



# 600-MW Morro Bay Battery Energy Storage System Project

## Paleontological Resources Evaluation

*prepared for*

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# Executive Summary

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## Purpose and Scope

Rincon Consultants, Inc. (Rincon) was retained by the City of Morro Bay to conduct a Paleontological Resources Evaluation (PRE) for the 1290 Embarcadero Road Battery Energy Storage System Project in Morro Bay, San Luis Obispo County, California (Project). This PRE includes a literature review, paleontological sensitivity assessment, formal locality search from the Santa Barbara Museum of Natural History (SBMNH), and reporting consistent with the professional standards of the Society of Vertebrate Paleontology (SVP; 2010) to determine whether the proposed action would result in significant impacts to paleontological resources under the California Environmental Quality Act (CEQA) within the Project Site.

## Results of Investigation

Two geologic units are mapped within the Project Site: Quaternary young alluvium and Quaternary old eolian deposits (Wieggers 2021). Both geologic units have low paleontological sensitivity. Quaternary young alluvium is Holocene in age and likely too young (i.e., less than 5,000 years old) to preserve paleontological resources as defined by the SVP (2010). Quaternary old eolian deposits are of sufficient age, but significant paleontological resources are very rarely discovered in coastal eolian deposits in California. The fossil locality search of the SBMNH recovered no known fossil localities within the Project Site or in similar sediments in San Luis Obispo County (Hoffman 2022).

## Impacts and Recommendations

The Project Site is currently occupied by the Morro Bay Power Plant, so the Project Site has been previously disturbed. Grading for the Project may reach depths where sediments other than Quaternary young alluvium and Quaternary old eolian deposits would be expected to occur. Pilings for the battery energy storage system buildings foundation may reach depths at which sediments other than Quaternary young alluvium and Quaternary old eolian deposits would be expected to occur. However, these pilings will be driven into the sediment, so monitoring of this activity is impossible.

Mitigation Measures PAL-1 and PAL-2 are recommended to reduce potential impacts to paleontological resources associated with grading and excavation to a less-than-significant level. Mitigation Measure PAL-1 requires the creation and delivery of a Worker Environmental Awareness Program training for construction personnel, and Mitigation Measure PAL-2 requires provisions for management of paleontological resources if discovered during construction of the project.

# 1 Introduction

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Rincon Consultants, Inc. (Rincon) conducted a desktop Paleontological Resources Evaluation (PRE) for the 1290 Embarcadero Road Battery Energy Storage System Project (Project) on behalf of the City of Morro Bay (City). This evaluation includes a literature review, paleontological sensitivity assessment, fossil locality search from the Santa Barbara Museum of Natural History and reporting consistent with the professional standards of the Society of Vertebrate Paleontology (SVP; 2010).

Paleontological resources (i.e., fossils) are the remains or traces of prehistoric life. Fossils are typically preserved in layered sedimentary rocks and the distribution of fossils across the landscape is controlled by the distribution and exposure of the fossiliferous sedimentary rock units at and near the surface. Construction-related impacts that typically affect or have the potential to affect paleontological resources include mass excavation operations, drilling/borehole excavations, trenching/tunneling, and grading. This PRE provides a list of the formations mapped at the surface within the Project Site and formations that underlie those mapped at the surface that may be impacted by Project construction activities.

## 1.1 Project Location

The approximately 95-acre Morro Bay Power Plant property (Assessor's Parcel Numbers [APNs] 066-331-046 and 066-461-016) is located at 1290 Embarcadero south of State Route 1 and north of Embarcadero in the City of Morro Bay. The Morro Bay Power Plant was operational on the Power Plant property since the 1950s but has been idle since its retirement in 2014. The Power Plant property currently includes the idled power plant building and smokestacks (stacks), the cooling water intake greenhouse located across Embarcadero to the south, Lila Keiser Park, and facilities operated by Pacific Wildlife Care and Marine Mammal Center. The Power Plant property is surrounded by Pacific Gas and Electric (PG&E) property (switchyards) and State Route 1 to the northeast; the Embarcadero, commercial uses, and a marina to the southwest; Morro Creek, a recreational vehicle (RV) park, and temporary lodging facilities (hotel and motel) to the north; and Coleman Park, the Morro Bay harbor walk, and dune habitat associated with Morro Rock beach to the west.

