp Pendleton	2014 (HDR Inc.)	Recommended Not Eligible for NRHP
P-37-037940	N/A	H	Chaplain's Office at USMC Base Camp Pendleton	2014 (HDR Inc.)	Recommended Not Eligible for NRHP
P-37-037944	N/A	M	Aircraft operations building at USMC Base Camp Pendleton	2014 (HDR Inc.)	Recommended Not Eligible for NRHP
P-37-037945	N/A	M	Control tower at USMC Base Camp Pendleton	2014 (HDR Inc.)	Recommended Not Eligible for NRHP

Primary No.	Trinomial	Age[1]	Description	Most Recent Recording Event	Previous CEQA Evaluation
P-37-037946	N/A	M	Armory at USMC Base Camp Pendleton	2014 (HDR Inc.)	Recommended Not Eligible for NRHP
P-37-037948	N/A	M	Hangars at USMC Base Camp Pendleton	2014 (HDR Inc.)	Recommended Not Eligible for NRHP
P-37-037949	N/A	M	Hazardous/ Flammable Storage at USMC Base Camp Pendleton	2014 (HDR Inc.)	Recommended Not Eligible for NRHP
P-37-037952	N/A	M	BEQ buildings at USMC Base Camp Pendleton	2014 (HDR Inc.)	Recommended Not Eligible for NRHP
P-37-037953	N/A	M	BEQ buildings at USMC Base Camp Pendleton	2014 (HDR Inc.)	Recommended Not Eligible for NRHP
P-37-037954	N/A	M[2]	Brig Complex at USMC Base Camp Pendleton	2014 (HDR Inc.)	Recommended Not Eligible for NRHP
P-37-037955	N/A	H, M	Brig Work Annex at USMC Base Camp Pendleton	2014 (HDR Inc.)	Recommended Not Eligible for NRHP
P-37-037956	N/A	M	Dining Facility at USMC Base Camp Pendleton	2014 (HDR Inc.)	Recommended Not Eligible for NRHP
P-37-037957	N/A	M	Telephone Exchange at USMC Base Camp Pendleton	2014 (HDR Inc.)	Recommended Not Eligible for NRHP
P-37-037958	N/A	M[3]	Brig Complex at USMC Base Camp Pendleton	2014 (HDR Inc.)	Recommended Not Eligible for NRHP
P-37-037959	N/A	M	Marine Corps Exchange at USMC Base Camp Pendleton	2014 (HDR Inc.)	Recommended Not Eligible for NRHP
P-37-037960	N/A	H, M	Miscellaneous Small Buildings at USMC Base Camp Pendleton	2014 (HDR Inc.)	Recommended Not Eligible for NRHP
P-37-037961	N/A	H	Vehicle maintenance building at USMC Base Camp Pendleton	2014 (HDR Inc.)	Recommended Not Eligible for NRHP
P-37-037962	N/A	M	Automotive organizational shop at USMC Base Camp Pendleton	2014 (HDR Inc.)	Recommended Not Eligible for NRHP

[2] Recorded as modern but is now older than 50 years in age.

[3] Recorded as modern but is now older than 50 years in age.

Primary No.	Trinomial	Age[1]	Description	Most Recent Recording Event	Previous CEQA Evaluation
P-37-037963	N/A	M	Electronics/ communi-cations maintenance shop at USMC Base Camp Pendleton	2014 (HDR Inc.)	Recommended Not Eligible for NRHP
P-37-037964	N/A	M	Hazardous material storage at USMC Base Camp Pendleton	2014 (HDR Inc.)	Recommended Not Eligible for NRHP
P-37-037965	N/A	H	Dining and adjoining buildings at USMC Base Camp Pendleton	2014 (HDR Inc.)	Recommended Not Eligible for NRHP
P-37-037966	N/A	H	Maintenance buildings at USMC Base Camp Pendleton	2014 (HDR Inc.)	Recommended Not Eligible for NRHP
P-37-037968	N/A	H	Miscellaneous Public Works at USMC Base Camp Pendleton	2014 (HDR Inc.)	Recommended Not Eligible for NRHP
P-37-037969	N/A	H, M	Miscellaneous Small Buildings at USMC Base Camp Pendleton	2014 (HDR Inc.)	Recommended Not Eligible for NRHP
P-37-037970	N/A	H, M	Storage Facilities at USMC Base Camp Pendleton	2014 (HDR Inc.)	Recommended Not Eligible for NRHP
P-37-038113	N/A	H, M[4]	Quonset huts at USMC Base Camp Pendleton	2014 (HDR Inc.)	Recommended Not Eligible for NRHP
P-37-038114	N/A	H, M	Quonset huts at USMC Base Camp Pendleton	2014 (HDR Inc.)	Recommended Not Eligible for NRHP

Tribal Consultation

Aspen's August 10, 2023, request to the NAHC, on behalf of the CEC, to search its Sacred Lands File returned positive results, indicating that the NAHC does have records of Native American cultural resources in the search area. The CEC as the lead agency is responsible for all tribal consultations, the results of which are outlined at a high level below, due to confidentiality.

The CEC's Consultation. The NAHC's September 8, 2023, search of the Sacred Lands File returned positive results, indicating that the NAHC does have record of Native American cultural resources in the search area. Aspen, on behalf of CEC, sent out consultation letters under AB 52 and CEC's Tribal Consultation Policy on August 28, 2024 (Aspen 2024b), with a brief description of the proposed project and invited consultation to the 21 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 AB 52 and CEC Tribal

[4] One resource recorded as modern but is now older than 50 years in age.

Consultation Policy. Follow-up emails and/or phones calls were made on September 12, 2024.

The CEC received requests for consultation from the Rincon Band of Luiseno Indians and Pechanga Band of Indians on September 12, 2024, and September 23, 2024, respectively. Both tribes requested copies of technical documents such as the project description, cultural report, and biological and geological information. All requested documents were sent to each tribe prior to initiated consultation. Grading plans were also requested and sent. No additional consultation requests were received within the 30-day response period.

CEC initiated formal government to government consultation with Rincon Band of Luiseno Indians on October 1, 2024, followed by a site visit which was held on October 17, 2024. Rincon Band of Luiseno Indians sent a follow up letter on October 18, 2024, with suggested mitigation measures which were incorporated into this analysis.

CEC initiated formal government to government consultation with Pechanga Band of Indians on October 14, 2024. Mitigation was suggested and incorporated into this analysis as potential tribal cultural resources were identified in the vicinity. Consultation with both tribes is ongoing.

Archaeological Survey

The archaeological survey did not identify archaeological or ethnographic resources in the PAA. Ground surface visibility ranged greatly 0% to 100% due to thick vegetation and paved areas. The PAA has been heavily disturbed by pasted grading.

Built Environment Survey

The built environment survey identified a total of 10 resources, one historic road and 9 built environment resources, within the built environment PAA. In-depth historical research was conducted for all built environment features identified during the field survey. Based on the results of this research, eight properties were eliminated from CRHR evaluation as being less than 50 years in age or had a previous eligibility that was concurred with. Aspen formerly evaluated two built environment resources for the CRHR and local guidelines and concluded that none are eligible for the CRHR or listing on a local 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 PAA includes: active alluvial flood plain deposits characterized by unconsolidated to locally poorly consolidated sand and gravel deposits in active flood plains and the Santiago Formation characterized as marine sandstone with siltstone interbeds. The Santiago Formation is from the Eocene Epochs (approximately 30-50 million years ago), long before the first human habitation of the PAA.

The SCIC record search does have reports on file that document subsurface excavations or observations, which did report some subsurface archaeological resources, primarily midden deposits. These reports are located outside of the PAA. The PAA has also been heavily disturbed in the past, with grading of Haybarn Canyon of up to 4 feet from on field observations. Based on the record search information, the extent of previous disturbance of the Project Site, the geology of the PAA, and the estimated maximum excavation depth of four feet, the potential for subsurface buried archaeological resources is low.

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

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 an analysis of geology information and previous disturbance in the Project Site, indicate that the PAA has a low potential for buried archaeological deposits.

The ground disturbance required for construction of the proposed project, specifically grading a trenching would extend into native soils up to approximately four feet below grade mostly in previously disturbed soil due to the construction and grading of the existing substation in Haybarn Canyon. While the potential to encounter unknown buried deposits is low, if unanticipated cultural resources were to be damaged during construction, it would be considered a significant impact without mitigation.

The proposed mitigation measures (MM) require worker awareness program (CUL-1), the development of a cultural resources monitoring plan (CRMP) to outline monitoring procedures (CUL-2), Native American monitoring (CUL-3), procedures for the event that unknown Native American archaeological or historic resources are encountered during excavation or grading of the site (CUL-4), and procedures for the event that unknown human remains are discovered (CUL-5), which will reduce impacts to unknown buried historical resources. It is our conclusion that with implementation of MM CUL-1 through MM CUL-5 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 an analysis of geology information in the Project vicinity, indicate that the PAA has a low potential for buried archaeological deposits.

The ground disturbance required for construction of the proposed project, specifically grading a trenching would extend into native soils up to approximately four feet below grade mostly in previously disturbed soil due to the construction and grading of the existing substation in Haybarn Canyon. While the potential to encounter unknown buried deposits is low, if unanticipated cultural resources were to be damaged during construction, it would be considered a significant impact without mitigation.

The proposed mitigation measures (MM) require worker awareness program (CUL-1), the development of a CRMP (CUL-2), Native American monitoring (CUL-3), procedures for the event that unknown Native American archaeological or historic resources are encountered during excavation or grading of the site (CUL-4), and procedures for the event that unknown human remains are discovered (CUL-5), which will reduce impacts to unknown buried resources that could be considered unique archaeological resources. It is our conclusion that with implementation of MM CUL-1 through MM CUL-5 impacts to buried archaeological 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 an analysis of geology information in the Project vicinity, indicate that the PAA has a low potential for buried archaeological deposits, including the presence of human remains.

The ground disturbance required for construction of the proposed project, specifically grading a trenching would extend into native soils up to approximately four feet below grade mostly in previously disturbed soil due to the construction and grading of the existing substation in Haybarn Canyon. While the potential to encountered unknown buried deposits, including human remains, is low, if unanticipated human remains were

to be damaged during construction, it would be considered a significant impact without mitigation.

The proposed mitigation measures (MM) require worker awareness program (CUL-1), development of a CRMP (CUL-2), Native American Monitoring (CUL-3), procedures for the event that unknown Native American archaeological or historic resources are encountered during excavation or grading of the site (CUL-4), and procedures for the event that unknown human remains are discovered (CUL-5), which will reduce impacts to unknown buried resources including human remains. It is our conclusion that with implementation of MM CUL-1 through MM CUL-5 impacts to human remains would be reduced to a less-than-significant level.

Operation

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

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. Tribal Cultural Resources have been identified by the within the PAA. 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 profile of the proposed project. Impacts on tribal cultural resources listed or eligible for listing in the CRHR or other state registers, NRHP, or local register of historical resources would therefore not occur during operation or 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 no known Tribal Cultural Resources have been identified to date 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 Native American archaeological resources that could qualify as Tribal Cultural Resources. If such resources were to be exposed or destroyed, it would be a significant impact without mitigation. Implementation of MM CUL-1 through MM CUL-5 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 profile of the proposed project. Impacts on tribal cultural resources listed or eligible for listing in the CRHR or other state registers, NRHP, or local register of 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: **Cultural Resources Monitoring Plan.** Prior to commencement of construction, the qualified archaeological specialist will develop a Cultural Resources Monitoring Plan (CRMP) to guide the procedures and protocols of a mitigation-monitoring program that shall be implemented within the

project boundaries during all ground disturbing activities. The CRMP will be prepared in consultation with the Rincon Band of Luiseño Indians and Pechanga Band of Indians. It will outline the project schedule; address the methodology for grading activity observation by the monitors; and shall include a treatment plan, based on the project mitigation measures and conditions of approval, should any cultural resources be identified. The extent of the monitoring program will be dependent upon the project duration and complexity of ground disturbing activities. The CRMP shall be submitted to the CEC at least 60 days prior to the start of construction for review and approval.

MM CUL-3: Archaeological and Native American Monitoring. Prior to commencement of construction, the applicant will secure the services of a qualified archaeologist and Native American monitors to observe all ground disturbing activity. Preference in selecting Native American monitors shall be given to Rincon Band of Luiseño Indians and Pechanga Band of Indians members of the with:

- Traditional ties to the area being monitored.
- Knowledge of local Native American village sites.
- Knowledge and understanding of Health and Safety Code, section 7050.5, and Public Resources Code, section 5097.9 et seq.
- Ability to effectively communicate the requirements of Health and Safety Code, section 7050.5, and Public Resources Code, section 5097.9 et seq.
- Ability to work with law enforcement officials and the Native American Heritage Commission to ensure the return of all associated grave goods taken from a Native American grave during excavation.
- Ability to travel to project sites within traditional tribal territory.
- Knowledge and understanding of Title 14, California Code of Regulations, section 15064.5.
- Ability to advocate for the preservation in place of Native American cultural features through knowledge and understanding of CEQA mitigation provisions.
- Ability to read a topographical map and be able to locate site and reburial locations for future inclusions in the Native American Heritage Commission's Sacred Lands Inventory.
- Knowledge and understanding of archaeological practices, including the phases of archaeological investigation.

If members of the Rincon Band of Luiseño Indians and Pechanga Band of Indians are unavailable for monitoring, the applicant may retain one or more monitors from another affiliated Luiseño tribe, if the monitor(s) meet the qualifications specified above.

MM CUL-4: **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 CEC shall be notified, and a Secretary of the Interior-qualified archaeologist, in consultation with Rincon Band of Luiseno Indians and Pechanga Band of Indians, 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, Rincon Band of Luiseno Indians and Pechanga Band of Indians will be 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 or resuming ground disturbing activity.

If the find meets the definition of a historical, unique archaeological, or Tribal Cultural Resource, then the Secretary of the Interior-qualified archaeologist, in consultation with Rincon Band of Luiseno Indians and Pechanga Band of Indians as necessary, 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 and Rincon Band of Luiseno Indians and Pechanga Band of Indians, as necessary. 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 CEC, Native American Heritage Commission (Tribal Cultural Resources), and the South Coast 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-5: **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 San Diego 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 CEC and the South Coast Information Center.

5.5.4 References

ASM 2017 - Final Integrated Cultural Resources Management Plan Update for Marine Corps Base Camp Pendleton. Prepared for Marine Corps Base Camp Pendleton. Prepared by ASM Affiliates, Inc. Carlsbad, California, September 2017. Available online at: www.pendleton.marines.mil/Portals/98/Docs/Environmental/Cultural%20Resources/Volume_I_MCB_CPen_ICRMP_Final_with_signatures.pdf

Aspen 2024a – Aspen Environmental Group (Aspen). Cultural Resources Assessment for the Haybarn Energy Reliability Center Project, prepared for California Energy Commission, May 13, 2024.

Aspen 2024b – Aspen Environmental Group (Aspen). Tribal Consultation Request Letters Mailed for the Haybarn Canyon Project, prepared for California Energy Commission, August 28, 2024.

CEC 2024 – California Energy Commission (CEC). *Tribal Consultation Policy*. CEC-130-2024-001. Sacramento, CA, February 2024.

County of San Diego 2011 – County of San Diego General Plan General Plan, Chapter 5: Conservation and Open Space Element, Cultural Resources, Goals and Policies, Updated 2011. Available online at: www.sandiegocounty.gov/pds/gpupdate/docs/BOS_Aug2011/C.1-4_Conservation_and_Open_Space.pdf

OHP 1995 – Office of Historic Preservation (OHP). *Instructions for Recording Historical Resources*. Sacramento, CA: Office of Historic Preservation. March 1995.

Section 5.06

Energy

5.6 Energy

This section describes the environmental and regulatory setting and discusses impacts associated with the construction and operation of the project specific to energy and energy resources.[1]

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, Energy Resources.

5.6.1 Environmental Setting

The HERC would provide 50 megawatts (MW) of multi-day energy storage with a storage capacity of 486 megawatt hours (MWh) using zinc hybrid cathode aqueous flow battery technology. This facility would be primarily grid-facing, meaning it would be designed to provide power to the public power grid, but would also be designed to provide power to MCB Camp Pendleton in contingency situations, such as during a regional electrical grid failure. The site sits directly adjacent to the SDG&E Pendleton Substation.

SDG&E provides most of the electricity and all of the natural gas to MCB Camp Pendleton. SDG&E owns and maintains most of the electric transmission, power, and distribution lines, and related infrastructure within the Base boundaries, but MCB Camp Pendleton also has many of its own electric transmission, power, and distribution lines. SDG&E currently provides power to MCB Camp Pendleton through a 69kV substation (SDG&E Pendleton Substation) located along Haybarn Road near the junction of Basilone Road and Vandegrift Boulevard, and through other 69kV substations such as the Stuart Mesa Substation, with radial feeds to different areas of the Base. In addition, SDG&E holds more than 1,300 acres (526 ha) of leases/right-of-way agreements within the Base for transmission lines and various associated facilities.

SDG&E provides electricity and natural gas to MCB Camp Pendleton and surrounding areas. SDG&E is a regulated public utility that provides energy service to 3.7 million people through 1.5 million electric meters and 900,000 natural gas meters in San Diego and southern Orange counties (SDG&E 2024). SDG&E's service area covers approximately

[1] This section includes staff's analysis of the project's potential impact on Energy Resources, as required by Public Resources Code section 25541 when considering a Small Power Plant Exemption.

4,100 square miles. About 55% of the electricity delivered by SDG&E comes from renewable sources, including solar and wind energy.

Regulatory

Federal

Department of Defense Instruction 4170.11. In December 2009, the DoD issued instructions to specifically include resiliency requirements on military installations. The Instruction has been updated twice since 2009. The 2018 Instruction includes the following:

- *Energy Resilience* – The DoD Components shall take necessary steps to ensure energy resilience on military installations. DoD Components shall plan and have the capability to ensure available, reliable, and quality power to continuously accomplish DoD missions from military installations and facilities (DoD 2018).
- *Energy Generation Systems, Infrastructure, Equipment, Fuel, and Testing* – DoD Components shall identify, design, and install primary power and emergency energy generation systems, infrastructure, and equipment to support their critical energy requirements.

Secretary of the Navy Energy (SECNAV) Goals and Strategies. In October 2009, the SECNAV established energy goals for the DoN's shore-based installations to meet by 2020. These goals include:

- The DoN will produce or procure at least 50 percent of the total quantity of electric energy consumed by shore-based facilities and activities each fiscal year from alternative energy sources.
- Fifty percent of DoN installations will be net zero (i.e., over the course of a fiscal year, an installation matches or exceeds the electrical energy it consumes ashore with electrical energy generated from alternative energy sources) (DoN 2019).

In support of this alternative energy goal, SECNAV chartered the 1 Gigawatt (GW) Task Force to enable DoN to procure 1 GW of renewable energy generation capacity by 2020 (DoN 2012).

State

Senate Bill 350. Senate Bill (SB) 350, the Clean Energy and Pollution Reduction Act of 2015, was enacted October 7, 2015, and took effect January 1, 2016. SB 350 (Chapter 547, Statues of 2015) codified, among other things, the state goal of increasing the procurement of electricity from renewable sources from 33 percent by 2020 to 50 percent by 2030. SB 350 also required the establishment of annual targets for statewide energy efficiency savings and demand reduction starting November 1, 2017. These energy efficiency savings and demand reductions would be designed to achieve a cumulative

doubling of statewide energy efficiency savings in electricity and natural gas use by January 1, 2030.

Senate Bill 100. SB 100, the 100 Percent Clean Energy Act of 2018, set a goal of powering all retail electricity sold in California and state agency electricity needs with renewable and zero-carbon resources by 2045. It also updated the state's Renewables Portfolio Standard to ensure that 60 percent of California's electricity will be renewable by 2030.

Assembly Bill 2514. This bill set CPUC energy storage procurement targets at 1,325 MW for facilities to be constructed and brought into service by 2024. Renewable energy generators are now required to consider energy storage components in their planning.

Local

No local regulations relating to energy have been identified that are applicable to the project.

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?

Construction and Decommissioning

Less Than Significant. Construction, commissioning, and decommissioning 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 SDG&E substation would be terminated.

While energy would be required for the construction, commissioning, and decommissioning of the project, the use of this energy would be normal for activities of this type and would not be wasteful, inefficient, or unnecessary. Further, the project would be able to store electrical energy that would increase electrical availability and improve system reliability. No potentially significant environmental impact would occur due to the direct or indirect energy consumption during the construction, commissioning, or and decommissioning of the proposed project.

Operation

Less Than Significant. Operation (including inspection and maintenance) of the project components would also require the use of minimal energy resources for routine testing

and 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 120 work hours would be required for quarterly maintenance of the site using two to three workers. Quarterly maintenance would also include servicing the battery system and auxiliary enclosures to ensure that fans used for ventilation and temperature control are operating properly. 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 batteries will come from a mix of renewable and fossil fuel-powered generation resources (i.e., gas-fired generation plants). The majority of the electricity provided to customers by SDG&E comes from renewable sources. The energy stored by the 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 batteries would partially displace fossil fuel generation (such as peaking plants) that would otherwise be used during periods of high demand or at night. The batteries would also be discharged to provide electrical energy to MCB Camp Pendleton during periods of electrical grid failure, which could displace the use of emergency backup generators.

The ratio of discharged to charged energy over the course of one full cycle, or round-trip efficiency, is upwards of 80 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).

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 be relatively small and would not constitute a wasteful, inefficient, or unnecessary consumption of energy resources. The use of this energy is necessary to maintain the long-duration battery storage project.

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

Construction, Operation, and Decommissioning

No Impact. Some upgrades are required to the SDG&E Pendleton Substation the local distribution system for the proposed project, including the installation of relays, a transmitter, telecommunication equipment, and 12-kV line extensions and connections from the project's pad-mounted switchgear. For the interconnection facilities, upgrades would include installing a receiver, meter, disconnect switch, and Supervisory Control and Data Acquisition (SCADA) recloser.

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 goals and requirements of AB 2514. Although the AB 2514 target of 1,325 MW of energy storage have been exceeded, 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 2021 SB 100 Joint Agency Report.

SDG&E's IRP includes its plan to meet the CPUC's 2022 IRP objectives and statewide clean energy goals. The project would contribute to SDG&E's efforts to achieve the benefits of energy storage on the electrical grid, while also helping MCB Camp Pendleton fulfill its energy resiliency requirements. 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.

5.6.3 Mitigation Measures

No mitigation is required.

5.6.4 References

DoD 2018 – Department of Defense Instruction 4170.11, Installation Energy Management, 11 December 2009, Incorporating Change 2. 31 August.

DoN 2012 – Strategy for Renewable Energy. Published by the 1 Gigawatt Task Force. October.

DoN 2019 – Energy, Environment and Climate Change. https://navysustainability.dodlinve.mil/energy/. Accessed on 09 May 2019.

SDG&E 2024 – San Diego Gas & Electric: Our Company. Available online at: https://www.sdge.com/more-information/our-company/about-us. Accessed on 18 April 2024.

Section 5.07

Geology and Soils

5.7 Geology and Soils

This section describes the environmental and regulatory setting and discusses impacts associated with the demolition, construction, and operation 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 and minerals.
*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

Regional Geologic Setting

Located within the Peninsular Ranges Geomorphic Province, MCB Camp Pendleton can be divided into five distinguishable physiographical (coastal and inland) topographic regions: the coastal plain, the coastal hills (e.g., San Onofre Hills), the Santa Margarita Mountains, an intermontane area between the coastal hills and interior mountains, and a series of valleys/canyons cut by streams flowing through the Base and into the Pacific Ocean. Basilone Road, which bisects MCB Camp Pendleton in an approximately northwest-southeast trending direction, is considered the dividing line between the coastal and interior topographic regions.

Natural erosive processes acting on the steep topography of MCB Camp Pendleton have cut southwest-trending stream valleys through the generally northwest-trending hills and mountains. Each stream contains its own valley fill deposits, as well as an alluvial fan deposit at its mouth at the coastline. The Santa Margarita River forms a broad alluvial plain as it nears its end point at the Pacific Ocean, forming a level area of land between the steep surrounding hills. In general, the topography of north and eastern MCB Camp Pendleton is steep and moderately to highly dissected with stream canyons. Aside from the relatively narrow coastal plain, much of the topography at MCB Camp Pendleton exceeds a 15 percent slope (MCB and MCAS Camp Pendleton, 2018).

Local Geology

Poorly consolidated marine sediments cover most of MCB Camp Pendleton's coastal plain, while granitic units, with lesser amounts of metasedimentary and metavolcanic units, can be found in the foothills and farther inland (MCB and MCAS Camp Pendleton 2018). The Haybarn site is primarily underlain by Quaternary alluvium, with Tertiary (Eocene) Santiago Formation underlying the surrounding hills and slopes (USGS & CGS 2001). The staging/ laydown area site is entirely underlain by Santiago Formation (USGS & CGS 2001). The Quaternary alluvium consist of active flood plain deposits of unconsolidated to poorly consolidated sand and gravel. The Santiago Formation consist of fossiliferous, inter-fingered and interbedded, marine and non-marine sandstone and siltstone which includes fine to medium grained sandstone, scattered pebble and cobble conglomerate, sandy mudstone, mudstone, siltstone, and claystone units (Santos 2018). Portions of the Santiago Formation are well-lithified, which creates cliff-like features and steep slopes within MCB Camp Pendleton.

Topography

Both the project site and the staging/laydown area lie within the hills east of the southern historic floodplain of the Santa Margarita River. Much, but not all, of the project site is previously graded. Haybarn Canyon is located between hills/ridges of the Morro Hills within a flat gently sloping alluvial drainage with elevations ranging from approximately 95 to 200 feet above mean sea level (MSL). The offsite staging/laydown area site is a

previously graded, gently sloping site at the edge of the Morro Hills that ranges in elevation from approximately 120 to 140 feet above MSL with gentle to moderately ascending hill slopes on the north and northeast and gentle to moderately descending hillslopes on the south and southwest.

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. Landslides are the downslope movement of earth materials (rock, debris, and soil) at rates that range from inches per year to tens of miles per hour.

A common indication of unstable slopes is the presence of old or recent landslides. No landslides are mapped at or near the project site or the offsite staging/laydown area; however, landslides are mapped south of the sites near Pueblitos and Windmill Canyons (USGS & CGS 2001). The project site is primarily located on the gently sloping alluvial floor that is partially graded; however, a portion of the site would require some grading of and adjacent to moderate to steep hillslopes. The offsite staging/laydown area is on a gently sloping previously graded site with adjacent and nearby gentle to moderate hillslopes. A review of the CGS landslide susceptibility map (CGS 2024a) indicates that the slopes near the project site primarily have landslide susceptibility ranging from low to moderate, with a few small areas of high susceptibility on the slopes west of the site. Landslide susceptivity of the slopes adjacent to the staging/laydown are none to moderate (CGS 2024a).

Groundwater

A review of online California Department of Water Resources (DWR) and USGS groundwater level databases did not identify any groundwater level data for the project site or immediate vicinity (DWR 2024, USGS 2024c). The project site is primarily located within an alluvial drainage underlain by Quaternary alluvium and thus may have shallow perched groundwater that would likely fluctuate seasonally. The offsite staging/laydown area is located on a graded hilltop and is unlikely to have shallow groundwater.

Subsidence

Land subsidence is a gradual settling or sudden sinking of the Earth's surface due to subsurface movement of earth materials; adverse effects of subsidence include damage to buildings and infrastructure, increased flood risk in low-lying areas, and lasting damage to groundwater aquifers and aquatic ecosystems. The largest cause of subsidence in California is excessive groundwater pumping. Land subsidence is generally characterized by a broad zone of deformation where differential settlements are small. The project is not mapped within or near any areas of significant land subsidence (USGS 2024d).

Seismicity and Seismic Hazards

The project site is in seismically active southern California which is crossed by numerous active and potentially active faults. An active fault is defined as one with evidence of surface displacement within the last 11,000 years; a potentially active fault is defined as one with evidence of surface displacement within the last 1.6 million to 11,000 years (CGS 2018). Although it is difficult to quantify the probability that an earthquake will occur on a specific fault, this classification is based on the assumption that if a fault has moved during the Holocene epoch (the last 11,000 years), it is likely to produce earthquakes in the future.

Known active faults in the area capable of producing large earthquakes in the area include the Offshore Zone of Deformation (which includes the offshore portion of the Newport-Inglewood-Rose Canyon Fault) located about 7.8 miles (12.5 km) to the southwest; the Whittier-Elsinore Fault, approximately 16 miles (28 km) to the northeast; and the San Jacinto fault approximately 42 miles (68 km) to the east (SCEDC 2024a, 2024b). Other nearby faults (Christianitos, San Mateo and unnamed faults) are not considered active seismic sources by the USGS and not expected to produce significant earthquakes (USGS 2024a).

The largest significant credible seismic event likely to affect the project area would likely be an earthquake of 7.5 magnitude (Southern California Earthquake Data Center [SCEDC] 2024a); however, large earthquakes of varying magnitudes could occur on any of the significant local and regional active faults. Approximately 47 earthquakes of greater than magnitude M 4.5 have occurred since 1900 within 50 miles of the project site, with the largest being the 1918 M6.7 San Jacinto Earthquake (San Jacinto Fault) and the 1933 M6.4 Long Beach Earthquake (Newport-Inglewood Fault) (USGS 2024b). Both the 1918 M6.7 San Jacinto Earthquake and the 1933 M6.4 Long Beach Earthquake were significant damaging earthquakes that caused major damage to buildings, roads, and other infrastructure and resulted in injuries and loss of life (USGS 2024b).

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.

In California, Alquist-Priolo Earthquake Fault (Alquist-Priolo) Zones have been defined by the California Geological Survey (CGS) along active faults with the potential for surface rupture. However, not all active faults have been zoned, as the criteria specifies that a fault must be shown to be "sufficiently active" and "well defined" by detailed site-specific

geologic explorations in order to determine whether an Alquist-Priolo Earthquake Hazard Zone can be established with associated building setbacks. Many known active faults are not sufficiently "well defined" at the surface to qualify to be Alquist-Priolo zoned but could still cause significant surface fault rupturing. There are no Alquist-Priolo zoned faults or other known active faults crossing or in proximity to the project site (CGS 2024b). The closest Alquist-Priolo zoned fault to the project area is a segment of the Elsinore Fault, located approximately 15. 4 miles east of the project site (CGS 2024b). Therefore, no surface fault rupture associated with an earthquake is expected within the project area.

Ground Shaking. The project area will be subject to ground shaking associated with earthquakes on faults in southern California, including faults of the San Andreas system and the Offshore Zone of Deformation. Several factors influence how ground motion interacts with structures, making the impact 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 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. Ground shaking due to nearby and distant earthquakes should be anticipated during the life of the project. Strong ground shaking can cause damage to structures and trigger slope failures.

Liquefaction. Liquefaction occurs when the intense shaking motion generated by an earthquake causes soils to lose shear strength temporarily and behave like liquid rather than solid material. Liquefaction can cause differential soil settlement, resulting in damage to buildings and other structures located in areas where it occurs. For liquefaction to affect structures on the ground surface, underlying soils generally must be granular, loose to medium-density, and saturated with water relatively near the surface. The project site is underlain by alluvial sediments that may be susceptible to earthquake induced liquefaction if shallow perched groundwater is present in these sediments. The Santiago Formation that underlies the offsite staging/laydown area and underlies the surrounding hills and alluvial sediments at the project site is not likely to be liquefiable due to its consolidated nature.

Lateral Spreading. Lateral spreading is a seismically induced ground deformation failure in which near surface soil layers, typically saturated cohesionless (loose) sandy sediments, typically break into blocks that progressively move downslope or toward a nearby free face such as a stream channel, river embankment, or a shoreline. Underground facilities and structural elements (e.g., pipelines, spread footings, pile foundations, etc.) that extend through or across a zone of lateral spreading may be pulled apart or sheared. Although the project does include construction on some sloped area and construction of retaining walls at the project site, lateral spreading is unlikely to occur in these areas as they are underlain by the consolidated Tertiary Santiago Formation that is unlikely to be saturated in these areas.

Soils

Soils within the project area reflect the underlying rock type, the extent of weathering of the rock, the degree of slope, and the degree of human modification. There are over 50 soil series found on MCB Camp Pendleton. A complete list of these soils and many of their properties can be found in Appendix E of the MCB Camp Pendleton Integrated Natural Resources Management Plan (MCB and MCAS Camp Pendleton 2018). Soils on MCB Camp Pendleton range from moderately to excessively well-drained, with particle sizes consistent with loamy sands, clays, and sandy or silty loams. A review of the National Resource Conservation Service (NRCS) Web Soil Survey revealed that the Haybarn Site is underlain by two soils associations, the Linne clay loam and the Tujunga sand. The Linne clay loam is primarily located in the southern portion of the Haybarn Site and is formed on hill slopes. The Tujunga sand consists of sand, loamy sand, and gravelly sand on alluvial plains (NRCS 2024). The offsite staging/laydown is entirely underlain by the Visalia sandy loam which is formed on alluvial fans and hill toe-slopes and consist of sandy loam, fine sandy loam, and very fine sandy loam (NRCS 2024).

There are many factors to consider when determining soil suitability for development. Among the most important criteria affecting soil suitability for development are slope conditions, erodibility, shrink-swell potential, and liquefaction potential. In terms of their suitability for home-sized structures, slopes of over 30 percent are designated as having poor suitability, slopes of 9 percent to 30 percent as having medium suitability, and slopes of 0 percent to 9 percent as having good suitability for development (USDA SCS 1973).

Almost all of MCB Camp Pendleton's soils are severely erodible due to steepness, shallow depth to rock, shallow depth to a hardpan, or excessive silt in soil texture composition. Exceptions are soils of clay textured types (USDA SCS 1973, MCB and MCAS Camp Pendleton 2018). Where project areas are either paved or vegetated, the potential for soil erosion can be reduced. While the underlying soils in these areas may be subject to erosion in their natural state, landscaping, storm water conveyance infrastructure, and the shallow slopes minimize the erosion potential.

Soil erosion is the removal of material from the surface soil and erosion processes involve detachment and short transport of particles from the soil surface, most commonly by wind and water. Potential soil erosion hazards vary depending on the use, conditions, and textures of the soils. Erodibility is determined by considering slope and soil texture. 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. The properties of soil that influence erosion by water (rainfall and runoff) are ones that affect the infiltration capacity of a soil, and those that affect the resistance of a soil to detachment and being carried away by falling or flowing water. At the project site, the Linne clay loam has moderate potential for erosion by water and low potential for erosion by wind and the Tujunga sand has low potential to erosion by

water and high potential for erosion by wind. At the offsite staging/laydown area, the Visalia sandy loam has moderate potential for both water and wind erosion (NRCS 2024).

Expansive soils are characterized by their ability to undergo significant volume change (shrink and swell) due to variations in soil moisture content. Shrink-swell (expansive) potential predicts the level of shrinking a soil will experience as it dries out, and any swelling that will occur when it gets wet. A soil's shrink-swell (expansive) potential is ultimately determined by the amount and type of clay it contains (USDA SCS 1973). Expansive soil behavior is a condition where clay soils react to changes in moisture content by expanding or contracting. Changes in soil moisture can result from rainfall, landscape irrigation, utility leakage, roof drainage, and/or perched groundwater. Expansive soils are typically very fine grained with a high to very high percentage of clay; poorly drained fine-grained soils typically have greater shrink-swell potential. Such soil conditions can affect the structural integrity of buildings and other structures. If untreated, expansive soils could damage future buildings and pavements on the project site. Soils with moderate to high shrink-swell potential would be classified as expansive soils. At the project site, the Linne clay loam soils have moderate expansive potential and the Tujunga sand soils have no to low expansive potential (NRCS 2024). The Visalia sandy loam soils at the staging/laydown area have no to low expansion potential (NRCS 2024).

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 "sensitivity" is defined as the potential for a geologic unit to produce scientifically significant fossils. This sensitivity is determined by rock type, past history of the rock 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. The proposed project is on federal land; therefore, the BLM Potential Fossil Yield Classification (PFYC) system (BLM 2022) for assessing paleontological resources is used herein to assess paleontological sensitivity of geologic units underlying the project. The PFYC system is based on mapped geologic units, which are assigned a paleontological sensitivity class based on the relative abundance and significance of paleontological resources and their sensitivity to adverse impacts.

The Quaternary alluvium underlying most of the project site is too young to have significant paleontological resources and has very low (PFYC Class 1) paleontological sensitivity. However, the Santiago Formation, which underlines the alluvium and the slopes at and adjacent to the project site and the entirety of the offsite staging/laydown area, is known to have produced numerous vertebrate and non-vertebrate fossils, including scientifically significant mammal and reptile vertebrate fossils (PBDB 2024, Santos 2018). The Santiago Formation would therefore be classified as a unit with high to very high paleontological sensitivity (PFYC Class 4 to 5).

Regulatory

Federal

Clean Water Act National Pollutant Discharge Elimination Systems (NPDES). The NPDES permit program was created in 1972 by the Clean Water Act. The NPDES helps address water pollution by regulating point sources that discharge pollutants to waters of the United States. Under the NPDES program, site of that disturb one acre or more, including smaller sites in a larger common plan of development or sale are required to obtain a NPDES permit and prepare a Stormwater Pollution Prevention Plan (SWPPP) to reduce or prevent pollutants in stormwater runoff from leaving a construction site. The SWPPP will include best management practices (BMPs) used to reduce pollutants in a construction site's stormwater discharges, including BMPs control erosion and sedimentation.