The site of the proposed project (Project Site) covers approximately 43 acres of the 95-acre Power Plant property.<sup>1</sup> The Project Site includes approximately 24 acres located immediately north of the inactive Power Plant building in the northwestern portion of the property. This area is currently vacant but was previously developed with above-ground fuel oil storage tanks. In addition, the Project Site includes approximately 19 acres in the southwestern area of the site that includes the

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<sup>1</sup> Following are definitions for several key terms used in this Project Description:

**Power Plant Property** refers to the approximately 95-acre Morro Bay Power Plant property. Refer to Figure 2.

**Project Site** refers to the portions of the Power Plant property that would be used for the proposed project. The Project Site covers approximately 43 acres of the 95-acre Power Plant property. Refer to Figure 2.

**BESS Site** refers to the portions of the Project Site used for construction and operation of the Battery Energy Storage System (BESS) and supporting facilities such as Gen-tie lines and access roads. The BESS Site includes approximately 24 acres of the 43-acre Project Site.

**Demolition Site** refers to the portions of the Project Site used for remediation and demolition of the idled power plant building and stacks. The Demolition Site includes the remaining 19 acres of the 43-acre Project Site.

inactive power plant building and three inactive stacks immediately southwest of the power plant building. The Project Site also includes the approximately 2.75-acre driveway that connects the Power Plant building to Quintana Road.

The Project Site is regionally accessible from SR 1, and locally accessible from Main Street, Beach Street, and Embarcadero, or from Main Street and Quintana Road. Figure 1 shows the regional location of the Project Site, and Figure 2 shows the location of the approximately 95-acre Power Plant property in its neighborhood context, and the Project Site in its neighborhood context.

## 1.2 Project Description

The proposed project has three components: (1) construction and operation of a 600-megawatt (MW) Battery Energy Storage System (BESS), (2) demolition and removal of the existing Power Plant building and stacks, and (3) adoption of a Master Plan that would change the land use designation of the BESS Site from Visitor Serving Commercial to General (Light) Industrial.

### **Construction and Operation of the BESS**

Of the 43 acres included in the Project Site, approximately 24 acres (BESS Site) would be used for construction and operation of the BESS. The BESS would provide power to utility customers by interconnecting to the existing PG&E switchyard located east of the Power Plant property and Project Site. The BESS would operate year-round to store and discharge electricity to support demand on the power grid and improve grid reliability.

The proposed BESS includes three enclosed buildings to house the batteries. Each building would contain approximately 2,400 battery racks and be surrounded by approximately 60 Power Conversion Systems (PCSs) composed of inverters and transformers to convert the direct current to alternating current. The BESS would also include three substations with transformers, a transmission line (Gen-tie) connecting to the existing dead-end structures on the southwestern side of the existing PG&E switchyard (the final structures before the connection with the substation), water supply system improvements, and internal access roads.

#### *Buildings*

The BESS would be installed in three (3) two-story buildings. Each building would be approximately 350 feet by 260 feet, for a total building area of 91,000 square feet (sf). The buildings would be 30 feet in height. Each building would require approximately 1,000 to 1,500 pilings which would be driven into the ground to a maximum depth of 75 feet. The bottom of building foundations would be approximately 6 feet below natural grade. The building exteriors would be steel frame with pre-cast concrete sides. Heating, ventilation, and air conditioning units would be either side- or roof-mounted.

#### *Power Conversion Systems*

The PCSs would be located adjacent to each building and installed on the pavement or gravel pads. Underground conduits buried three to five feet in depth would connect the PCSs to the batteries in the buildings. Each building would be surrounded by approximately 60 PCS units. Each PCS would be approximately 10 feet by 30 feet, with a height of approximately 15 feet.