International Building Code. The International Building Code (IBC) was developed by the International Code Council. The IBC addresses health and safety concerns for buildings based on prescriptive and performance-related requirements. Chapter 16 of the IBC includes seismic structural design requirements and chapter 18 includes soils and foundations investigation and design requirements. The code is updated every three years. The current version is the 2021 IBC. The current year's published CBC is based on the prior year's published IBC.

Paleontological Resources Preservation Act (PRPA) of 2009 (43 CFR Part 49). The PRPA requires management and protection of paleontological resources on federal land using scientific principles and expertise, and requires federal agencies to develop appropriate plans for inventorying, monitoring, and the scientific and educational use of paleontological resources, in accordance with applicable laws, regulations, and policies. The PRPA is the authority for federal land managing agencies for permits to collect paleontological resources, as well as curation of these resources in an approved repository. It provides authority for the protection of significant paleontological resources on federal lands including criminal and civil penalties for fossil theft and vandalism.

State

Alquist-Priolo Earthquake Fault Zoning Act. The Alquist-Priolo Earthquake Fault Zoning Act was passed following the 1971 San Fernando earthquake. The act regulates development in California near known active faults due to hazards associated with surface fault ruptures. Alquist-Priolo maps are distributed to affected cities, counties, and state agencies for their use in planning and controlling new construction. Areas within an Alquist-Priolo Earthquake Fault Zone require special studies to evaluate the potential for surface rupture to ensure that no structures intended for human occupancy are constructed across an active fault.

Seismic Hazards Mapping Act. The Seismic Hazards Mapping Act (SHMA) was passed in 1990 following the 1989 Loma Prieta earthquake. The SHMA directs the California

Geological Survey (CGS) to identify and map areas prone to liquefaction, earthquake-induced landslides, and amplified ground shaking. CGS has completed seismic hazard mapping for the portions of California most susceptible to liquefaction, landslides, and ground shaking, including the central San Francisco Bay Area. The SHMA requires that agencies only approve projects in seismic hazard zones following site-specific geotechnical investigations to determine if the seismic hazard is present and identify measures to reduce earthquake-related hazards.

California Building Standards Code. The California Building Standards Code (CBC) prescribes standards for constructing safer buildings. The CBC contains provisions for earthquake safety based on factors including occupancy type, soil and rock profile, ground strength, and distance to seismic sources. The CBC requires that a site-specific geotechnical investigation report be prepared for most development projects to evaluate seismic and geologic conditions, such as surface fault ruptures, ground shaking, liquefaction, differential settlement, lateral spreading, expansive soils, and slope stability. The CBC is updated every three years; the current version is the 2022 CBC. The CBC is based on and modified from the IBC.

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."

California Division of Occupational Safety and Health Regulations. Excavation, shoring, and trenching activities during construction are subject to occupational safety standards for stabilization by the California Division of Occupational Safety and Health (Cal/OSHA) under Title 8 of the California Code of Regulations and Excavation Rules. These regulations minimize the potential for instability and collapse that could injure construction workers on the site.

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 and Operation

No Impact. There are no known active faults or Alquist-Priolo zoned faults located crossing the project site or in the immediate vicinity of the project and, therefore, fault

rupture would not occur at or near the proposed project. Fault rupture would not occur and thus would not cause adverse effects at the proposed project site.

ii. Strong seismic ground shaking?

Construction

Less Than Significant Impact. Earthquakes up to a magnitude of 7.5, stemming from the nearby Newport-Inglewood-Rose Canyon Fault or other significant active local and regional faults, would be likely to affect the project area during the lifetime of the proposed Project. In the unlikely event of a large earthquake occurring during construction that affects the Project area, effects to construction workers from seismically induced ground shaking, would be minimized by compliance with State and federal worker safety rules and regulations, construction and design regulations, and the 2016 CPR. Additionally, construction activities are temporary; therefore, the potential impact from seismic hazards would be temporal. Therefore, impacts from strong seismic shaking during Project construction would not be significant.

Operation

Less Than Significant Impact. Earthquakes up to a magnitude of 7.5, stemming from earthquakes on local and regional faults, would be likely to affect the project during its lifetime resulting in strong seismically induced ground shaking. Compliance with geotechnical recommendations, permit conditions, and federal and state building codes would minimize any potential adverse impacts due to seismic ground shaking during project operation, resulting in a less-than-significant impact.

iii. Seismic-related ground failure, including liquefaction?

Construction

Less Than Significant Impact. Earthquakes up to a magnitude of 7.5, stemming from the nearby Newport-Inglewood-Rose Canyon Fault or other significant active local and regional faults, would be likely to affect the project area during the lifetime of the proposed project. Lateral spreading is unlikely to occur in the consolidated Santiago Formation underlying the slopes at and adjacent to the project site and staging/laydown area. Potentially liquefiable Quaternary alluvium underlies portions of the project site. However, in the unlikely event of a large earthquake occurring during construction that affects the project area, effects to construction workers from potential liquefaction would be minimized by compliance with State and federal worker safety rules and regulations, construction and design regulations, and the 2016 CPR. Additionally, construction activities are temporary; therefore, the potential impact from seismic hazards would be temporal. Therefore, impacts from liquefaction or lateral spreading during project construction would not be significant.

Operation

Less Than Significant Impact. Earthquakes up to a magnitude of 7.5, stemming from earthquakes on local and regional faults, would be likely to affect the project during its lifetime. Lateral spreading is unlikely to occur in the consolidated Santiago Formation underlying the slopes at and adjacent to the project site and staging/laydown area. Portions of the project site are underlain by Quaternary alluvial that may be subject to liquefaction if shallow perched groundwater is present. However, compliance with geotechnical recommendations, permit conditions, and federal and state building codes would minimize impacts from seismic hazards such as liquefaction or lateral spreading during project operation, resulting in a less-than-significant impact.

iv. Landslides?

Construction

Less Than Significant Impact. Excavation and grading would be required for project components in some areas mapped as having moderate landslide susceptibility (CGS 2024a) which could result in triggering slope failures. The project would include construction of retaining walls to stabilize graded slopes. The project would implement geotechnical recommendations to minimize construction impacts related to slope instability (landslides), and all construction would be conducted in compliance with all applicable State and federal standards and regulations including design and construction requirements listed in the 2016 CPR. Therefore, impacts related to landslides during Project construction would not be significant.

Operation

Less Than Significant Impact. Areas at and near the project are mapped as having low to moderate landslide susceptibility with some nearby areas of high susceptibility, and landslides could be triggered in areas of moderate to high susceptibility by events such as earthquakes or large storms. Earthquakes up to a magnitude of 7.5, stemming from earthquakes on local and regional faults, would be likely to affect the project during its lifetime. Landslides could potentially damage proposed facilities near to slopes with moderate to high landslide susceptibility at the project site. However, compliance with geotechnical recommendations, permit conditions, and federal and state building codes would minimize impacts from landslide hazards during project operation resulting in a less-than-significant impact.

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

Construction

Less Than Significant Impact. The two soils at the project site have differing characteristics and clay content and therefore have differing erosion potentials. The Linne clay loam has moderate potential for erosion by water and low potential for erosion by wind and the Tujunga sand has low potential to erosion by water and high potential for erosion

by wind. Soils disturbed by construction would therefore be subject to wind and water erosion. However, the project would comply with Clean Water Act NPDES requirements, would prepare a project-specific SWPPP, and would comply with MCB Camp Pendleton erosion control programs and Biological Opinion (BO)conditions, which would minimize the potential for soil erosion throughout the duration of the project. Any vegetation disturbed during this phase of construction would be replaced in compliance with 2016 CPR to help stabilize the soil and reduce the impact of future erosion. Therefore, the impact of soil erosion during project construction would not be significant.

Operation

Less Than Significant Impact. Current Base soil erosion programs would be used throughout the operation and maintenance of the project. Current soil erosion control programs at MCB Camp Pendleton include road maintenance, grading, culvert maintenance and installation, water runoff control, traffic control in erosion damaged areas, and mulching areas with a protective cover of organic material such as wood chips and vegetation. Compliance with existing erosion control programs would reduce erosion impacts during project operation to 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

Less Than Significant Impact. As discussed in sections 5.7.2 a iii) and 5.7.2 a iv), impacts related to liquefaction, lateral spreading, or landslides would not be significant during construction due to their temporal nature and with compliance with geotechnical recommendations, permit conditions, federal and state building codes, and the 2016 CPR. Impacts related to liquefaction, lateral spreading, or landslides would therefore be less than significant. Subsidence has not been mapped in the area and would therefore there would be no impact related to subsidence due to the project.

Operation

Less Than Significant Impact. As discussed in sections 5.7.2 a iii) and 5.7.2 a iv), impacts related to liquefaction, lateral spreading, or landslides would be less than significant during operation with compliance with geotechnical recommendations, permit conditions, federal and state building codes, and the 2016 CPR. Subsidence has not been mapped in the area; therefore, 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

No Impact. The presence of potentially expansive Linne clay soils at the project site would not cause adverse effects to construction activities or equipment. Construction of the project would not include any long-term construction facilities/structures that would be damaged by expansive soils.

Operation

Less Than Significant Impact. The Linne clay loam that underlies a portion of the project site is moderately expansive and could cause damage to project facilities and structures due to shrink and swell of clays in the soil. However, compliance with geotechnical recommendations and federal and State building codes would minimize impacts from expansive soils during project operation, resulting in a less-than-significant impact.

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

No Impact. Construction activities for the project would not require a permanent wastewater disposal system. Portable restrooms and hand washing facilities would be supplied for use by construction workers.

Operation

No Impact. The proposed project would not include restrooms or other facilities that would need a septic system or alternative wastewater disposal system; 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

Less Than Significant with Mitigation. Construction-related ground disturbance for the proposed project, consisting of grading and excavation, could impact paleontological resources (fossils). It is not anticipated that paleontological resources would be encountered in the Quaternary alluvium underlying most of the project site as it is too young for significant fossils and has very low sensitivity (PFYC 1). However, grading and excavation in areas underlain by the Santiago Formation and areas of Quaternary alluvium where excavation depths reach the underlying Santiago Formation may damage or destroy paleontological resources. The Santiago Formation is known to contain numerous signi-

ficant fossils and has a high to very high paleontological sensitivity (PFYC 4-5). Implementation of Mitigation Measure GEO-1 would ensure impacts to paleontological resources during construction would be minimized and reduced to below a level of significance.

Operation

No Impact. Operation of the project would not require ground-disturbing activities and would therefore have no potential to impact significant paleontological resources.

5.7.3 Mitigation Measures

MM GEO-1 **Paleontological Resources.** Prior to commencement of any grading activity, the applicant shall retain a qualified paleontologist, subject to the review and approval of the MCBCP, or designee. The paleontologist shall prepare a Paleontological Resources Impact Mitigation Program (PRIMP) for the proposed project. The PRIMP shall be consistent with the BLM Policy PIM 2022-009 and the guidelines of the Society of Vertebrate Paleontology. A qualified paleontological monitor shall attend the preconstruction meeting and be on-site during all rough grading and other significant ground-disturbing activities in previously undisturbed Santiago Formation, and in areas where Santiago Formation is likely to be encountered at depth below the alluvium, if applicable. In the event that paleontological resources (fossils) are exposed or unearthed during grading or excavation, the paleontology monitor will temporarily halt and/or divert grading or excavation activity to allow recovery of paleontological resources in conformance with the PRIMP and under the supervision of the qualified paleontologist. The area of discovery will be roped off with a 50-foot radius buffer and to allow for documentation and collection of the find. Once documentation and collection of the find is completed, the monitor will remove the rope and allow grading to recommence in the subject area.

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Section 5.08

Greenhouse Gas Emissions

5.8 Greenhouse Gas Emissions

This section describes the environmental and regulatory setting and discusses greenhouse gas (GHG) emissions impacts associated with the demolition/construction and operation of the project.

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: CO_2, CH_4, N_2O, hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). 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 CO_2, 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 ($MMTCO_2e$) 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 $MMTCO_2e$ in 2020 (ARB 2023). Globally, an estimated 33,000 $MMTCO_2e$ 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 2022).

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

County of San Diego. Guidelines for Determining Significance Climate Change. The County's guidelines for CEQA review of evaluating GHG emissions for individual projects was adopted by the board as the following: "A proposed project would have a less than significant cumulatively considerable contribution to climate change impacts if it is found to be consistent with the County's Climate Action Plan; and, would normally

have a cumulatively considerable contribution to climate change impacts if it is found to be inconsistent with the County's Climate Action Plan."

County of San Diego 2018 Climate Action Plan. The County of San Diego Board of Supervisors adopted the County's 2018 Climate Action Plan (CAP) on February 14, 2018, to identify strategies and measures to reduce the County's contribution to GHG emissions and to meet the States 2030 GHG emissions targets and show progress towards the 2050 GHG reduction goal. In September 2020, the County of San Diego Board of Supervisors voted to set aside its approval of the 2018 CAP because the County's Supplemental Environmental Impact Report (SEIR) was found to be out of compliance with CEQA, and as a response the County is revising the CAP and EIR for compliance. While the court ruling struck down part of the 2018 CAP SEIR, it did not find fault with the stated 26 GHG reduction measures (San Diego County, 2020). The County has prepared a 2024 draft CAP for anticipated adoption by the Board of Supervisors later in 2024. While the proposed project site is within unincorporated San Diego County, the CAP would not apply as the site is a military base outside of the County's CAP's jurisdictional control.

San Diego Association of Governments (SANDAG). Regional Energy and Climate Change Program. This program "works to find ways for the region to use energy more efficiently, expand choices in transportation fuels and electricity supply, and reduce GHGs attributed to our mobility." The agency's current energy and climate change projects include Regional Alternative Fuel Planning and Implementing Energy and Climate Strategies.

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 and Operation

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 CO_2, CH_4, and N_2O due to fuel use and combustion, and motor vehicle fuel combustion emissions in terms of CO_2e are approximately 95 percent CO_2, and CH_4 and N_2O emissions occur at rates of less than 1 percent of the mass

of combustion CO_2 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 period of construction would be approximately 1069 $MTCO_2e$ and similar period of demolition would be approximately 489 $MTCO_2e$ (Appendix A, Air Quality and GHG Emissions), based on use of the California Emissions Estimator Model (CalEEMod, v.2022.1). This equates to roughly 78 $MTCO_2e$ per year if averaged over the twenty-year life of the project. The County of San Diego and SDAPCD have not adopted numeric thresholds for determining the significance of GHG emissions in the context of CEQA; however, as discussed previously, GHG emissions from construction activities would be temporary and limited.

Operation of the battery system would not directly cause or create GHG emissions while charging and discharging. The energy that the battery system would be storing is drawn from the electricity supply during times of surplus generation. It is likely that the 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 more fossil fuel-based generation and less 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 potentially displacing natural gas-fired generation, thus reducing GHG emissions from the electricity sector. The battery system has a round-trip efficiency of 80 percent; this means that 0.80 megawatt hours (MWh) would be discharged for every 1 MWh delivered to the battery by the local utility (SDG&E) during charging.

Table 5.8-1 compares the GHG emissions intensities of the electric utility supply from SDG&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 battery system, discharging the full storage capacity of 486 MWh requires SDG&E to supply approximately 607 MWh during charging.

Table 5.8-1. Comparison of GHG Emissions Intensities

Source of Electricity	GHG Emissions Intensity of Supply ($MTCO_2e$/MWh)	Emissions to Fully Charge Battery, including Round-Trip Losses ($MTCO_2e$)	Emissions of Producing 486 MWh from Natural Gas Resources ($MTCO_2e$)
SDG&E Electrical Utility Emission Factor	0.246	96	---
Natural Gas-Fired Combined-Cycle Power Plant	0.385	---	187
Natural Gas-Fired Advanced Combustion Turbine Power Plant	0.524	---	255

Sources: Appendix A, SDG&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 battery system (96 $MTCO_2e$) 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 486 MWh of supply (187 to 255 $MTCO_2e$). Although there is energy loss during the charging and discharging cycles, the multi-day storage (MDS) provided by the project's 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 but would reasonably be expected to result in a reduction of GHG emissions from regional electrical generation. In addition, since operation would be remote, and there would be minimal maintenance with no regular employees driving to the site, indirect emissions would be minimal. During operation, the quantity of GHG emitted directly by vehicles and equipment supporting the MDS battery system would be less than 14 $MTCO_2e$ per year (see Appendix A). Because the project would provide overall beneficial effects of displacing GHG from natural gas-fired power plants used for energy generation during peak usage, and construction impacts would be temporary and limited, the impact to the environment caused by project construction and operation would be less than significant.

Cumulative

Less than Significant. Cumulative project operations include up to three emergency backup diesel generators for MCAS Camp Pendleton. GHG emissions from the emergency generators would be limited by air permitting requirements, which would limit emergency standby engine testing and maintenance to 50 hours a year. Maximum yearly GHG emissions associated with readiness testing and maintenance for these cumulative sources would be 153 $MTCO_2e$/year. Total emissions associated with the proposed project with the MCAS backup generators as a cumulative project would be 167 $MTCO_2e$/year. This quantity of project-related and cumulative project emissions would not significantly add to the global problem of climate change and would reduce GHG emissions by displacing natural gas generation. Similarly, the proposed project would not hinder California's ability to reach California's GHG reduction goals in any significant way, even when considered cumulatively. Therefore, the project's GHG emissions would not be considered cumulatively 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 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. San Diego County has not yet prepared and adopted a green-house gas reduction plan for the unincorporated areas of the county. However, the project is not anticipated to emit a significant amount of GHG emissions and will be offsetting emissions by displacing natural gas generation.

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 not affect SDG&E's ability to supply renewable energy. By installing long-duration battery energy storage, the project would improve SDG&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 2022). Moreover, the proposed project would not conflict with local, SDAPCD, State, or federal regulations pertaining to GHG emissions. Therefore, this impact would be less than significant.

Cumulative

Less than Significant. The proposed project's GHG emissions would not result in a "cumulatively considerable" contribution to global climate change under CEQA because it would conform with all applicable plans, policies, and regulations adopted for the purpose of GHG emissions reductions. Additionally, as the batteries are expected to be charged during times of excess solar production, the use of the stored energy during peak times will offset the use of energy produced from fossil fuels. The battery storage onsite will reduce the amount of fossil fuel generated energy the site uses, overall contributing to a reduction in regional GHG emissions associated with onsite energy procurement.

5.8.3 Mitigation Measures

None required or list mitigation.

5.8.4 References

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Section 5.09

Hazards and Hazardous Materials

5.9 Hazards and Hazardous Materials

This section describes the environmental setting and regulatory background and discusses impacts associated with the construction and operation 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. Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
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?	☐	☐	☐	☒
d. Would the project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would 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. Would the project 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 affected environment of the proposed Haybarn Energy Reliability Center (HERC) includes the 19-acre Haybarn Canyon site located in the 22 Area of Marine Corps Base Camp Pendleton (MCB Camp Pendleton). The site is adjacent to the SDG&E Pendleton (Haybarn) Substation.

A search of the Geotracker and EnviroStor databases did not indicate the presence of any open Installation Restoration Program (IRP) sites, Munitions Response Plan (MRP) sites, underground storage tanks (USTs), leaking USTs, or ammunition storage areas at or in the immediate vicinity of the HERC site (SWRCB 2024, DTSC 2024). However, there is one closed site associated with the SDG&E Pendleton Substation that may require further evaluation:

- SDG&E Pendleton (Haybarn) Substation, Case #H35928-001

This case involved the leakage of transformer polychlorinated biphenyl (PCB) oil into concrete slabs and soil at the site. Remediation included disposal of contaminated soil and concrete. The case was closed in 1997. However, the closure report recommends that at the time of land use changes or proposed excavation in areas of known contamination, the project should be evaluated to determine if public health and the environment could be adversely affected (CSD 1997).

Regulatory Background

Federal

Resource Conservation and Recovery Act. The federal Resource Conservation and Recovery Act of 1976 (RCRA) established a program administered by the United States Environmental Protection Agency (U.S. 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.

Comprehensive Environmental Response, Compensation, and Liability Act. The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as Superfund, was enacted in 1980. CERCLA established requirements concerning closed and abandoned hazardous waste sites, provided for liability of persons responsible for releases of hazardous waste at these sites, and established a trust fund to provide for cleanup when no responsible party could be identified.

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

State

California Environmental Protection Agency. The California Environmental Protection Agency (CalEPA) created in 1991, unified California's environmental authority in a single cabinet-level agency and brought the California Air Resources Board (CARB), State Water Resources Control Board (SWRCB), Regional Water Quality Control Boards (RWQCBs), 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 under the CalEPA "umbrella" provide protection of human health and the environment and 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. DTSC administers the California Hazardous Waste Control Law to regulate hazardous waste. The Hazardous Waste Control Law; establishes permit requirements for treatment, storage, disposal, and transportation of hazardous waste, prescribes management controls; and identifies some wastes that cannot be disposed of in landfills.

Department of Toxic Substances Control. DTSC 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 the Hazardous Waste Control Laws and oversees site cleanup under the Hazardous Substance Account Act (HSAA). Other laws that affect hazardous waste are specific to handling, storage, transportation, disposal, treatment, and reduction.

Local

San Diego County Operational Area Hazard Mitigation Plan. The plan includes a risk assessment that identifies the natural hazards and risks that can impact a community based on historical experience, estimates the potential frequency and magnitude of disasters, and assesses 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.

5.9.2 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

Less Than Significant. Construction of the HERC would involve the use of typical construction-related hazardous materials, such as fuels, lubricants, and solvents. The management of these materials is governed by various federal, state, and local

regulations depending on the material's state (whether it's in use, in transport, or has become a waste):

- **Hazardous Materials Use:** The use of hazardous materials is regulated by various agencies, including Cal/OSHA for worker safety and local fire departments for storage and handling.
- **Transportation:** The U.S. Department of Transportation (DOT) regulates the transportation of hazardous materials.
- **Hazardous Waste:** Once materials become waste, they are regulated under the Resource Conservation and Recovery Act (RCRA) at the federal level and the California Hazardous Waste Control Law (HWCL) at the state level, with DTSC as the primary enforcement agency.
- **Emergency Response:** The project would comply with local regulations requiring the development of a Hazardous Materials Business Plan, which addresses proper handling, storage, and emergency response procedures for hazardous materials.

The project would implement standard construction Best Management Practices (BMPs) and a Solid Waste Management Plan to minimize the potential for improper handling spills, and disposal of hazardous materials.

Additionally, the project would adhere to the local Certified Unified Program Agency (CUPA) requirements for hazardous materials management and emergency response planning.

With adherence to these regulations, plans, and standard practices, impacts related to the routine transport, use, or disposal of hazardous materials during construction would be less than significant.

Operation

Less Than Significant. Operation of the zinc hybrid cathode aqueous flow battery system would involve the use of water-based, non-flammable electrolyte blends. Small amounts of hydrogen gas generated during charging would be exhausted and dispersed. Other hazardous materials used during operations and maintenance would be managed in accordance with applicable regulations, including RCRA and the California Hazardous Waste Control Law. The implementation of an operational Stormwater Pollution Prevention Plan (SWPPP) and standard BMPs would further minimize potential hazards. As a result, impacts would be less than significant.

The electrolyte used in the installed batteries is a water-based zinc bromine solution, which is considered non-hazardous and non-flammable. The electrolyte would be contained within the battery cells within the energy cube enclosures. The enclosures would include leak detection, electrolyte and ambient temperature sensors, real-time monitoring and control, and the enclosures would serve as secondary containment for the electrolyte

should there be a leak. Electrolyte would not be released or refilled during operation. The project would include up to 44 transformers, depending on final project design, and the transformers would be filled with a non-hazardous mineral oil. No hazardous materials would be used during project operation, resulting in no impact related to transport, use, or disposal.

Due to the non-flammable electrolyte in the batteries, they are not subject to thermal runaway and thus the proposed battery enclosures do not include fire suppression systems. The batteries are not considered flammable and are not generally subject to internal system fires. If subject to fire, the electrolyte could create bromine gas, a toxic gas (DNV-GL 2016). The batteries would be contained in steel containers spaced on concrete foundations, and the site's ground cover would be primarily gravel, paving, concrete pads, and other nonflammable surfaces. Under these conditions, the likelihood of bromine gas being created as a result of fire is not significant.

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

Less Than Significant. In the unlikely event that contaminated soil is encountered during construction due to the previously closed SDG&E Substation case, the contractor would coordinate with MCB Camp Pendleton to properly evaluate and manage the soil in accordance with applicable regulations. This may include compliance with the Carpenter-Presley-Tanner HSAA, which is California's equivalent of the federal Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). The HSAA provides authority for the cleanup of contaminated sites and is enforced by the DTSC.

The project would comply with a construction SWPPP as required under the Clean Water Act and enforced by the State Water Resources Control Board. Additionally, the project would implement a Spill Prevention, Control, and Countermeasure (SPCC) plan as required by the U.S. Environmental Protection Agency for projects that store, use, or consume oil products above certain threshold to minimize the potential for accidental releases (MCB Camp Pendleton 2011). These plans are designed to prevent and control potential spills of hazardous materials or substances during construction activities.

With these measures in place, impacts related to reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment during construction would be less than significant.

Operation

Less Than Significant. An operational SWPPP, spill prevention plan, and standard BMPs, as required by the Clean Water Act and the would be implemented to minimize the

potential for accidental releases of hazardous materials used during operation and maintenance. Compliance with these regulations and implementation of control measures would ensure that impacts remain less than significant.

Due to the non-flammable electrolyte in the batteries, they are not subject to thermal runaway and thus the proposed battery enclosures do not include fire suppression systems. The batteries are not considered flammable and are not generally subject to internal system fires. If subject to fire, the electrolyte could create bromine gas, a toxic gas. The batteries would be contained in steel containers spaced on concrete foundations, and the site's ground cover would be primarily gravel, paving, concrete pads, and other nonflammable surfaces. Under these conditions, the likelihood of bromine gas being created as a result of fire is not significant.

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

No Impact. The project site is not located within one-quarter mile of an existing or proposed school. The closest school is Stuart Mesa School located 7.12 miles southwest of the project site. Construction activities would not emit hazardous emissions or handle hazardous materials, substances, or waste in proximity to schools. Therefore, no impact would occur during construction.

Operation

No Impact. The project site is not located within one-quarter mile of an existing or proposed school. The closest school is Stuart Mesa School located 7.12 miles southwest of the project site. Operation of the HERC would not emit hazardous emissions or handle hazardous materials, substances, or waste in proximity to schools. Therefore, no impact would occur during operation.

d. Would the project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

Construction

Less Than Significant. The project site is not included on a list of hazardous materials sites compiled pursuant to Government Code section 65962.5. However, the previously closed SDG&E Substation case requires evaluation prior to land use changes or excavation. Prior to construction, the project proponent will analyze previous areas of known contamination that may be impacted by construction activities and perform a site investigation, if required, to determine if contamination is present. If contaminated areas are found, the potential for adverse impacts will be evaluated, and recommendations

from the SDG&E Pendleton Substation closure report will be implemented as applicable. By complying with applicable regulations, Hazardous Substances Account Act, and implementing necessary site investigation and remediation measures, the project would not create a significant hazard during construction, and impacts would not be significant.

Operation

Less Than Significant. As discussed above, the project site is not included on a list of hazardous materials sites compiled pursuant to Government Code section 65962.5. Any potential contamination related to the previously closed SDG&E Substation case would be addressed prior to or during construction. During operation, the project would not involve activities that would disturb or encounter contaminated sites. Therefore, the project would not create a significant hazard during operation, and impacts would not be significant.

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

No Impact. The project site is not located within an airport land use plan or within two miles of a public airport or public use airport. The closest public airport or public use airport is Oceanside Municipal located 6.87 miles south of the project site. Construction activities would not result in a safety hazard or excessive noise related to airport operations. Therefore, no impact would occur during construction.

Operation

No Impact. The project site is not located within an airport land use plan or within two miles of a public airport or public use airport. The closest public airport or public use airport is Oceanside Municipal located 6.87 miles south of the project site. Operation of the HERC would not result in a safety hazard or excessive noise related to airport operations. Therefore, no impact would occur during operation.

f. Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Construction

Less Than Significant. Construction activities for the proposed project would occur within the boundaries of MCB Camp Pendleton and would not impair implementation of or physically interfere with an adopted emergency response or evacuation plan. The project proponent will need to coordinate with MCB Camp Pendleton officials and provide appropriate notifications of any temporary roadway impacts or utility disruptions that could potentially affect emergency response during construction. Emergency access to the project site and surrounding areas would be maintained throughout construction. By adhering to MCB Camp Pendleton's emergency response procedures and maintaining

coordination with base officials, impacts related to emergency response and evacuation during construction would be less than significant.

Operation

Less Than Significant. Operation of the HERC would not impair implementation of or physically interfere with an adopted emergency response or evacuation plan. MCB Camp Pendleton maintains a comprehensive Emergency Action Plan that outlines procedures for various emergencies, including fire, earthquakes, and other plausible scenarios (MCBCP 2002). The project site is located in an existing industrial area adjacent to the Haybarn Substation, and the facility would be remotely operated with only quarterly maintenance visits. The project would not involve activities or infrastructure that would obstruct or hinder emergency response or evacuation routes. The existing access road off Vandegrift Boulevard would be improved during construction, potentially enhancing emergency access to the area. Additionally, the project's design includes perimeter and center line compacted and graveled dirt roads for emergency access, which aligns with the Base's emergency planning requirements.

MCB Camp Pendleton's emergency procedures include regular drills and training to keep personnel prepared for various scenarios (MCBCP 2002). The project's minimal on-site presence during operation (quarterly maintenance visits) would not interfere with these established procedures. Appropriate coordination with MCB Camp Pendleton officials would be maintained to ensure that emergency response and evacuation procedures can be implemented effectively during operation. This coordination would include adherence to the Base's notification systems and evacuation protocols as outlined in their Emergency Action Plan (MCBCP 2002).

Therefore, impacts related to emergency response and evacuation during operation would not be significant.

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

Less Than Significant. The project site is located within an un-zoned Fire Hazard Severity Zone in a local responsibility area, indicating a less than moderate susceptibility to wildland fires. During construction, the project would comply with applicable fire safety regulations, including the California Fire Code and MCB Camp Pendleton's fire prevention and protection requirements. Fire prevention measures, such as maintaining clear work areas, properly storing flammable materials, and providing fire extinguishers on-site, would be implemented in accordance with MCB Camp Pendleton's Integrated Wildland Fire Management Plan. Construction personnel would receive fire safety training and would be equipped to respond to small fires. In the event of a larger wildland fire, construction activities would cease, and personnel would evacuate the area in accordance with MCB Camp Pendleton's evacuation procedures. By adhering to applicable regulations,

implementing fire prevention measures, and following evacuation procedures, the project would not expose people or structures to a significant risk related to wildland fires during construction, and impacts would not be significant.

Operation

Less Than Significant. The project site is located within an un-zoned Fire Hazard Severity Zone in a local responsibility area, indicating a less than moderate susceptibility to wildland fires. During operation, the project would continue to comply with applicable fire safety regulations, including the California Fire Code and MCB Camp Pendleton's fire prevention and protection requirements. The facility would be remotely operated and monitored through a SCADA system, with staff visiting the site quarterly for maintenance. This limited on-site presence reduces the potential exposure of personnel to wildfire risks.

The project design incorporates fire prevention measures, such as maintaining clear areas around equipment, properly storing any flammable materials, and providing appropriate fire suppression systems. These measures align with MCB Camp Pendleton's Integrated Wildland Fire Management Plan.

Operational staff would receive fire safety training. In the event of a larger wildland fire, the facility's remote operation capabilities would allow for safe shutdown procedures without putting personnel at risk. Evacuation of maintenance staff, if present during a fire event, would follow MCB Camp Pendleton's established evacuation procedures.

By adhering to applicable regulations, implementing fire prevention measures in facility design and operation, and following established safety and evacuation procedures, the project would not expose people or structures to a significant risk related to wildland fires during operation, and impacts would not be significant.

5.9.3 Mitigation Measures

No mitigation is required.

5.9.4 References

CSD – County of San Diego (CSD). 1997. SDG&E Substation Case #H35928-001 Closure Report. County of San Diego Department of Environmental Health. 19 September. Accessed on April 27, 2024.

DNV GL 2016 – DNV USA, Inc. Safety Review of Bromine-Based Electrolytes for Energy Storage Applications, PP127316. Prepared for ICL Industrial Products. Accessed February 2024. Accessed online at: https://energystorageicl.com/wp-content/uploads/2018/04/DNV-GL-Safety-Review-of-Bromine-Based-Electrolytes-for-Energy-Storage-Applications.pdf

DTSC 2024 – EnviroStor record for Camp Pendleton South. Accessed on April 27, 2024.

MCBCP 2002 – Marine Corps Base Camp Pendleton (MCBCP). 2002. Emergency Action Plan. Accessed on July 22, 2024. Available at: https://www.pendleton.marines.mil/Main-Menu/Staff-Agencies/Safety/Safety-Programs/Emergency-Action-Plan/

MCB Camp Pendleton. 2011. Final Hazardous Waste Management Plan. November. Accessed on April 27, 2024.

SWRCB 2024 – GeoTracker record for Camp Pendleton South. Accessed on April 27, 2024.

Section 5.10

Hydrology and Water Quality

5.10 Hydrology and Water Quality

This section describes the environmental setting and regulatory background and discusses impacts associated with the construction and operation 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

The proposed Haybarn Energy Reliability Center (HERC) site is located within the Santa Margarita watershed on Marine Corps Base (MCB) Camp Pendleton. The site is situated between the floodplains of the Santa Margarita River (SMR) to the south and Cockleburr

Creek to the North. Storm water from the proposed project site would drain into the SMR (MCBCP 2018).

Most of the streams on MCB Camp Pendleton are ephemeral and only flow following successive, major rain events. Due to the extreme variability of precipitation and runoff, the potential for flooding at MCB Camp Pendleton is high. However, the proposed project site does not occur within a 100-year floodplain. In addition, there are no jurisdictional wetlands or other waters of the U.S. at the proposed project site that would be subject to federal authority under Section 404 of the Clean Water Act (CWA) (MCBCP 2018).

Upstream users greatly affect the water quality of surface waters as MCB Camp Pendleton is the last water user on the extensive SMR system. SMR nutrient levels, particularly nitrogen, have increased in recent years due to intensive agricultural use of fertilizers in the upper watersheds. The upper and lower portions of the SMR are CWA § 303(d) impaired water bodies for enterococcus, fecal coliform, phosphorus, toxicity, and total nitrogen due to urban/agricultural runoff, natural sources, and point source and nonpoint source pollution (SWRCB 2017).

The principal source of drinking water for MCB Camp Pendleton is groundwater. The proposed project area is located within the Santa Margarita groundwater basin. The groundwater basins are recharged by percolation from overlying rivers and streams. Overall, localized water tables can be expected at similar elevations to those of observed nearby flowing streams, or below the elevations of dry stream channels (MCBCP 2018).

Regulatory Background

Federal

Clean Water Act and California's Porter-Cologne Water Quality Control Act. The State Water Resources Control Board (SWRCB) and its nine Regional Water Quality Control Boards (RWQCB) are responsible for the regulation and enforcement of the water quality protection requirements of the federal CWA and the state's Porter-Cologne Water Quality Control Act.

DoD Unified Facilities Criteria, Low Impact Development. All Department of Defense (DoD) construction projects are required to be compliant with Low Impact Development (LID) criteria, which is a stormwater management strategy designed to maintain the hydrologic functions of a site and mitigate the adverse impacts of stormwater runoff (DoD 2015, DoD 2023).

Energy Independence and Security Act. Section 438 requires federal agencies to develop facilities having a footprint that exceeds 5,000 square feet in a manner that maintains or restores the pre-development site hydrology to the maximum extent technically feasible (USEPA 2007).

EO 11988, Floodplain Management. Federal agencies must take action to reduce the risk of flood loss and restore and preserve the values of floodplains.

State

State Sustainable Groundwater Management Act. The 2014 Sustainable Groundwater Management Act (SGMA) requires local public agencies and Groundwater Sustainability Agencies (GSAs) in high- and medium-priority basins to develop and implement Groundwater Sustainability Plans (GSPs) or Alternatives to GSPs. GSPs include detailed road maps for how groundwater basins will attain long term sustainability.

The County of San Diego was not classified as a high- or medium-priority basin and formerly withdrew from managing the San Luis Rey Valley Groundwater Basin as a GSA effective January 31, 2019.

Local

The MCBCP Storm Water Management Plan. The MCBCP Storm Water Management Plan details the operations required for compliance with the MS4 permit (MCBCP 2016). Additional Base documents have been developed for construction and operational and maintenance activities to address required practices and procedures to protect water quality throughout MCB Camp Pendleton (MCBCP 2011, NAVFAC SW 2017).

5.10.2 Environmental Impacts

A surface water hydrology assessment was conducted for the proposed sites to identify potential impacts to existing water courses to ensure that the proposed project is not creating new points of stormwater discharge and not altering flow rates. The results of the assessment are discussed below.

a. Would the project violate water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

Construction

Less Than Significant. Grading activities and trenching for installation of conduit and utility ductbanks associated with construction would temporarily increase the potential for localized erosion until site stabilization activities are completed. Because the project would result in a total area of more than 1 acre of soil disturbance, the project must obtain coverage under the California Construction General Permit, which would include the preparation and implementation of a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP would include standard erosion control measures and Best Management Practices (BMPs) to reduce potential impacts resulting from erosion (SWRCB 2010). With implementation of the SWPPP and associated BMPs, construction impacts on water quality would not be significant.