Figure 1 Regional Location



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★ Project Location

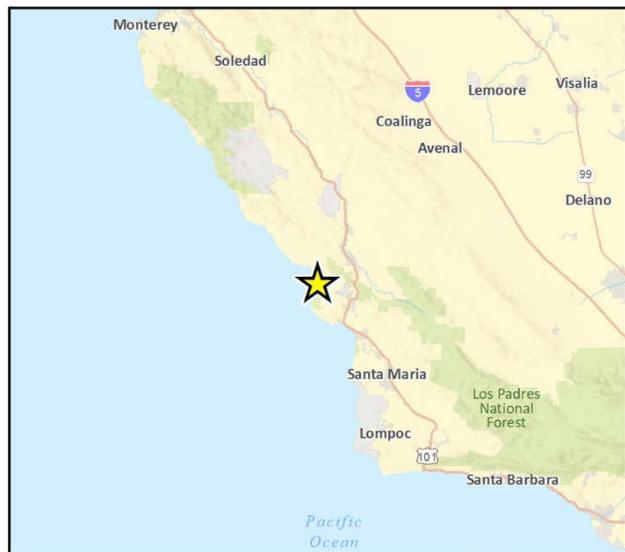


Fig 2-1 Regional Location

Figure 2 Project Site Location



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Additional data provided by Vistra, 2022.

Fig. 2-2 Parcel and Project Site Location

### *Substations*

The BESS would include three substations located outside the buildings. Each BESS substation would have a transmission Gen-tie line to connect to the existing PG&E substation. The dimensions of each substation would be approximately 218 feet by 228 feet and approximately 30 feet tall. The substation areas would be graded and compacted to level the ground. Drilled pilings to a maximum depth of 75 feet would be used to support the concrete pad for the transformers. One control house would be required for the three substations. The control house would be 30 feet by 40 feet in area for a total area of 1,200 square feet, and 15 feet in height.

### *Connection to the PG&E Switchyard*

The three proposed substations would connect to the existing, adjacent PG&E switchyard. Approximately nine new transmission line poles (one 230-kilovolt [kV] double circuit transmission line pole and eight 230-kV single circuit transmission line poles) with a maximum height of 105 feet would be required for connection to PG&E existing 95-foot dead end structures (the final structures before the connection with the substation).

### *Construction-related Grading and Vegetation Management*

The proposed structures would be located predominantly on the previously removed fuel oil tank farm area of the Morro Bay Power Plant. The area is relatively flat with the exception of some raised berms that would need to be removed prior to building construction. The area would be grubbed to remove vegetation and the internal berms would be excavated. Soil from those berms would be spread over the BESS Site and balanced on the site (no net import or export of material). The entire BESS Site would be disturbed during project construction. No soil import or export would be required. Once the berms have been removed, the soil would be compacted as needed. Water would be used to manage dust during construction activities.

## **Demolition and Remediation of Existing Power Plant Building and Stacks**

Following construction of the BESS, the existing power plant building and stacks would be remediated and demolished. Remediation and demolition would be expected to commence within six months of completion of the BESS. Of the 43 acres included in the Project Site, approximately 19 acres (Demolition Site) would be used for remediation and demolition of the power plant building and stacks. Figure 3 shows the approximate limits of the demolition activities. Environmental remediation and demolition would include the removal of equipment, removal of remaining regulated materials, dismantling of plant facilities and infrastructure, salvage and recycling of remaining equipment, waste management transport and disposal and backfill of below grade voids. Remediation and demolition are anticipated to take up to two years to complete.

Most of the outbuildings and transformers at the Power Plant property were removed in 2014. Several transformers and circuit breakers remain on the Power Plant property and would be demolished in conjunction with or prior to the main building demolition. A detached garage and water tank near the main plant entrance would also be demolished. This work would be accomplished using cranes, torches, and shearing machines. All materials would be hauled to a qualified recycler or disposal facility.

Figure 3 Proposed Demolition Area



Imagery provided by Microsoft Bing and its licensors © 2022.