Operation

Less Than Significant. Operation of the HERC would result in an increase in impervious surfaces, which could contribute additional stormwater runoff and pollutants to surface waters. However, the additional stormwater generated would be collected on site in compliance with LID requirements (DoD 2015, DoD 2023). Maintenance activities, including potential use of herbicides for vegetation control, would be conducted in accordance with applicable regulations and MCBCP's Integrated Pest Management Plan to prevent runoff into nearby watercourses (NAVFAC SW 2017). With adherence to LID principles and proper management practices, operational impacts on water quality would not be 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

Less Than Significant. Construction activities associated with trenching and excavation would typically remain above the groundwater table. If groundwater is encountered, any required dewatering would be temporary and localized, and water levels would return to normal upon completion. No pumping of groundwater supplies would be required as water for construction would either be trucked in from an off-Base source or obtained from local fire hydrants, subject to permission from MCB Camp Pendleton. Therefore, construction would not substantially deplete groundwater supplies or interfere with recharge, resulting in a less than significant impact.

Operation

No Impact. Operation of the HERC would not require the use of groundwater. The minimal amounts of water used for typical maintenance would be trucked in from an off-Base source (MCBCP 2019). The project would not substantially increase impervious surfaces such that groundwater recharge would be impeded. Therefore, no impact to groundwater supplies or recharge would occur.

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

Less Than Significant. Construction activities would temporarily alter existing drainage patterns and expose soils to potential erosion. However, the implementation of the SWPPP, erosion control measures, and BMPs would minimize the potential for substantial erosion or siltation (SWRCB 2010).

Existing surface drainage patterns in Haybarn Canyon would be modified by drainage improvements associated with the proposed battery energy storage system, as described in Section 4.9. Small area drains would be installed to collect surface water runoff, which would be piped into a main storm drainpipe (around 12" to 24" in diameter) down the center of the site. Inlets/catch basins would be installed throughout the site to intercept larger water flows, which would be piped to the main storm drainpipe. The main drainpipe would be directed to a basin/underground cistern for water quality treatment. Water will then be piped into the bypass storm drain for off-site flows that would continue north to Vandegrift Boulevard and enter the existing storm drain system. These improvements will be designed avoid producing erosion or siltation. Impacts would not be significant.

Operation

Less Than Significant. The project would result in an increase in impervious surfaces but would include on-site stormwater collection in compliance with LID requirements (DoD 2015, DoD 2023). This would minimize the potential for substantial erosion or siltation during operation. Impacts would not be significant.

ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;

Construction

Less Than Significant. Construction activities would not substantially alter the rate or amount of surface runoff such that flooding would occur. The implementation of the SWPPP and BMPs would manage stormwater runoff during construction (SWRCB 2010). Impacts would not be significant.

Operation

Less Than Significant. While the project would increase impervious surfaces, on-site stormwater collection per LID requirements would minimize increases in surface runoff rates and amounts (DoD 2015, DoD 2023). This would prevent flooding on- or off-site. Impacts would not be 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

Less Than Significant. Construction activities would not generate runoff that would exceed the capacity of existing or planned stormwater drainage systems. The SWPPP and BMPs would manage construction site runoff and prevent substantial additional sources of polluted runoff (SWRCB 2010). Impacts would not be significant.

Operation

Less Than Significant Impact. On-site stormwater collection per LID requirements would prevent the project from creating or contributing runoff that would exceed stormwater drainage system capacities (DoD 2015, DoD 2023). Drainage improvements at the project site will be sized and designed to accommodate anticipated surface water runoff. Proper material management and implementation of MCBCP stormwater programs would minimize additional sources of polluted runoff (MCBCP 2016). Impacts would not be significant.

iv. Impede or redirect flood flows?

Construction

No Impact. The project site is not located within a 100-year floodplain (MCBCP 2018). Construction activities would not impede or redirect flood flows. No impact would occur.

Operation

No Impact. The project site is not located within a 100-year floodplain (MCBCP 2018). The project would not place structures that would impede or redirect flood flows. No impact would occur.

d. Would the project in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

Construction

No Impact. The project site is not located within a flood hazard, tsunami, or seiche zone (MCBCP 2018). Construction of the project would not risk release of pollutants due to inundation. No impact would occur.

Operation

No Impact. The project site is not located within a flood hazard, tsunami, or seiche zone (MCBCP 2018). Operation of the project would not risk release of pollutants due to inundation. No impact would occur.

e. Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Construction

No Impact. The project would comply with the applicable MCB Camp Pendleton stormwater programs and permits, which are in accordance with regional water quality control plans (MCBCP 2016). The project site is not located within a basin subject to a sustainable groundwater management plan. Construction of the project would not conflict with or obstruct implementation of water quality control plans or sustainable groundwater management plans. No impact would occur.

Operation

No Impact. The project would comply with the applicable MCB Camp Pendleton storm-water programs and permits, which are in accordance with regional water quality control plans (MCBCP 2016). The project site is not located within a basin subject to a sustainable groundwater management plan. Operation of the project would not conflict with or obstruct implementation of water quality control plans or sustainable groundwater management plans. No impact would occur.

5.10.3 Mitigation Measures

No mitigation is required.

5.10.4 References

DoD 2015 - Department of Defense (DoD). Unified Facilities Criteria (UFC): Low Impact Development. UFC 3-210-10. Accessed on: April 30, 2024. Available online at: https://www.wbdg.org/FFC/DOD/UFC/ufc_3_210_10_2015.pdf

DoD 2023 - Department of Defense (DoD). Unified Facilities Criteria (UFC): Low Impact Development. UFC 3-210-10. Updated 28 August 2023.

MCBCP 2011 - Marine Corps Base Camp Pendleton (MCBCP). Basewide Hazardous Waste Management Plan. November. Accessed on: April 30, 2024.

MCBCP 2016 - Marine Corps Base Camp Pendleton (MCBCP). Basewide Stormwater Management Plan. March. Accessed on: April 30, 2024.

MCBCP 2018 - Marine Corps Base Camp Pendleton (MCBCP). Integrated Natural Resources Management Plan. March. Accessed on: April 30, 2024.

MCBCP 2019 - Marine Corps Base Camp Pendleton (MCBCP). 2019 Consumer Confidence Report, South System, Marine Corps Base Camp Pendleton. Accessed on: April 30, 2024.

NAVFAC SW 2017 - Naval Facilities Engineering Systems Command Southwest (NAVFAC SW). Integrated Pest Management Plan. Marine Corps Base Camp Pendleton. October. Accessed on: April 30, 2024.

SWRCB 2010 - California State Water Resources Control Board (SWRCB). 2010 Integrated Report (Clean Water Act Section 303(d) List / 305(b) Report). Accessed on: April 30, 2024. Available online at: https://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2010.shtml

SWRCB 2017 - California State Water Resources Control Board (SWRCB). Final 2014 and 2016 Integrated Report (Clean Water Act Section 303(d) List / 305(b) Report). Accessed on: April 30, 2024. Available online at: https://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2014_2016.shtml

USEPA 2007 - U.S. Environmental Protection Agency (USEPA). Energy Independence and Security Act. Section 438. Accessed on: April 30, 2024. Available online at: https://www.epa.gov/nps/energy-independence-and-security-act-2007-eisa-section-438-federal-leadership-environmental

Section 5.11

Land Use and Planning

5.11 Land Use and Planning

This section describes, with respect to land use and planning: the environmental setting and regulatory background of the project; and the impacts associated with construction and operation of the project.

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 HERC would be located within the perimeter of MCB Camp Pendleton in northwestern San Diego County. The 19.35-acre project site is located in Haybarn Canyon on land owned by MCB Camp Pendleton. The site is currently disturbed and is partially graded and paved. Coastal sage scrub and riparian scrub habitats exist outside of the graded area.

The HERC would be northeast of and adjacent to the existing SDG&E Pendleton Substation. A water treatment facility serving MCB Camp Pendleton is located northeast of the HERC site. An unnamed dirt road off Vandegrift Boulevard provides access to the substation and equipment storage areas.

Regulatory

Federal

Coastal Zone Management Act (16 USC 1451-1464, Chapter 33; P.L. 92-583). Encourages states to keep coastal zones in their natural state as much as possible and to avoid irreversible uses (CZMA 2024).

State

California Coastal Act (PRC Section 30000 et seq.). Sets forth policies to guide coastal zone conservation and development. Requires Coastal Development Permit (CDP) from local agencies or Coastal Commission for development in coastal zone (CCA 2024).

Local

San Diego County General Plan, Land Use Element. Guides future growth and development within unincorporated areas of San Diego County (San Diego County 2011).

- **Goal LU-2:** Maintenance of the County's Rural Character. Conservation and enhancement of the unincorporated County's varied communities, rural setting, and character.
- **Goal LU-4:** Inter-jurisdictional Coordination. Coordination with the plans and activities of other agencies and tribal governments that relate to issues such as land use, community character, transportation, energy, other infrastructure, public safety, and resource conservation and management.
    - **Policy LU-4.4:** Development Compatibility with Military Facilities. Ensure compatibility of new development with the current and planned mission and operations of U.S. government military installations.

MCBCP 2030 Master Plan. The MCBCP 2030 Master Plan, finalized in March 2011, serves as a comprehensive planning document that guides the future development and management of the base. The plan establishes land use designations, policies, and guidelines to ensure the compatibility of new development with the military mission while preserving natural and cultural resources. It also outlines strategies for sustainable growth, efficient infrastructure, and enhanced quality of life for base personnel and residents (MCBCP 2011).

MCBCP Integrated Natural Resources Management Plan (INRMP). The MCBCP INRMP, approved in 2018, is a long-term planning document that guides the management and conservation of natural resources on the base while ensuring the sustainability of the military mission. The plan provides a framework for balancing the protection and enhancement of ecosystems, species, and other natural resources with the operational requirements of the base. It establishes resource-specific goals, objectives, and management strategies, as well as procedures for monitoring, reporting, and adaptive management (MCBCP and MCAS 2024).

5.11.2 Environmental Impacts

a. Would the project physically divide an established community?

Construction

No Impact. The project site is located entirely within MCB Camp Pendleton, which is closed to the public. The site is not within or adjacent to any established communities. The surrounding area within the Base consists of undeveloped land, military facilities, and infrastructure. Project construction would not physically divide an established community.

Operation

No Impact. As described above, the project site is within MCB Camp Pendleton and not located within an established community. The energy storage facility would not physically divide any communities. Project operation would not physically divide an established community.

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

Less Than Significant. The project is located on federal land and would not conflict with applicable local land use plans and policies, including the San Diego County General Plan, Land Use Element (San Diego County 2011) and MCB Camp Pendleton Integrated Natural Resources Management Plan (MCBCP and MCAS 2024). The project would support the current and planned uses of the military base and does not conflict with the MCB Camp Pendleton 2030 Master Plan or MCAS Camp Pendleton Master Plan, which recognizes the area's established role in providing utility infrastructure to serve the Base.

The project would require a lease from MCB Camp Pendleton that includes provisions for conformance with site-specific considerations like natural resources and existing uses.

The project site is within the Coastal Zone. The California Coastal Act requires a CDP for development in the Coastal Zone (CCA 2024). As the project is located entirely on federal land, it would be exempt from the CDP requirement. In accordance with the Coastal Zone Management Act, the project would still aim to be consistent with applicable Coastal Act policies related to protection of coastal resources, public access, recreation, marine environment, and land resources.

Construction of the energy storage facility would not conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. Impacts would be less than significant.

Operation

Less Than Significant. Operation of the energy storage facility would be consistent with the military and industrial character of the surrounding area within MCB Camp Pendleton. As described above, the project would not conflict with applicable land use plans, policies, or regulations, including the San Diego County General Plan, Land Use Element (San Diego County 2011), MCB Camp Pendleton Integrated Natural Resources Management Plan (MCBCP and MCAS 2024), MCB Camp Pendleton 2030 Master Plan, MCAS Camp Pendleton Master Plan, and California Coastal Act (CCA 2024). Operational impacts related to land use plan, policy, or regulation conflicts would be less than significant.

5.11.3 Mitigation Measures

None required.

5.11.4 References

CCA 2024 – California Coastal Act (CCA). California Public Resources Code Division 20. Accessed on March 21, 2024. Available at: https://www.coastal.ca.gov/coastact.pdf

CZMA 2024 – Coastal Zone Management Act (CZMA) of 1972. 16 USC 1451-1464, Chapter 33; P.L. 92-583. Accessed on March 21, 2024. Available at: https://coast.noaa.gov/data/Documents/OceanLawSearch/Summary%20of%20Law%20-%20Coastal%20Zone%20Management%20Act.pdf?redirect=301ocm

MCBCP 2011 – Marine Corps Base Camp Pendleton (MCBCP). 2011. Marine Corps Base Camp Pendleton 2030 Master Plan. Finalized March 2011. Accessed on May 28, 2024.

MCBCP and MCAS 2024 – Marine Corps Base Camp Pendleton and Marine Corps Air Station Camp Pendleton (MCBCP and MCAS). Final Joint Integrated Natural Resources Management Plan for Marine Corps Base and Marine Corps Air Station Camp Pendleton, California, Revision. Approved May 24, 2024. Accessed on July 22, 2024. Available online at: https://www.pendleton.marines.mil/Portals/98/2024%20CamPen%20INRMP%20FINAL%20May%202024%20Public_1.pdf

San Diego County 2011 – San Diego County (San Diego County). 2011. San Diego County General Plan. Land Use Element. Accessed on July 22, 2024. Available at: https://www.sandiegocounty.gov/content/dam/sdc/pds/gpupdate/docs/GP/LandUseElement.pdf

Section 5.12

Mineral Resources

5.12 Mineral Resources

This section describes the environmental setting and regulatory background and discusses the impacts associated with the construction and operation of the project with respect to mineral resources.

Mineral Resources Would the project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State?	☐	☐	☐	☒
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 State CEQA Guidelines, Appendix G, minerals.

5.12.1 Environmental Setting

Information on mineral resources was compiled from published literature, maps, and review of aerial photographs. Impacts to mineral resources from project construction 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 and operational activities.

The project site, located within the county of San Diego, is located within the perimeter of MCB Camp Pendleton. The project site is in an area that is not classified or designated by Mineral Land Classification studies produced under the Surface Mining and Reclamation Act (SMARA).

Regulatory

Federal

There are no federal regulations, authorities, or administering agencies pertaining to mineral resources that would apply to the project.

State

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 2000):

- MRZ-1: Areas where adequate information indicates that no significant mineral deposits are present, or where it is judged that little likelihood for their presence exists.
- MRZ-2: Areas where adequate information indicates that significant deposits are present, or where it is judged that a high likelihood for their presence exists.[1]
- MRZ-3: Areas containing mineral deposits, but their significance cannot be evaluated from available data.
- 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. SMARA excludes military from areas classified as Aggregate Resource Areas, as they considered to be generally incompatible with mining (DOC, 2000).

Local

No local regulations related to mineral resources have been identified that are applicable to the project.

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 and Operation

No Impact. The proposed project site is in on an active military installation and does not contain any known or designated mineral resources. Therefore, the project would not result in the loss of availability of a known mineral resource.

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?

[1] The guidelines set forth two requirements to be used to determine if land should be classified MRZ-2:

(1) The deposit must be composed of material that is suitable as a marketable commodity.

(2) The deposit must meet threshold value. The projected value (gross selling price) of the deposit, based on the value of the first marketable product, must be at least $5 million (1978 dollars).

Construction and Operation

No Impact. The proposed project site is not delineated in the General Plan or other land use plan as a locally important mineral resource recovery site. The proposed 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 2000 – Department of Conservation (DOC). California Surface Mining and Reclamation Policies and Procedures. Guidelines for Classification and Designation of Mineral Lands. Accessed on: July 17, 2024. Available online at: https://www.conservation.ca.gov/smgb/Guidelines/Documents/ClassDesig.pdf

Section 5.13

Noise

5.13 Noise

This section describes the environmental and regulatory setting and discusses impacts associated with the construction and operation of the or 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

MCB Camp Pendleton is located north of the city of San Diego, within the northern portion of San Diego County. The city of San Clemente and the Cleveland National Forest border MCB Camp Pendleton to the north and east, with the community of Fallbrook and the Naval Weapons Station Seal Beach Detachment Fallbrook to the east, and the city of Oceanside to the south (MCBCP 2020).

The proposed Haybarn Energy Reliability Center (HERC) would be located on the south-east side of Vandegrift Boulevard with access to the site via Vandegrift Boulevard and Haybarn Road, adjacent to the SDG&E Pendleton Substation. The HERC site is located over two miles from the MCB Camp Pendleton boundary. The primary source of existing noise within MCB Camp Pendleton is aircraft activity at MCAS Pendleton and at the various Landing Zones located throughout the Base (MCBCP 2020). The HERC site is located about 0.8-mile northeast of the end of the MCAS runway, and the parking lot laydown area is located about 1.75 miles northeast of the MCAS runway.

Noise sensitive locations include residential areas, schools, places of worship, and hospitals because these are most likely to be adversely impacted by increased noise levels. The nearest noise sensitive locations are Ranch House Chapel (0.3 miles from the HERC site, 1.3 miles from the laydown area at the parking lot site), Deluz Child Development Center (1.5 miles from the HERC site, 0.6 miles from the parking lot site). Additional sensitive receptors between 1 and 2 miles from the project site and the laydown area include May Fay Elementary School, Marine Memorial Chapel, Brown House School, Palomar College, Corteau Development Center, and Hope and Care Rehabilitation Center. The nearest residential area is approximately 1.5 miles from the Haybarn Canyon site. Surrounding infrastructure includes operations and maintenance facilities, MCAS training facilities, commercial facilities, and parking areas.

Regulatory

Federal

No federal noise regulations have been identified that are applicable to the project.

State

The State CEQA Guidelines (Appendix G) 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.

In September 2013, the California Department of Transportation (Caltrans) released the Transportation and Construction Vibration Guidance Manual. This manual includes the Federal Transit Administration's (FTA) methods and findings. The Caltrans manual states that for construction activities that generate vibration, the threshold of human response begins at a peak particle velocity (ppv) of 0.16 inch per second (in/sec). This is characterized by Caltrans as a "distinctly perceptible" event (Caltrans 2013).

Local

The proposed project is located entirely within the boundaries of MCB Camp Pendleton, under federal jurisdiction. Local noise regulations and standards are not applicable to the project.

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

Less Than Significant. Construction of the HERC would result in temporary increases in noise levels due to the use of heavy equipment and construction activities. Construction noise would be short-term and limited to daytime hours. The Ranch House Chapel is the only sensitive receptor located near enough to the project to potentially be affected by construction noise. The Ranch House Chapel is part of the Santa Margarita Ranch House National Historic Site, which is used for gatherings and events. It is not available for use by the general public and there are no restrooms at the facility, thus it is not regularly occupied (MCBCP 2021). Distance would attenuate noise to levels at all other identified sensitive receptors. Regular aircraft activity in the vicinity would continue to dominate the noise environment.