19-08915 MB, MB BESS EIR  
Fig 2-8 Demolition Area

### **Master Plan for Redevelopment of the Power Plant Property**

The proposed project also includes a Master Plan that would amend the General Plan and LCP LUP land use designation on the BESS Site from Visitor Serving Commercial to General (Light) Industrial. The proposed Master Plan would not modify the existing land use designation on the remainder of the Power Plant property, retaining the Visitor Serving Commercial designation and Mixed-Use Residential Overlay recently implemented through Plan Morro Bay.

## 2 Regulations

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### 2.1 State Regulations

#### California Environmental Quality Act

Paleontological resources are protected under CEQA, which states a project would “normally” have a significant effect on the environment if project effects exceed an identified threshold of significance (CEQA Guidelines Section 15064.7[a]). Appendix G of the CEQA Guidelines (the Environmental Checklist Form) provides suggested thresholds of significance for evaluating a project’s environmental impacts, including impacts to paleontological resources. In Section VII(f), the question is posed thus: “Will the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?” To determine the uniqueness of a given paleontological resource, it must first be identified or recovered (i.e., salvaged). Therefore, CEQA mandates mitigation of adverse impacts, to the extent practicable, to paleontological resources.

CEQA does not define “a unique paleontological resource or site.” However, the SVP (2010) has defined a “significant paleontological resource” in the context of environmental review as follows:

Fossils and fossiliferous deposits, here defined as consisting of identifiable vertebrate fossils, large or small, uncommon invertebrate, plant, and trace fossils, and other data that provide taphonomic, taxonomic, phylogenetic, paleoecologic, stratigraphic, and/or biochronologic information.

Paleontological resources are typically to be older than recorded human history and/or older than middle Holocene (i.e., older than about 5,000 radiocarbon years) (SVP 2010).

The loss of paleontological resources meeting the criteria outlined above (i.e., a significant paleontological resource) would be a significant impact under CEQA, and the CEQA lead agency is responsible for mitigating impacts to paleontological resources, where practicable, in compliance with CEQA and other applicable statutes.

#### California Public Resources Code

California Public Resources Code Section 5097.5 states:

No person shall knowingly and willfully excavate upon, or remove, destroy, injure, or deface any historic or prehistoric ruins, burial grounds, archaeological or vertebrate paleontological site, including fossilized footprints, inscriptions made by human agency, or any other archaeological, paleontological or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over such lands. Violation of this section is a misdemeanor.

Here “public lands” means those owned by, or under the jurisdiction of, the State or any city, county, district, authority, or public corporation, or any agency thereof. Consequently, public agencies are required to comply with Public Resources Code Section 5097.5 for their own activities, including construction and maintenance, and for permit actions (e.g., encroachment permits) undertaken by others.

## 2.2 Regional and Local Regulations

### **City of Morro Bay General Plan**

The Conservation Element of the City of Morro Bay General Plan (Plan Morro Bay) addresses paleontological resources (City of Morro Bay 2021). Goal C-2 states, “Cultural and historic resources are identified for protection and showcased as a vital part of Morro Bay history.” Policy C-2.4 and Implementation Action C-5 also address paleontological resources.

**Policy C-2.4:** Cultural Resources Overlay. Develop a cultural resources overlay to protect cultural, archaeological, and paleontological resources in Morro Bay.

**Implementation Action C-5:** Require all discretionary proposals within the cultural resources overlay to consider the potential to disturb cultural resources. If preliminary reconnaissance suggests that cultural resources may exist, a Phase I cultural resources study shall be performed by a qualified professional meeting the Secretary of the Interior’s (SOI) Professional Qualification Standard (PQS) for archaeology and/or architectural history, as appropriate (NPS 1983).

## 3 Paleontological Resources Assessment Guidelines

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Paleontological resources are limited, nonrenewable resources of scientific, cultural, and educational value and are afforded protection under state and local laws and regulations. Per the SVP (2010), significant paleontological resources are, by definition, older than middle Holocene (i.e., 5,000 years old) in age. This PRE satisfies Public Resources Code Section 5097.5 requirements, follows guidelines and significance criteria specified by the SVP (2010).

### 3.1 Paleontological Sensitivity

Paleontological sensitivity refers to the potential for a geologic unit to produce scientifically significant fossils. Direct impacts to paleontological resources occur when earthwork activities, such as grading or trenching, cut into the geologic deposits within which fossils are buried and physically destroy the fossils. Because fossils are the remains of prehistoric animal and plant life, they are considered to be nonrenewable. These activities may constitute significant impacts under CEQA or adverse effects under federal environmental protection laws and may require mitigation. Sensitivity is determined by rock type, history of the geologic unit in producing significant fossils, and fossil localities recorded from that unit. Paleontological sensitivity is derived from the known fossil data collected from the entire geologic unit, not just from a specific survey.

The discovery of a vertebrate fossil locality is of greater significance than that of an invertebrate fossil locality, especially if it contains a microvertebrate assemblage. The recognition of new vertebrate fossil locations could provide important information on the geographical range of the taxa, their radiometric age, evolutionary characteristics, depositional environment, and other important scientific research questions. Vertebrate fossils are almost always significant because they occur more rarely than invertebrates or plants. Thus, geological units having the potential to contain vertebrate fossils are considered the most sensitive.

### 3.2 Resource Assessment Criteria

In its Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources, the SVP outlines guidelines for categorizing paleontological sensitivity of geologic units within a Project Site. The SVP describes sedimentary rock units as having a high, low, undetermined, or no potential for containing significant nonrenewable paleontological resources. This criterion is based on rock units within which vertebrates or significant invertebrate fossils have been determined by previous studies to be present or likely to be present. Significant paleontological resources are fossils or assemblages of fossils, which are unique, unusual, rare, uncommon, diagnostically, stratigraphically, taxonomically, or regionally (SVP 2010). The paleontological sensitivity of the Project Site has been evaluated according to the following SVP (2010) categories:

- **High Potential (Sensitivity).** Rock units from which significant vertebrate or significant invertebrate fossils or significant suites of plant fossils have been recovered are considered to have a high potential for containing significant non-renewable fossiliferous resources. These units include but are not limited to, sedimentary formations and some volcanic formations which contain significant nonrenewable paleontological resources anywhere within their

geographical extent, and sedimentary rock units temporally or lithologically suitable for the preservation of fossils. Sensitivity comprises both (a) the potential for yielding abundant or significant vertebrate fossils or for yielding a few significant fossils, large or small, vertebrate, invertebrate, or botanical and (b) the importance of recovered evidence for new and significant taxonomic, phylogenetic, ecologic, or stratigraphic data. Areas which contain potentially datable organic remains older than recent, including deposits associated with nests or middens, and areas that may contain new vertebrate deposits, traces, or trackways are also classified as significant. Full-time monitoring is typically recommended during any project-related ground disturbance in geologic units with high sensitivity.

- **Low Potential (Sensitivity).** Sedimentary rock units that are potentially fossiliferous but have not yielded fossils in the past; contain common and/or widespread invertebrate fossils of well-documented and understood taphonomic (processes affecting an organism following death, burial, and removal from the ground), phylogenetic relationships (evolutionary relationships among organisms), and paleoecology; or are believed to be too young to preserve paleontological resources (i.e., less than 5,000 years old). Reports in the paleontological literature or field surveys by a qualified vertebrate paleontologist may allow determination that some areas or units have low potentials for yielding significant fossils prior to the start of construction. Generally, these units will be poorly represented by specimens in institutional collections and will not require protection or salvage operations.
- **Undetermined Potential (Sensitivity).** Specific areas underlain by sedimentary rock units for which little information is available are considered to have undetermined fossiliferous potentials. Field surveys by a qualified vertebrate paleontologist to specifically determine the potentials of the rock units are required before programs of impact mitigation for such areas may be developed.
- **No Potential.** Rock units of metamorphic or igneous origin are commonly classified as having no potential for containing significant paleontological resources.