When estimating construction noise levels that may occur at the nearest noise-sensitive receptors, and in order to evaluate the potential health-related effects (physical damage to the ear) from construction noise, the construction equipment noise levels were calculated using worst-case conditions and modeled using the Federal Highway Administration's Roadway Construction Noise Model (FHWA 2006). The results of the modeling are compared against the construction-related noise level threshold established in the Criteria for a Recommended Standard: Occupational Noise Exposure prepared in 1998 by the National Institute for Occupational Safety and Health (NIOSH). The NIOSH construction-related noise level threshold starts at a time-weighted average (TWA) of 85 dBA over 8 hours per day; for every 3 dBA increase, the exposure time is cut in half. This reduction results in noise level thresholds of TWA 88 dBA over 4 hours per day, TWA of 92 dBA over 1 hour per day, TWA 96 dBA over 30 minutes per day, and up to a TWA of 100 dBA over 15 minutes per day. For the purposes of this analysis, the more conservative threshold of 85 dBA Leq is used as an acceptable threshold for construction noise potentially experienced at the nearby sensitive receptors (NIOSH 2024).

Construction equipment is not typically positioned at any one location during the duration of construction activities, but rather dispersed throughout the site and at various distances from sensitive receptors. Therefore, the Federal Transit Administration (FTA) guidance for calculating construction noise recommends modeling construction noise produced by all construction equipment from the center of the project site (FTA 2018). The center of the project site would be approximately 1,584 feet from the nearest sensitive receptor. The anticipated short-term construction noise levels generated for the necessary project equipment combined is anticipated to be approximately 56.9 dBA Leq, far below the recommended NIOSH threshold of 85 dBA Leq. Appendix B provides the

calculated Maximum Noise Levels of the combined construction equipment that would be used for various phases of the project.

Due to the irregular nature of the use of the Ranch House Chapel, noise-sensitive events can be scheduled to avoid periods of excessively loud construction activity. Alternately, construction can be suspended if a noise-sensitive event needs to be scheduled during project construction. It should be noted that the existing noise environment in the vicinity is dominated by aircraft operations at MCAS Camp Pendleton and at other locations across the Base. Therefore, construction noise impacts on sensitive receptors can be avoided and would not be significant.

Operation

Less Than Significant. MCB Camp Pendleton has approximately 40,000 to 45,000 training events scheduled at the Base each year. Events range from small unit trainings to larger brigade exercises. In terms of noise generation, the most significant activities are artillery training and aircraft operations. MCAS Camp Pendleton contains an airfield where approximately 180 helicopters are based. There are no fixed wing aircraft based at the Base; however, turbo prop and jet aircraft from MCAS Miramar and other local military facilities use the base for aerial weapons delivery training and other trainings (CA WRCB 2005).

According to the MCB Camp Pendleton Range Compatible Use Zone Study (RCUZ), the project site is located within Noise Zone I, the lowest noise zone. Although noise levels experienced within this zone are not expected to pose any hazards, they may interfere with certain activities of some noise sensitive locations, particularly during more intensive base operations. The RCUZ Range Safety Zones (RSZ) are used for land use planning purposes and define the three areas of concern for safety hazards. The site is located within RSZ C, which contains minimum restricted airspace for aircraft maneuvering (MCBCP 2007).

As the project site is near the MCAS runway, the majority of the existing ambient noise levels experienced at the site would be that of frequent aircrafts flying over and occasional training events that may include distant artillery noise, helicopter flights, and other aircraft activities. The nearest sensitive receptor to the site, the Ranch House Chapel, is located 0.3-mile due east of the site and is situated nearly halfway in between the site and the northeastern end of the MCAS runway, which is 0.25-mile directly east of the Chapel. According to the Final EA for a Southern Nevada Regional Heliport noise study done in 2008, predicted ambient average hourly noise levels experienced at distances similar to that of the Chapel to the MCAS runway could be anywhere from 35 dB(A) Leq to 55 dB(A) Leq, with the potential of reaching an Lmax of over 70 dB(A) and having single-event helicopter noise level events reaching above 80 dB(A) (Clark County DOA 2008). The range in noise levels is dependent on the factors such as the type of helicopter, or other aircrafts, wind direction, atmospheric pressure, and other variables. The minimal noise levels generated by the cooling fans on the battery storage system's inverter units and the minor corona discharge (audible noise induced by an electrical discharge caused by the ionization of a fluid such as air surrounding a conductor carrying

a high voltage) would not exceed the existing ambient noise environment experienced by the Chapel.

Operation of the HERC would involve battery energy storage systems and upgraded electrical equipment at the adjacent substation. The proposed battery energy storage system generates noise in the range of 50 to 65 dBA (Eos 2024), which is consistent with outdoor noise levels.

These facilities are not anticipated to generate significant noise levels beyond those of the existing substation. Recurring maintenance activities would result in negligible noise. No sensitive receptors are located in close proximity to the HERC site. Therefore, operational noise impacts would not be significant.

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

Construction

Less Than Significant. Construction activities associated with the HERC, such as grading and excavation, may generate localized groundborne vibration. The nearest sensitive receptor is located approximately 0.3 miles from the project site. At this distance, groundborne vibration would be imperceptible and would not exceed the Caltrans threshold of 0.16 in/sec ppv for human response (Caltrans 2013). Therefore, construction-related groundborne vibration impacts would not be significant.

Operation

No Impact. Operation of the HERC would not involve any sources of significant ground-borne vibration. Battery energy storage systems and electrical equipment do not generate excessive vibration. Therefore, no operational groundborne vibration impacts would occur.

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

No Impact. The HERC site is not located within an airport land use plan or within two miles of a public or private airport. The proposed project would not expose people to excessive aircraft noise levels. Therefore, no impact related to airport noise would occur during construction.

Operation

No Impact. As discussed above, the HERC site is not located within an airport land use plan or within two miles of an airport. Operation of the HERC would not expose people

to excessive aircraft noise levels. Therefore, no impact related to airport noise would occur during operation.

5.13.3 Mitigation Measures

No mitigation is required.

5.13.4 References

CA WRCB 2005 – California State Water Resources Control Board. San Juan Creek and Western San Mateo Creek Watersheds SAMP. DRAFT Environmental Impact Statement – Watershed Existing Noise Conditions. Accessed online on May 23, 2024: https://www.waterboards.ca.gov/water_issues/programs/cwa401/docs/notice_031511/volumes1_2/Section%204/4.1.8%20Noise-Nov2005.pdf

Caltrans 2013 – California Department of Transportation (Caltrans). Transportation and Construction Vibration Guidance Manual. September 2013. Accessed on: April 25, 2024. Available online at: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/tcvgm-apr2020-a11y.pdf

Clark County Department of Aviation 2008 – Final EA for a Southern Nevada Regional Heliport (Appendix D). https://downloads.regulations.gov/FAA-2010-0302-0903/attachment_1.pdf

Eos Energy Enterprises, Inc. (Eos) 2024 – Fact sheet titled "Powering our nation with positively ingenious clean energy storage." Accessed online on May 22, 2024: https://www.eose.com/technology/

FHWA (Federal Highway Administration) 2006 – Roadway Construction Noise Model (RCNM) Version 2.0. Accessed online on May 23, 2024: https://www.fhwa.dot.gov/environment/noise/construction_noise/rcnm2/

FTA (Federal Transit Administration) 2018 – Transit Noise and Vibration Impact Assessment, FTA-VA-90-1003-06. Accessed online on May 23, 2024: https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/FTA_Noise_and_Vibration_Manual.pdf

MCBCP 2007 – Range Compatible Use Zone (RCUZ) Study. Accessed on: May 23, 2024: https://www.pendleton.marines.mil/Portals/98/Docs/Operations/RangeOps/CampPendleton_RCUZ_June2007.pdf

MCBCP 2020 – Marine Corps Base Camp Pendleton (MCB Camp Pendleton). Final Supplemental Environmental Assessment for MCB Camp Pendleton PV and Natural Gas Energy Generation Facilities. November 2020. Available online at: https://imlive.s3.amazonaws.com/Federal%20Government/ID225372037205229199014589353958863371211/Final%20SEA%20PV-NG%20Energy%20Facilities_NOV%202020_w%20FONSI.pdf

MCBCP 2021 – Environmental Security, Resource Management Branch. Santa Margarita Ranch House General Rules. Accessed online on May 23, 2024: https://www.pendleton.marines.mil/Portals/98/Santa_Margarita_Ranch_House_General_Rules_2021.pdf

NIOSH (National Institute for Occupational Safety and Health) 2024 – Occupational Noise Exposure. Accessed online on May 23, 2024: https://www.cdc.gov/niosh/topics/noise/noise.html

Section 5.14

Population and Housing

5.14 Population and Housing

This section describes the environmental and regulatory background, and discusses impacts associated with the construction and operation 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 HERC is proposed within the perimeter of MCB Camp Pendleton in northwestern San Diego County. Nearby residential communities include Oceanside to the south and San Clemente to the north. The project site is a 19.35-acre parcel located in Haybarn Canyon on land owned by MCB Camp Pendleton.

According to the U.S. Census Bureau, the estimated population of San Diego County was 3,298,634 as of July 1, 2021 (U.S. Census Bureau 2021a). The city of Oceanside had an estimated population of 174,068, and San Clemente had 64,293 (U.S. Census Bureau 2021b).

The project would require a temporary construction workforce drawn primarily from the southern California region, including Los Angeles, Orange, and San Diego counties. The commuting distances to the project site vary depending on the specific location within these counties.

For example, driving distances from various parts of Los Angeles County to the project site vary, with travel times dependent on traffic conditions. Coastal areas generally offer shorter commutes, while areas further inland or in the northern parts of the county may require longer travel times.

Construction of the entire HERC system would require approximately 24 months to complete. The average daily construction workforce would vary between 25 and 50 workers, with a peak workforce of up to 100 workers. Given the varying commute times, it's likely that workers would be drawn primarily from areas within a more reasonable commuting distance, such as southern Orange County and northern San Diego County.

During operation, the facility would be remotely operated and monitored. Staff would visit the site quarterly to perform maintenance, with about 120 work hours required per quarter using two to three workers. Operational employees would likely be based in the project region.

Population Growth

San Diego County's population grew by 6.6% between 2010 and 2020 (U.S. Census Bureau 2021a). The city of Oceanside's population increased by 5.2% during the same period, while San Clemente's population grew by 3.1% (U.S. Census Bureau 2021b). The project is not expected to directly or indirectly induce substantial population growth in the area.

Housing

According to the U.S. Census Bureau, there were an estimated 1,226,879 housing units in San Diego County as of July 1, 2021, with a homeownership rate of 61.6% (U.S. Census Bureau 2021c). Oceanside had an estimated 67,235 housing units, with a homeownership rate of 57.9%. San Clemente had 26,032 housing units, with a homeownership rate of 67.2% (U.S. Census Bureau 2021d). The project would not displace any existing housing.

Labor Supply

The civilian labor force in San Diego County was estimated at 1,582,400 as of May 2023, with an unemployment rate of 2.7% (EDD 2023). The construction and operation work-force for the project is expected to be drawn from the existing labor pool in the region and would not require a significant influx of new workers.

Regulatory

Federal

There are no applicable federal regulations related to population and housing for this project.

State

There are no applicable state regulations related to population and housing for this project.

Local

San Diego County General Plan, Housing Element. Provides an assessment of current and projected housing needs and a comprehensive strategy for addressing those needs (San Diego County 2021).

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

No Impact. The project does not propose any new homes, businesses, or infrastructure extensions that would directly induce population growth. Construction workers would be drawn from the substantial existing labor force in the region and are not expected to relocate to the area to participate in the construction of the project. The project would not indirectly induce substantial unplanned population growth.

Operation

No Impact. The project would employ a small number of workers for quarterly maintenance visits, most of whom are expected to be from the local region and would not relocate as a result of the project. The project would not extend roads or other infrastructure that could indirectly induce population growth. The project would not induce substantial unplanned population growth.

b. Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

Construction

No Impact. The project site is located entirely within MCBCP, which does not contain any private residences. The project would not displace any people or existing housing.

Operation

No Impact. As stated above, the project would not displace any people or housing, and would not necessitate the construction of replacement housing elsewhere.

5.14.3 Mitigation Measures

None required.

5.14.4 References

EDD 2023 – Employment Development Department, State of California (EDD). 2023. Labor Market Information, San Diego County. Accessed on July 12, 2023. Available at: https://www.labormarketinfo.edd.ca.gov/geography/sandiego-county.html

San Diego County 2021 – San Diego County (San Diego County). 2021. San Diego County General Plan, Housing Element. Accessed on July 12, 2023. Available at: https://

www.sandiegocounty.gov/content/dam/sdc/pds/GPUpdate2021/Housing%20Element_Adopted%2004.06.2021_Clean%20Version.pdf

U.S. Census Bureau 2021a – U.S. Census Bureau (U.S. Census Bureau). 2021. QuickFacts, San Diego County, California. Accessed on July 12, 2023. Available at: https://www.census.gov/quickfacts/fact/table/sandiegocountycalifornia,CA/PST045221

U.S. Census Bureau 2021b – U.S. Census Bureau (U.S. Census Bureau). 2021. QuickFacts, Oceanside city, California; San Clemente city, California. Accessed on July 12, 2023. Available at: https://www.census.gov/quickfacts/fact/table/oceansidecitycalifornia,sanclementecitycalifornia/PST045221

U.S. Census Bureau 2021c – U.S. Census Bureau (U.S. Census Bureau). 2021. QuickFacts, Housing, San Diego County, California. Accessed on July 12, 2023. Available at: https://www.census.gov/quickfacts/fact/table/sandiegocountycalifornia,CA/HSG010221

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Section 5.15

Public Services

5.15 Public Services

This section describes the environmental and regulatory background, and discusses impacts associated with the construction and operation 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, population and housing.

5.15.1 Environmental Setting

The project site is a 19.35-acre parcel located in Haybarn Canyon on land owned by MCB Camp Pendleton. A portion of site is disturbed, including graded and paved areas. Coastal sage scrub and riparian scrub habitats exist outside of the graded area.

Fire Protection

Camp Pendleton Fire and Emergency Services is responsible for structural fire suppression, wildland fire suppression, technical rescue, emergency medical services, hazardous materials mitigation, and disasters mitigation at the Base. The Fire Operation Branch has approximately 67 personnel on each of two shifts, housed within eleven fire stations located throughout the installation. The department maintains a fleet of emergency apparatuses including fire engines, ladder trucks, brush engines, rescue ambulances, and a hazardous materials unit. They respond to over 4,000 calls for service annually (MCBCP 2023a).

The nearest State Responsibility Area is located 2.0 miles northeast of the project site (CAL FIRE 2020). The nearest very high Fire Hazard Severity Zone is located 2.5 miles northeast of the project site (CAL FIRE 2022).

Police Protection

The Provost Marshal is responsible for law enforcement and physical security activities for MCB Camp Pendleton. The Provost Marshal is a special staff officer to the Commanding Officer of the Marine Corps Base, under the staff cognizance of the Commanding Officer, Security & Emergency Services Battalion (MCBCP 2023d).

Schools

There are five non-Department of Defense schools on MCB Camp Pendleton, belonging to Oceanside Unified School District and Fallbrook Union Elementary School District. School assignment is determined by Base housing area. The schools include (MCBCP 2023e):

- North Terrace Elementary (K-8), Oceanside High School (9-12)
- Santa Margarita Elementary (K-8), Oceanside High School (9-12)
- Stuart Mesa Elementary (K-8), Oceanside High School (9-12)
- Mary Fay Pendleton Elementary (K-8), Potter Junior High (7-8), Fallbrook High School (9-12)
- San Onofre Elementary (K-8), San Clemente High School (9-12)

Military families living off-Base attend schools in the surrounding districts including Bonsall, Capistrano, Carlsbad, Murrieta Valley, San Dieguito, Temecula Valley, and Vista (MCBCP 2023e).

Parks

Lake O'Neill Recreational Park, located on Base, offers a variety of recreational activities and facilities including (MCBCP 2023c):

- Fishing: Permitted year-round, the lake is stocked and bait is sold at the Lake O'Neill Recreation Office. A California State License and Camp Pendleton Base permit are required.
- Recreation Area: Row and paddle boats, volleyball, basketball, baseball equipment, and horseshoes are available for rent. Boat rentals are available Friday-Sunday from April through October.
- Peninsula: Available for large group activities including promotions, retirements, and wedding receptions. Amenities include picnic cabanas, BBQ grills, a stage, electrical power, and athletic facilities.

- Campground: Campsites offer water, electricity, sewer hookups, and tent camping. ADA-friendly sites are available.

The park also features hiking trails, playgrounds (including an ADA playground), basketball courts, softball fields, ADA miniature golf, and a peninsula for group activities (MCBCP 2023c).

Other Public Facilities

There are four libraries aboard Camp Pendleton that offer a variety of resources and materials to enhance personal and professional learning for all ages (MCBCP 2023b):

- Patrick J. Carney Library
- Pacific Views Library
- Seaside Square Library
- Bookmobile

These libraries are part of the Marine Corps Community Services (MCCS) and are available to military personnel, retirees, reservists, and their family members (MCBCP 2023b).

Regulatory

Federal

There are no applicable federal regulations.

State

California Fire Code (24 CCR Part 9). The California Fire Code establishes regulations to safeguard against fire hazards and ensure safety of buildings, including energy storage systems. It addresses fire prevention, fire protection, life safety, and safe storage (CFC 2022).

California Building Code (24 CCR Part 2). The California Building Code establishes requirements for building systems and safety features, including fire safety (CBC 2022).

Local

There are no local regulations related to public services that are applicable to the project.

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

No Impact. The project would be constructed within MCB Camp Pendleton which has its own extensive Fire and Emergency Services Department. The existing fire stations, equipment, and personnel are adequate to serve the project during construction without the need for new or altered fire protection facilities (MCBCP 2023a). The project is not located within a high fire hazard area. Compliance with applicable fire code requirements would further reduce any fire risks (CFC 2022). The project would not result in the need for new or altered fire protection facilities.

Operation

No Impact. The Camp Pendleton Fire and Emergency Services Department would continue to provide adequate fire protection service to the project site during operation (MCBCP 2023a). The project does not include any new facilities that would require additional fire protection services. Operation of the battery storage system would comply with applicable fire codes and include fire safety features (CFC 2022). The project would not result in the need for new or altered fire protection facilities.

ii. Police protection?

Construction

No Impact. The project is located within a secured military installation where law enforcement and security are provided by the Provost Marshal (MCBCP 2023d). Project construction would not require new or altered police facilities.

Operation

No Impact. Police protection would continue to be provided by the Provost Marshal (MCBCP 2023d). Project operation would not require new or altered police facilities.

iii. Schools?

Construction

No Impact. The project is located within a military installation with its own schools (MCBCP 2023e). It is not located near any off-Base public schools and would not require new or altered school facilities. Construction workers would be drawn from the local and regional workforce and would not result in an increase in demand for schools.

Operation

No Impact. The project would be operated remotely with a small number of workers visiting the site quarterly for maintenance. It would not result in a substantial increase in

population or demand for schools. On-Base schools have adequate capacity for serve Base personnel and their families (MCBCP 2023e). The project would not require new or altered school facilities.

iv. Parks

Construction

No Impact. The project is not located near Lake O'Neill Recreational Park or other public parks (MCBCP 2023c). Construction would not affect park facilities nor require new or altered park facilities.

Operation

No Impact. Operation of the project would not result in an increase in demand for parks or recreational facilities. It would not affect Lake O'Neill Recreational Park nor require new or altered park facilities (MCBCP 2023c).

v. Other public facilities?

Construction

No Impact. The project is located within a secured military facility and would not affect libraries or other public facilities or require any new or altered public facilities (MCBCP 2023b).

Operation

No Impact. Operation of the project would not affect libraries or other public facilities or require new or altered facilities (MCBCP 2023b). The existing on-Base libraries have adequate capacity to serve the project's small number of employees without requiring expansion or new facilities.

5.15.3 Mitigation Measures

None required.

5.15.4 References

CAL FIRE 2020 – CAL FIRE (California Department of Forestry and Fire Protection). 2022. California State Responsibility Area Viewer. Accessed on September 12, 2023. Available: https://calfire-forestry.maps.arcgis.com/apps/webappviewer/index.html?id=468717e399fa4238ad86861638765ce1

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MCBCP 2023d – Camp Pendleton Provost Marshal (Camp Pendleton Provost Marshal). Accessed on March 21, 2024. Available at: https://www.pendleton.marines.mil/Main-Menu/Staff-Agencies/Security-Emergency-Services-Battalion/Provost-Marshal/

MCBCP 2023e – Camp Pendleton School Liaison Office (Camp Pendleton School Liaison Office). Welcome Letter. Accessed on March 21, 2024. Available at: http://www.marines.mil/unit/basecamppendleton/Pages/Services/SchoolLiaison/Home.aspx

Section 5.16

Recreation

5.16 Recreation

This section describes the environmental setting and regulatory background and discusses impacts associated with the construction and operation 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

The project site is a 19.35-acre parcel located in Haybarn Canyon on land owned by MCB Camp Pendleton. The site is currently disturbed and is partially graded and paved. Coastal sage scrub and riparian scrub habitats exist outside of the graded area.

Recreation Facilities

Lake O'Neill Recreational Park, located on Base, offers a variety of recreational activities and facilities including (MCBCP 2023):

- Fishing: Permitted year-round, the lake is stocked and bait is sold at the Lake O'Neill Recreation Office. A California State License and Camp Pendleton Base permit are required.
- Recreation Area: Row and paddle boats, volleyball, basketball, baseball equipment, and horseshoes are available for rent. Boat rentals are available Friday-Sunday from April through October.
- Peninsula: Available for large group activities including promotions, retirements, and wedding receptions. Amenities include picnic cabanas, BBQ grills, a stage, electrical power, and athletic facilities.
- Campground: Campsites offer water, electricity, sewer hookups, and tent camping. ADA-friendly sites are available.

The park also features hiking trails, playgrounds (including an ADA playground), basketball courts, softball fields, ADA miniature golf, and a peninsula for group activities (MCBCP 2023a).

Recreational facilities surrounding MCBCP include:

- Cleveland National Forest to the east
- San Onofre State Beach to the north
- Oceanside parks and beaches to the south
- San Diego County regional parks, preserves, camping parks, and community centers

Regulatory

Federal

There are no applicable federal regulations related to recreation for this project.

State

There are no applicable state regulations related to recreation for this project.

Local

There are no applicable local regulations related to recreation for this 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

No Impact. The average daily construction workforce is projected to vary between 25 and 50 workers, with peaks of up to 100 workers. These workers would primarily commute from within the southern California region and are not expected to relocate to the area for this project. Given the temporary nature of construction and the workforce numbers, there would be no significant increase in the use of local recreational facilities. The project is designed to enhance energy resilience at MCB Camp Pendleton. It would not promote or facilitate population growth in external communities beyond the Base. Given the project's location and activities, it would not be in proximity to, nor would it interfere with, any recreational areas. Hence, the project would not induce any growth or increase in the use or demand for parks or recreational facilities. Project construction would have no impact on increasing the use of existing recreational facilities to a point where substantial physical deterioration would occur.

Operation

No Impact. Once operational, the HERC would be remotely operated and monitored. Quarterly maintenance would require about 120 work hours using two to three workers. The project's primary objective is to bolster energy resilience within MCB Camp Pendleton. These operational activities would not induce population growth in neighboring communities outside MCB Camp Pendleton. Due to the project's location and associated operational activities, the project would not be in proximity to, nor would it interfere with, any recreational areas. Project operation would have no impact on increasing the use of existing recreational facilities to a point where substantial physical deterioration would occur.

b. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

Construction

No Impact. The project is infrastructure-based and does not encompass any recreational components. Project construction would have no impact related to the inclusion or need for recreational facilities that might have an adverse physical effect on the environment.

Operation

No Impact. During its operation, the project is dedicated to energy storage and does not include the development, construction, or expansion of any recreational facilities. The operational activities are intended to provide long-duration energy storage and are not anticipated to necessitate or lead to the creation or expansion of recreational facilities within or around MCB Camp Pendleton. project operation would have no impact related to the inclusion or need for recreational facilities that might have an adverse physical effect on the environment.

5.16.3 Mitigation Measures

None required.

5.16.4 References

MCBCP 2023 – Camp Pendleton Parks & Recreation (Camp Pendleton Parks & Recreation). Lake O'Neill Recreation Area. Accessed on March 21, 2024. Available at: https://mccscp.com/lakeoneill/

Section 5.17

Transportation

5.17 Transportation

This section describes the environmental setting and regulatory background and discusses impacts associated with the construction and operation 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

Marine Corps Base (MCB) Camp Pendleton is located in North San Diego County, neighbored by the City of Oceanside to the south, the community of Fallbrook to the east, and Orange County to the north (MCBCP 2020). It is the Marine Corps' largest west coast expeditionary training facility, encompassing more than 125,000 acres, and offers training facilities and specialized schools for many military employees. MCB Camp Pendleton employs about 49,000 military personnel. However, the facility sees an average daytime population of 80,000 employees, military family members, and visitors (MCBCP 2018).

Freeway / Roadway Network

I-5 is a major north-south corridor that runs through MCB Camp Pendleton. On base, military personnel in camp areas east of I-5 can access the camp areas west of I-5 by travelling on Wire Mountain Road and several private roads. Military personnel do not need to exit the base to travel between the camp areas on both sides of the I-5. I-15 is another major north-south corridor that is east of the base (MCBCP 2020).

State Route 76 (SR 76) is a major east-west facility south of the base that connects I-5 and I-15. All three freeways provide access to MCB Camp Pendleton via driving, carpooling, and vanpooling. There are several Park & Ride lots along these major corridors where commuters can meet to carpool, vanpool, or access transit services (MCBCP 2020).

Transit

Military personnel can access MCB Camp Pendleton via various transit services. The Oceanside Transit Center (OTC), located approximately two miles south of MCBCP, is served by passenger rail, light rail, and bus service. The Amtrak, Metrolink, and NCTD COASTER are all passenger rail lines that stop at OTC. Amtrak connects major metropolitan areas along the Los Angeles - San Diego - San Luis Obispo (LOSSAN) Rail Corridor; the Metrolink Commuter Rail System consists of several rail lines that connect various locations in the counties of Orange, Riverside, San Bernardino, and Los Angeles; and the COASTER connects Downtown San Diego to coastal San Diego County cities, terminating in Oceanside at OTC. Though Amtrak and Metrolink run through MCB Camp Pendleton, there is no stop for these services on base. In addition to stopping at OTC, Amtrak and Metrolink stop three miles north of MCB Camp Pendleton at the San Clemente Station. The NCTD SPRINTER also serves OTC. The SPRINTER is an east-west light rail that runs along the Highway 78 corridor, connecting the cities of Oceanside, Vista, San Marcos, and Escondido (MCBCP 2020).

MCBCP Gate Access

Access to the proposed Haybarn Energy Reliability Center (HERC) site will be through either the Main Gate or the San Luis Rey Gate. The Main Gate is located on the southwest end of MCB Camp Pendleton along Vandegrift Boulevard, east of I-5, and north of SR 76 and the City of Oceanside. The Main Gate has four inbound lanes and two outbound lanes and is open 24 hours daily. The San Luis Rey Gate is located on the southeast end of MCB Camp Pendleton along Vandegrift Boulevard, near the intersection of Vandegrift Boulevard and Papagallo Drive. The San Luis Rey Gate has two inbound lanes and two outbound lanes and is open 24 hours daily. The San Luis Rey Gate has been identified as the most used gate by commuters to enter and exit MCB Camp Pendleton. Construction vehicles, including trucks and heavy equipment, and personal vehicles would use these gates to access the HERC site (MCBCP 2020).

Regulatory

Federal

No specific federal regulations related to transportation are applicable to the proposed project.

State

No specific state regulations related to transportation are applicable to the proposed project.

Local

The proposed project is located entirely within the boundaries of MCB Camp Pendleton, under federal jurisdiction. Local transportation regulations and standards are not applicable to the project.

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

Less Than Significant. Construction of the HERC would generate temporary vehicle trips associated with workers and the delivery of materials and equipment. These trips would occur on MCB Camp Pendleton roadways and access the site through the Main Gate or San Luis Rey Gate. Construction-related traffic would be small in volume and would not significantly affect the performance of the local circulation system. All construction trips would adhere to MCB Camp Pendleton traffic regulations and policies. The project does not involve any changes to transit, bicycle, or pedestrian facilities. Therefore, construction of the HERC would not conflict with any applicable transportation-related programs, plans, ordinances, or policies, and impacts would not be significant.

Operation

Less Than Significant. Operation of the HERC would generate minimal vehicle trips for maintenance and monitoring activities. These trips would be infrequent and would not significantly affect the performance of the MCB Camp Pendleton circulation system. The HERC would not generate daily employee or visitor trips. Operation of the project would not conflict with any applicable transportation-related programs, plans, ordinances, or policies, and impacts would not be significant.

b. Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

Construction

Less Than Significant. State CEQA Guidelines section 15064.3(b) focuses on vehicle miles traveled (VMT) as the most appropriate measure of transportation impacts. Construction of the HERC would generate temporary VMT associated with worker trips and the delivery of materials and equipment. The average daily construction workforce would vary between 25 and 50 construction workers, with a peak workforce of up to 100 workers. Additionally, construction activity trips would include several trucks arriving and departing the site each day to deliver materials, supplies, and equipment. An estimated maximum of 15 truck trips per day would be required, with an average of eight daily two-way truck trips.

While specific local thresholds of significance for VMT are not applicable to the project, a qualitative analysis can be performed as allowed under CEQA Guidelines section 15064.3(b)(3). The project's approach to minimizing construction-related VMT includes several strategies. The North County Transit District operates various public bus routes serving the base, and construction workers would have the option to utilize these services

to reduce individual vehicle trips (MCBCP 2024). To the extent possible, the project would prioritize hiring local construction workers to reduce commute distances. Where possible, materials would be stored on-site to reduce the frequency of deliveries, thereby minimizing truck VMT.

These strategies are anticipated to reduce the project's construction-related VMT compared to standard practices. By implementing the proposed measures, the project aims to maintain construction worker VMT below average levels. Additionally, construction-related VMT would be temporary and would cease upon the completion of the project, which is expected to have a construction period of approximately 1 to 2 years.

Given these factors and the implementation of VMT reduction strategies, the project would not conflict or be inconsistent with State CEQA Guidelines section 15064.3(b), and construction impacts would be less than significant.

Operation

Less Than Significant. Operation of the HERC would generate minimal VMT for maintenance and monitoring activities. These trips would be infrequent and would not exceed any applicable MCB Camp Pendleton or regional VMT thresholds. Because the project would not be staffed daily and there would be no expected visitors to the project, as this is a secure military facility, the project would not generate any regular daily employee or visitor VMT. Therefore, the project would not conflict or be inconsistent with State CEQA Guidelines section 15064.3(b), and operational impacts would not be 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

Less Than Significant. Construction of the HERC would not involve any changes to the geometric design of roadways or intersections. Construction activities would occur within the boundaries of the project site and would not introduce any hazardous design features. Construction equipment and vehicles would be compatible with the military land uses on MCB Camp Pendleton. Therefore, construction of the project would not substantially increase hazards, and impacts would not be significant.

Operation

No Impact. Operation of the HERC would not involve any changes to roadway designs or introduce any incompatible uses. The project would not result in any transportation-related hazards. Therefore, no operational impacts related to increased hazards would occur.

d. Would the project result in inadequate emergency access?

Construction

Less Than Significant. Construction of the HERC would not require any road closures that could affect emergency access. Construction activities would be coordinated with MCB Camp Pendleton officials to ensure that appropriate emergency access is maintained. The project would not result in inadequate emergency access during construction, and impacts would not be significant.

Operation

No Impact. Operation of the HERC would not involve any changes to roadways or access points that could affect emergency access. The project would be designed and maintained in accordance with MCB Camp Pendleton requirements to ensure adequate emergency access. Therefore, no operational impacts related to inadequate emergency access would occur.

5.17.3 Mitigation Measures

No mitigation is required.

5.17.4 References

Fehr & Peers 2019 - Fehr & Peers. 2019. Find Your VMT With VMT+. Available online at: https://www.fehrandpeers.com/project/find-my-vmt/. Accessed July 22, 2024.

MCBCP 2018 - MCB Camp Pendleton. 2018. Marine Corps Base Camp Pendleton Economic Impact Analysis Fiscal Year 2018. Available online at: https://www.pendleton.marines.mil/Portals/98/Docs/BaseStaff/CPAO/CPEconImpactAnalysisFY18.pdf. Accessed April 30, 2024.

MCBCP 2020 - MCB Camp Pendleton. 2020. Final Supplemental Environmental Assessment for MCB Camp Pendleton PV and Natural Gas Energy Generation Facilities. November 2020. Available online at: https://imlive.s3.amazonaws.com/Federal%20Government/ID225372037205229199014589353958863371211/Final%20SEA%20PV-NG%20Energy%20Facilities_NOV%202020_w%20FONSI.pdf

MCBCP 2024 - MCB Camp Pendleton. 2024. Camp Pendleton Installation Details. Available online at: https://installations.militaryonesource.mil/in-depth-overview/camp-pendleton

Section 5.18

Utilities and Service Systems

5.18 Utilities and Service Systems

This section describes the environmental setting and regulatory background and discusses impacts associated with the construction and operation 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

The project site, located north of the City of Oceanside within the county of San Diego, would be located within the perimeter of MCB Camp Pendleton. The project site is located in Haybarn Canyon, with the parking lot site as a construction laydown area.

The proposed project includes the addition of new battery energy storage systems. The batteries would be connected to pad-mounted switchgear and transformers located no more than 500 feet from each unit. From the pad-mounted switchgear, distribution and transmission lines would be extended to the Camp Pendleton Substation 12kV and 69kV tap, both via underground duct banks and overheard conductors. In addition to the

batteries, installation will include approximately 44 transformers and 88 inverters. Distribution upgrades would include the installation of relays, a transmitter, telecommunication equipment, and 12kV line extensions and connections from the project's pad-mounted switchgear. For the interconnection facilities, upgrades would include installing a receiver, meter, disconnect switch, and Supervisory Control and Data Acquisition (SCADA) recloser.

SDG&E provides most of the electricity and all of the natural gas to MCB Camp Pendleton. SDG&E owns and maintains most of the electric transmission, power, and distribution lines, and related infrastructure within the Base boundaries, but MCB Camp Pendleton also has many of its own electric transmission, power, and distribution lines. SDG&E currently provides power to MCB Camp Pendleton through a 69kV substation (SDG&E Pendleton Substation) located along Haybarn Road near the junction of Basilone Road and Vandegrift Boulevard, and through other 69kV substations such as the Stuart Mesa Substation, with radial feeds to different areas of the Base. In addition, SDG&E holds more than 1,300 acres (526 ha) of leases/right-of-way agreements within the Base for transmission lines and various associated facilities.

MCB Camp Pendleton's municipal and industrial water supply is pumped from on-Base wells. The potable water facilities within MCB Camp Pendleton are owned and operated by the Facilities Maintenance Department. The Base's potable water is locally produced from underground water aquifers located on Base and permitted by the State of California. The San Diego County Water Authority provides water to the regional area.

Regulatory

Federal

Department of Defense Instruction 4170.11. In December 2009, the DoD issued instructions to specifically include resiliency requirements on military installations. The Instruction has been updated twice since 2009. The 2018 Instruction includes the following:

- *Energy Resilience* – The DoD Components shall take necessary steps to ensure energy resilience on military installations. DoD Components shall plan and have the capability to ensure available, reliable, and quality power to continuously accomplish DoD missions from military installations and facilities (DoD 2018).
- *Energy Generation Systems, Infrastructure, Equipment, Fuel, and Testing* – DoD Components shall identify, design, and install primary power and emergency energy generation systems, infrastructure, and equipment to support their critical energy requirements.

Secretary of the Navy Energy (SECNAV) Goals and Strategies. In October 2009, the SECNAV established energy goals for the DoN's shore-based installations to meet by 2020. These goals include:

- The DoN will produce or procure at least 50 percent of the total quantity of electric energy consumed by shore-based facilities and activities each fiscal year from alternative energy sources.
- Fifty percent of DoN installations will be net zero (i.e., over the course of a fiscal year, an installation matches or exceeds the electrical energy it consumes ashore with electrical energy generated from alternative energy sources) (DoN 2019).

In support of this alternative energy goal, SECNAV chartered the 1 Gigawatt (GW) Task Force to enable DoN to procure 1 GW of renewable energy generation capacity by 2020 (DoN 2012).

State

Senate Bill 350. Senate Bill (SB) 350, the Clean Energy and Pollution Reduction Act of 2015, was enacted October 7, 2015, and took effect January 1, 2016. SB 350 (Chapter 547, Statues of 2015) codified, among other things, the state goal of increasing the procurement of electricity from renewable sources from 33 percent by 2020 to 50 percent by 2030. SB 350 also required the establishment of annual targets for statewide energy efficiency savings and demand reduction starting November 1, 2017. These energy efficiency savings and demand reductions would be designed to achieve a cumulative doubling of statewide energy efficiency savings in electricity and natural gas use by January 1, 2030.

Senate Bill 100. SB 100, the 100 Percent Clean Energy Act of 2018, set a goal of powering all retail electricity sold in California and state agency electricity needs with renewable and zero-carbon resources by 2045. It also updated the state's Renewables Portfolio Standard to ensure that 60 percent of California's electricity will be renewable by 2030.