## 4 Methods

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Rincon reviewed published geologic maps to identify the geologic units present at and below the surface within the Project Site (Wiegers 2021). Rincon reviewed the online paleontological collections database of the University of California Museum of Paleontology (UCMP; 2022) and Paleobiology Database (PBDB; 2022) and consulted primary literature to identify known fossil localities in San Luis Obispo County and surrounding regions from similar geologic units to those identified within the Project Site. Rincon requested a records search of the Santa Barbara Museum of Natural History (SBMNH) on June 2, 2022, to identify any fossil localities known from within the Project Site or nearby fossil localities known from the same geologic units as found in the Project Site. The Project Site contains no bedrock exposures, so a field survey was not warranted.

Paleontological sensitivity ratings of the geological formations were assigned based on the findings of the records search and literature review and based on the potential impacts to nonrenewable paleontological resources from project construction following SVP (2010) guidelines.

## 5 Description of Resources

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### 5.1 Geologic Setting

The Project Site is situated in the Coast Ranges, one of the 11 geomorphic provinces of California (California Geological Survey 2002), defined as a region of unique topography and geology that is distinguished from other regions based on its landforms and geologic history. The Coast Ranges extend along the majority of California's coast from the California-Oregon border to Point Arguello in Santa Barbara County in the south and consist of northwest-trending mountain ranges and valleys. The Coast Ranges are composed of Mesozoic and Cenozoic sedimentary, igneous, and metamorphic strata. The eastern side is characterized by strike-ridges and valleys in the Upper Mesozoic strata. The Coast Ranges province runs parallel to and overlaps the San Andreas Fault in some areas (California Geological Survey 2002).

The City of Morro Bay is on the coast of the Pacific Ocean on the north side of Morro Bay at the western end of the Los Osos Valley. The Project Site is in the *Morro Bay North* and *Morro Bay South* United States Geological Survey 7.5-minute topographic quadrangles.

### 5.2 Geology of the Project Site

The geology of the region around the Project Site was mapped at a scale of 1:100,000 by Wiegers (2021), who identified two geologic units, Quaternary young alluvial floodplain deposits and Quaternary old eolian deposits, underlying the Project Site (Figure 4). The distribution, characteristics, and paleontological sensitivity of each of these geologic units is discussed below.

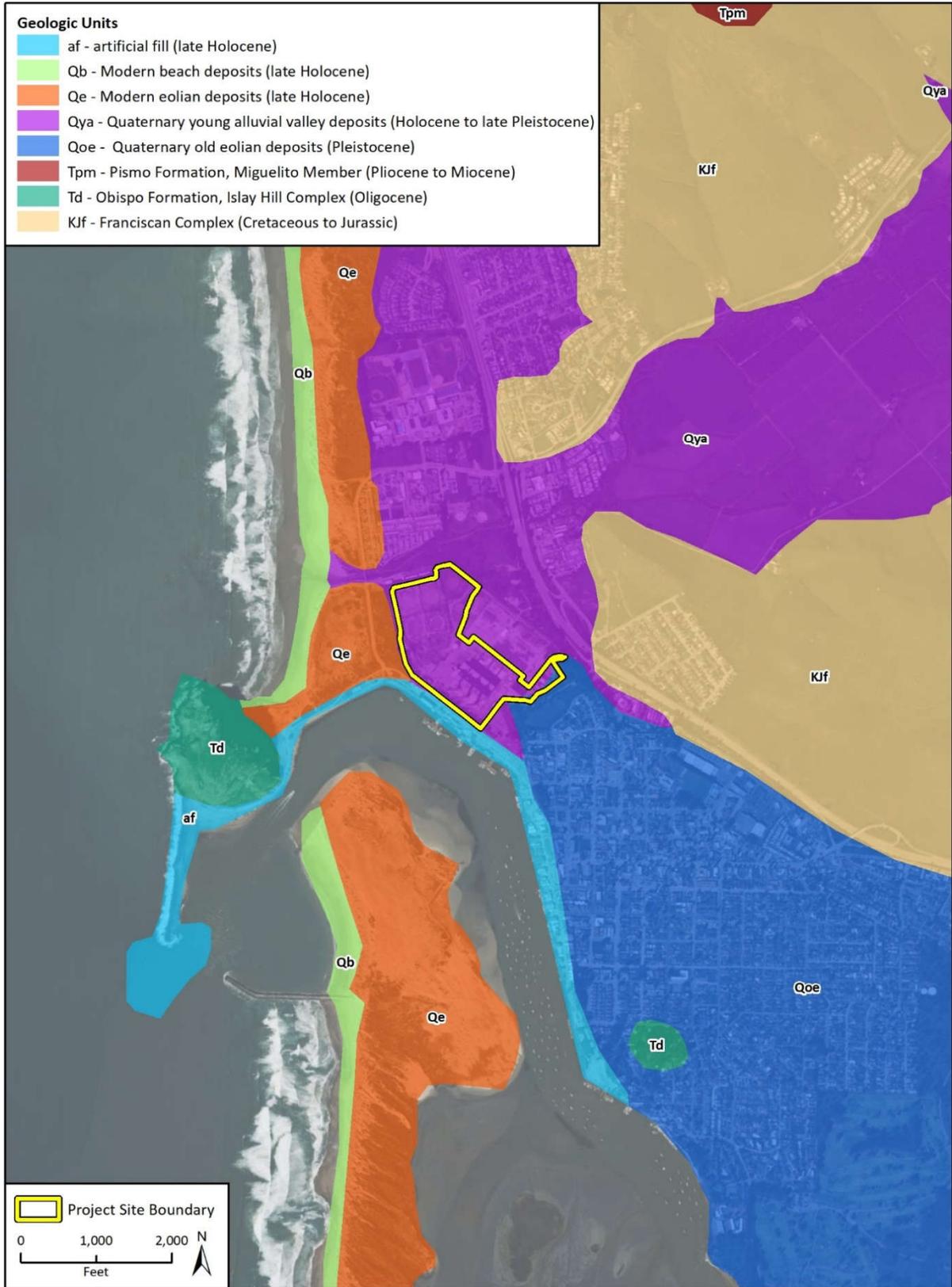
#### **Quaternary Young Alluvial Floodplain Deposits (Qya)**