Assembly Bill 2514. Assembly Bill 2514 set CPUC energy storage procurement targets at 1,325 MW for facilities to be constructed and brought into service by 2024. Renewable energy generators are now required to consider energy storage components in their planning.

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 San Diego 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

No local regulations relating to utilities or services systems have been identified that are applicable to the project.

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

Less than Significant. Construction of the proposed project would not require the expansion of any water, wastewater treatment facility, storm water drainage, electric power facility, natural gas supply, or telecommunications facility.

A temporary potable water supply during construction for personnel use and wash water would be provided by the vendor providing wash stations. Water use during construction includes dust control and wash down, and the water would be obtained from a local hydrant and metered in accordance with MCB Camp Pendleton requirements. Water use during construction would not result in the use of a substantial proportion of the remaining system capacity, reach or exceed the current capacity of the system, nor require development of facilities and sources beyond those existing or currently planned. Impacts would not be significant.

The proposed project would only generate wastewater from portable toilets that would be provided for construction personnel by a vendor at the project site. Surface water runoff would be controlled pursuant to the California Construction General Permit and the preparation and implementation of the SWPPP, which would include standard erosion control measures to reduce potential impacts resulting from erosion. The SWPPP would incorporate the use of BMPs to protect stormwater runoff and the placement of those BMPs (see **Section 5.10, Hydrology Water Quality**). Runoff and wastewater during construction would not result in the use of a substantial proportion of the remaining sewer system capacity, reach or exceed the current capacity of the stormwater system, nor require development of facilities and sources beyond those existing or currently planned. Therefore, the proposed project would not require or result in the construction or expansion of new wastewater treatment facilities off-site nor stormwater drainage facilities. Impacts would not be significant.

Preparation activities at the Haybarn Canyon site would include relocating overhead electrical power/distribution lines underground and interconnection upgrades to the substation and distribution systems. Grading, excavation, and trenching would be required for the installation of piping, electrical conduit and utility ductbanks, and foundations. These activities represent an upgrade and addition to electricity sources, transmission, and distribution systems and would not result in the use or loss of a substantial proportion of electrical system capacity, nor reach or exceed the current capacity of the system. These activities would not require development of facilities and sources beyond those existing or currently planned. Impacts would not be significant.

Operation

Less than Significant. The proposed project would include development of a battery energy storage system and associated upgrades and additions to the existing SDG&E and MCB Camp Pendleton transmission and distribution systems. The proposed project would cause some upgrades and system changes near the project site to accommodate the project's energy storage and discharge capabilities and to integrate operations into the

transmission and distribution systems. The project would not require development of facilities and sources beyond those existing or currently planned. Impacts would not be significant.

Water use during operation and maintenance would be negligible as the facility would be unmanned and there is no specific need for a water supply. Water use during periodic maintenance operations would be minimal for general site use and would be met using a typical hose. There would be no wastewater generated as part of operations. There would be no connections to MCB Camp Pendleton's sanitary sewer systems during operations. Impacts would not be significant.

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

Less than Significant. As discussed above, the minimal water needed for construction would be pulled from a local hydrant and metered in accordance with MCB Camp Pendleton requirements. Water use during construction would be temporary and would not affect long-term water supplies. It would not result in the use of a substantial proportion of the remaining system capacity, reach or exceed the current capacity of the system, nor require development of facilities and sources beyond those existing or currently planned. Therefore, impacts would not be significant.

Operation

No Impact. As discussed above, water use during operation and maintenance would be negligible as the facility would be unmanned and there is no specific need for a water supply. Water use during operations would be minimal for general site use and would be met using a typical hose. The project may result in water savings to the extent operations of the project displaces the running of water-cooled natural gas power plants. Therefore, no impact would occur.

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

Less Than Significant. The proposed project would generate minimal wastewater during construction. The proposed project would provide portable toilets for construction workers and the waste would be treated at a local wastewater treatment facility. Because the number of construction workers is small and construction would be short term, existing wastewater facilities would adequately accommodate the minor, temporary demand

caused by project construction while serving existing commitments. Therefore, this effect would not be significant.

Operation

No Impact. There would be no wastewater generated as part of operations. There would be no connections to MCB Camp Pendleton's sanitary sewer systems during operations. No impact would occur.

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

Less than Significant. Construction would be conducted in compliance with all applicable rules and regulations. The use of standard construction BMPs and a Solid Waste Management Plan (SWMP) would maximize the control of HAZMAT/HAZWASTE components (see **Section 5.9, Hazards and Hazardous Materials**). 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. Solid waste would be transported to the Las Pulgas Landfill, which is on Base. The impact of solid waste disposal on local infrastructure and landfill capacity would not be significant.

Operation

Less than Significant. During operations, 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 not be significant.

e. Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

Construction

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 above, the landfill serving the site would have sufficient capacity to accommodate the 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.

Operation

No Impact. As stated above, the proposed project would be unstaffed and would not generate notable quantities of solid waste. There would be no change in compliance with federal, state, or local statutes and regulations related to solid waste management and reduction and, therefore, no impact would occur.

5.18.3 Mitigation Measures

None required.

5.18.4 References

DoN 2012 – United States Department of the Navy (DoN). Strategy for Renewable Energy. 1 Gigawatt Task Force. October 2012.

Section 5.19

Wildfire

5.19 Wildfire

This section describes the environmental and regulatory setting and discusses impacts associated with the construction and operation of the project with respect to wildfires.

Wildfire	**Potentially Significant Impact**	**Less Than Significant with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
a. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:	☐	☐	☐	☒
i. Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
ii. 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?	☐	☐	☐	☒
iii. 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?	☐	☐	☐	☒
iv. 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

The project site is a 19.35-acre parcel located in Haybarn Canyon on land owned by MCB Camp Pendleton. A portion of the site is currently disturbed and is partially graded and paved. Coastal sage scrub and riparian scrub habitats exist outside of the graded area.

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 (FHSZ), grouped into unzoned, moderate, high, and very high zones. State Responsibility Areas (SRA) are locations where the state of California is responsible for wildfire protection and Local Responsibility Areas (LRA) are locations where the responding agency is the county or city.

The project site is also not within a zone classified as a very high FHSZ (CAL FIRE 2022). The nearest very high FHSZ is located 2.5 miles northeast of the project site. The project site is not located within a SRA. The nearest SRA is located 2.0 miles northeast of the project site (CAL FIRE 2020). The project site is not located within a LRA. The nearest LRA is located 3.6 miles southeast of the project site (CAL FIRE 2020).

Camp Pendleton Fire and Emergency Services is responsible for structural fire suppression, wildland fire suppression, technical rescue, emergency medical services, hazardous materials mitigation, and disasters mitigation at the base. The Fire Operation Branch has approximately 67 personnel on each of two shifts, housed within eleven fire stations located throughout the installation. The department maintains a fleet of emergency apparatuses including fire engines, ladder trucks, brush engines, rescue ambulances, and a hazardous materials unit. They respond to over 4,000 calls for service annually (MCBCP 2023).

Regulatory

Federal

No federal regulations related to wildfires have been identified that are applicable to the project.

State

Fire Hazard Severity Zones (Pub. Resources Code, §§ 4201-4204). The purpose of this code section is to provide for the classification of lands within State Responsibility Area 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.

Fire Hazard Severity (Cal. Code Regs, tit. 14, § 1280). FHSZs reflect the degree of severity of fire hazard.

Local

No local regulations related to wildfires apply to the project.

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:

i. Substantially impair an adopted emergency response plan or emergency evacuation plan?

Construction

No Impact. The project is not located in or near a SRA, with the nearest one being 2.0 miles northeast, a LRA, with the nearest being 3.6 miles southeast, or a very high FHSZ,

with the nearest being 2.5 miles northeast. Construction is localized within the confines of MCB Camp Pendleton, which has established emergency and evacuation plans that account for activities and disruptions. The presence of the Camp Pendleton Fire and Emergency Services Department, with its extensive resources and personnel, further ensures adequate emergency response during construction (MCBCP 2023). The project would not substantially impair an adopted emergency response or evacuation plan during construction.

Operation

No Impact. As stated, the project is not located in or near a SRA, LRA, or very high FHSZ, with the nearest ones being 2.0 miles northeast, 3.6 miles southeast, and 2.5 miles northeast, respectively. Once operational, the facility would not necessitate alterations to existing emergency response or evacuation plans. In the event of an emergency, the base would adhere to its established plans, supported by the Camp Pendleton Fire and Emergency Services Department (MCBCP 2023). The project would not substantially impair an emergency response or evacuation plan during operation.

ii. 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

No Impact. The project site is not within a SRA, LRA, or classified as a very high FHSZ, with the nearest ones being 2.0 miles northeast, 3.6 miles southeast, and 2.5 miles northeast, respectively. The site does not possess exacerbating factors like steep slopes that would intensify wildfire risks. Given the flat topography of the site, developed nature of the surrounding area, and the presence of the Camp Pendleton Fire and Emergency Services Department (MCBCP 2023), the project would not exacerbate wildfire risks during construction.

Operation

No Impact. Given the project's location outside of a SRA or very high FHSZ, with the nearest ones being 2.0 miles and 2.5 miles northeast, respectively, the absence of exacerbating factors like steep slopes, and the proximity of the Camp Pendleton Fire and Emergency Services Department (MCBCP 2023), operations would not increase wildfire risks or exposure to pollutant concentrations from wildfires. The built environment and site characteristics ensure operations would not contribute to or face heightened risk from wildfires. Maintenance and operational protocols would further minimize inadvertent fire risks. The project would not exacerbate wildfire risks during operation.

iii. 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

No Impact. The project is not in an SRA, with the nearest one being 2.0 miles northeast, a LRA, with the nearest being 3.6 miles southeast, or very high FHSZ, with the nearest one being 2.5 miles northeast. The existing fire protection infrastructure, including the Camp Pendleton Fire and Emergency Services Department, is sufficient and the project would not require additional infrastructure that exacerbates fire risk (MCBCP 2023). The project would not require infrastructure that exacerbates fire risk during construction.

Operation

No Impact. The project is not in a SRA, LRA, or very high FHSZ, with the nearest ones being 2.0 miles northeast, 3.6 miles southeast, and 2.5 miles northeast, respectively. Ongoing maintenance activities would conform to fire safety protocols to maintain fire safety for the life of the project. The Camp Pendleton Fire and Emergency Services Department would continue to provide adequate fire protection infrastructure (MCBCP 2023). Fire risks would remain low. The project would not require infrastructure that exacerbates fire risk during operation.

iv. 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

No Impact. The project is not in an SRA, with the nearest one being 2.0 miles northeast, a LRA, with the nearest being 3.6 miles southeast, or very high FHSZ, with the nearest one being 2.5 miles northeast. The sites are predominantly flat, minimizing landslide or slope instability concerns. There is minimal risk of runoff, post-fire slope instability or drainage changes leading to flooding. The Camp Pendleton Fire and Emergency Services Department further reduces post-fire risks (MCBCP 2023). The project would not expose people or structures to significant risks during construction.

Operation

No Impact. As stated, the project is not in an SRA, LRA, or very high FHSZ, with the nearest ones being 2.0 miles northeast, 3.6 miles southeast, and 2.5 miles northeast, respectively. As explained under construction, the project would not significantly alter drainage patterns that could lead to flooding. The Camp Pendleton Fire and Emergency Services Department provides ongoing protection from post-fire hazards (MCBCP 2023). Therefore, the project would not contribute to runoff or post-fire instability that could expose people or structures to significant risks during operation.

5.19.3 Mitigation Measures

None required or list mitigation.

5.19.4 References

CAL FIRE 2020 – CAL FIRE (California Department of Forestry and Fire Protection). 2022. California State Responsibility Area Viewer. Accessed on September 12, 2023. Available: https://calfire-forestry.maps.arcgis.com/apps/webappviewer/index.html?id=468717e399fa4238ad86861638765ce1

CAL FIRE 2022 – CAL FIRE (California Department of Forestry and Fire Protection). 2022. California Fire Hazard Severity Zone Viewer. Accessed on September 12, 2023. Available: https://calfire-forestry.maps.arcgis.com/apps/webappviewer/index.html?id=988d431a42b242b29d89597ab693d008

MCBCP 2021 – Marine Corps Base Camp Pendleton (MCBCP) Fire Protection Regulations and Instructions. MCIWEST-MCB CAMPEN ORDER 11320.13A. Accessed on July 22, 2024. Available at: https://www.pendleton.marines.mil/Portals/98/MCIWEST-%20MCB%20CAMPENO%2011320_13A%20FIRE%20PROTECTION%20AND%20REGULATIONS%20AND%20INSTRUCTIONS.pdf

Section 5.20

Mandatory Findings of Significance

5.20 Mandatory Findings of Significance

This section describes impacts specific to mandatory findings of significance associated with the construction and operation of the project.

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?

Less than Significant with Mitigation Incorporated.

Air Quality

Less than Significant. As discussed in **Section 5.3, Air Quality**, the proposed project would increase emissions temporarily during construction and eventual demolition. However, project emissions from construction/demolition activities would not exceed the

thresholds for significant air quality impacts. Operational emissions at the project site would be minimal as the site would be operated remotely and the batteries themselves would not result in any air pollutant 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 or demolition emissions, and operational 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, substantially 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 is adjacent to an existing water treatment plant and SDG&E substation, with dirt access roads and parking facilities within the site's boundaries. The project study area primarily consists of coastal sage scrub communities, located on the slopes of the foothills adjacent to the more level/flat terrain of the study area; riparian scrub and woodland vegetation communities, located on the northwest side of Vandegrift Boulevard; coast live oak woodland, located southwest of the of the substation access road at Vandegrift Boulevard; and native communities, located within and immediately south of the parking lot, as well as non-native grassland communities west of the substation that have 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.

Portions of the project area have been subject to historic and ongoing disturbance, limiting the potential for special-status plants to occur. No special-status plants were observed during April 18, 2024, reconnaissance-level surveys and a formal floristic botanical survey was not conducted. However, and as discussed in **Section 5.4, Biological Resources**, the results of the literature and on-line database review, as well as the MCB Camp Pendleton Geographic Information System (GIS) data layers identified 34 special-status plant species and 28 special-status wildlife species with the potential to occur within or adjacent to the project area. Several of these species were recorded within or near the survey area.

Indirect impacts to vegetation communities and habitat could occur and include alterations to long-term hydrology and degradation of habitat from the introduction and

proliferation of noxious and invasive weeds. The project would modify existing surface drainage patterns in Haybarn Canyon by drainage improvements, which would be designed to avoid producing excess erosion and sedimentation. Erosion and hazardous materials control measures and BMPs (including obtaining a permit under the California Construction General Permit and implementing a SWPPP) would be used throughout construction/demolition to reduce potential impacts.

Proposed mitigation measures (MMs) BIO-1 through BIO-15 include measures such as, but are not limited to, preconstruction worker trainings, preconstruction surveys and avoidance measures for special-status species (if present), biological monitoring, habitat restoration, protocol surveys, nighttime lighting and exclusion fencing, providing evidence of jurisdictional waters permits, preparation of a Noise Minimization Plan, and a requirement that all vehicles and equipment are cleaned prior to entering work areas. MMs BIO-1 through 15 would ensure less-than-significant impacts.

Cultural and Tribal Cultural Resources

Less than Significant with Mitigation Incorporated. As described in **Section 5.5, Cultural and Tribal Cultural Resources**, the archaeological survey did not identify any archaeological or ethnographic resources at the project site and the potential for subsurface buried archaeological resources is low. Further, no built environment resources are eligible for the CRHR or listing on a local register and are not considered historical resources. Although the potential to encounter unknown buried deposits is low, if unanticipated cultural resources were to be damaged during construction, impacts to unanticipated cultural resource discoveries can be reduced to a less-than-significant level with the implementation of standard mitigation measures (see mitigation measures CULT-1, CULT-2, and CULT-3). Therefore, the proposed project is unlikely to eliminate important examples of major periods of California history or prehistory.

Geology and Soils

Less than Significant. **Section 5.7, Geology and Soils**, indicates that no previous paleontological finds have been made at or near the project site. It is not anticipated that paleontological resources would be encountered in the Quaternary alluvium underlying most of the project site as it is too young for significant fossils and has very low sensitivity. Implementation of MM GEO-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 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 areawide conditions contributing to the cumulative impact.

This Initial Study evaluates cumulative impacts using a list of past, present, or future projects that would occur within one mile from the proposed project. Based on consultation with MCB Camp Pendleton, only one other project was identified within the vicinity of the proposed project site. That project consists of the installation of up to three diesel backup generators in Haybarn Canyon to serve MCAS Camp Pendleton (described in **Section 4.8, Project Characteristics**). As described in **Section 5.3, Air Quality**, the California Airborne Toxic Control Measure for Stationary Compression-Ignition Engines and SDAPCD air permitting requirements would limit emergency standby engine testing and maintenance to 50 hours a year. Emissions associated with testing and maintenance include 50 hours per year of testing, with up to 1 hour of testing per generator per day. While the number of hours of engine use in emergency scenarios would not be limited, daily maintenance usage of the generators would be subject to SDAPCD limits and thresholds. The daily maximum emissions associated with the maintenance of the backup generators would not exceed the threshold for significant impacts, nor would the combined emissions from operations of the proposed project and the cumulative project exceed significance thresholds.

As discussed in preceding Sections 5.1 through 5.19, most potential impacts of the proposed project would occur during construction or demolition, with few, if any, occurring during project operations. Because the construction- and 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 the only nearby cumulative project identified consists of the diesel generators described above, which would not exceed significance thresholds for air quality, cumulative impacts would not be significant and would be 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. The proposed project would result in temporary impacts related to human health during construction and demolition, including changes to pre-existing noise levels and exposure to hazardous substances. The proposed project could result in temporary noise impacts on humans during construction and demolition. Noise would be generated by the battery energy storage system and electrical transformers during operation. However, as discussed in **Section 5.13, Noise**, there is limited potential for construction-related noise to significantly affect noise-sensitive receptors. Operational noise levels would be low and have limited potential to adversely affect sensitive receptors. Therefore, significant adverse noise-related effects on human beings can be avoided without mitigation. As discussed in **Section 5.9, Hazards and Hazardous Materials**, the project's zinc hybrid cathode aqueous flow battery system uses water-based, non-flammable electrolyte blends. Small amounts of hydrogen gas generated during charging would be exhausted and dispersed. Due to the non-flammable electrolyte in the batteries, they are not subject to thermal runaway and thus the proposed battery enclosures do not require fire suppression systems. The batteries are not considered flammable and are not generally subject to internal system fires. Because the likelihood of an internal fire is low, the potential for creation of toxic bromine gas, which would be a byproduct of a fire, is also low. 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. Therefore, the project would not cause substantial adverse effects on human beings either directly or indirectly.