Quaternary young alluvial floodplain deposits underlie the majority of the Project Site (Figure 4). Quaternary young alluvial floodplain deposits consist of unconsolidated clay, silt, and sand, that was deposited in floodplains and valley floors and is Holocene to late Pleistocene in age (Wiegers 2021). Quaternary young alluvial floodplain deposits are likely too young (i.e., less than 5,000 years old) to preserve paleontological resources at the surface. Therefore, Quaternary young alluvial floodplain deposits have **low paleontological sensitivity**.

#### **Quaternary Old Eolian Deposits (Qoe)**

Quaternary old eolian deposits underlie the eastern edge of the Project Site (Figure 4). Quaternary old eolian deposits consist of brown, moderately consolidated, well-sorted sand that represent stabilized dune deposits that are late to middle Pleistocene in age (Wiegers 2021). Quaternary old eolian deposits are of appropriate age to contain paleontological resources, but coastal dune deposits very rarely preserve fossils in California (Jefferson 2010; PBDB 2022; UCMP 2022). Therefore, Quaternary old eolian deposits have **low paleontological sensitivity**.

**Figure 4 Regional Geologic Map**



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## 5.3 Paleontology of the Project Site

A formal fossil locality search of the SBMNH discovered no fossil localities within the Project Site nor from Holocene-aged alluvial sediments or Pleistocene eolian sediments in San Luis Obispo County (Hoffman 2022).

## 6 Evaluation, Impacts, and Recommendations

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### 6.1 Significance Thresholds

The impact analysis included here is organized based on the paleontological resources thresholds included in the CEQA Guidelines Appendix G: Environmental Checklist Form, Section VII. Geology and Soils:

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

The remaining environmental topics addressed in Section VII. Geology and Soils, which include seismic impacts, soil erosion, landslides, liquefaction, and septic system impacts, are addressed in separate studies being conducted for the proposed action.

### 6.2 Paleontological Sensitivity Evaluation

The Project Site is underlain by two geologic units with low paleontological sensitivity, Quaternary young alluvium and Quaternary old eolian deposits (Figure 4). Quaternary young alluvium consists of sediments that are likely too young (i.e., less than 5,000 years old) to preserve paleontological resources. Quaternary old eolian deposits represent coastal dune deposits, which very rarely produce fossils in California.

### 6.3 Impacts

If construction activities result in the destruction, damage, or loss of scientifically important paleontological resources and associated stratigraphic and paleontological data, they would be considered as having a significant impact on paleontological resources.

The Project Site is currently occupied by the Morro Bay Power Plant, and large portions (including the berms that will be graded), if not all, of the Project Site are previously disturbed and therefore have no paleontological sensitivity. The Project Site is underlain by geologic units with low paleontological sensitivity (Figure 4), so ground-disturbing activities (i.e., grading, excavation) in previously undisturbed portions of the Project Site are unlikely to result destruction, damage, or loss of scientifically important paleontological resources. However, these low-sensitivity sediments may be underlain by older sediments with higher paleontological sensitivity, but the depth at which sediments that are old enough to preserve paleontological resources (i.e., more than 5,000 years old) is unknown. The final depth below surface required for mass grading associated with the proposed BESS building foundations is not yet known; therefore, while it is unlikely that mass grading will result in significant impacts to paleontological resources, this cannot be certain, so impacts to paleontological resources as a result of mass grading are potentially significant.

The types of ground-disturbing activities typically associated with construction of building foundations that can be monitored for paleontological resources include, but are not limited to: mass grading for creation of level building pads and roadways, excavation of stormwater

management basins, trenching for underground wet and dry utilities, and large-diameter drilling (greater than about 18 inches in diameter) for foundation supports. Notably, not all types of ground-disturbing activities can be feasibly monitored for paleontological resources. For example, it is not practical to monitor post-driving or drilling with a small-diameter auger (less than about 18 inches) for paleontological resources. Paleontological monitoring of boreholes is typically conducted by examining spoils brought up during the drilling process for any contained fossil remains. For post-driving, no spoils are produced, thus paleontological monitoring cannot occur.

Construction of the BESS buildings are expected to require 1,000 to 1,500 pilings to be driven into the ground to depths up to 75 feet. At this depth, it is likely that older sediments and/or a geological unit other than Quaternary young alluvium and Quaternary old eolian deposits are likely to occur, which could have higher paleontological sensitivity. However, these pilings will be driven into the ground. No sediment will be excavated, meaning pile driving cannot be monitored. Therefore, it is impossible to know whether a paleontological resource is significantly impacted as a result of this activity. Because no known paleontological resources would be impacted and the level of potential impact to undiscovered resources is unknowable, pile-driving activities are therefore unlikely to result in destruction, damage, or loss of scientifically important paleontological resources, and thus, would not be a significant impact.

## 6.4 Recommended Mitigation

The following mitigation measure would address potentially significant impacts to paleontological resources. Implementation of Mitigation Measures PAL-1 and PAL-2 would reduce the project's potentially significant impacts to these resources by training construction personnel so that they can identify paleontological resources if encountered during project construction and requiring the project applicant to establish a protocol to follow if a paleontological resource is encountered during project construction.

### **PAL-1 Paleontological Worker Environmental Awareness Program**

Prior to the start of construction, a Qualified Professional Paleontologist (as defined by SVP 2010) or their designee shall conduct a paleontological Worker Environmental Awareness Program (WEAP) training for construction personnel regarding the appearance of fossils and the procedures for notifying paleontological staff should fossils be discovered by construction staff.

### **PAL-2 Unanticipated Discovery of Paleontological Resources**

In the event a fossil is discovered during construction of the project, excavations within 50 feet of the find shall be temporarily halted or delayed until the discovery is examined by a Qualified Professional Paleontologist. The project applicant shall include a standard inadvertent discovery clause in every construction contract to inform contractors of this requirement. If the find is determined to be significant, the applicant shall retain a Qualified Professional Paleontologist to direct all mitigation measures related to paleontological resources. The Qualified Professional Paleontologist shall design and carry out a data recovery plan consistent with the SVP (2010) standards.

## 6.5 Significance After Mitigation

The recommended mitigation measures described above would reduce the potential for impacts to paleontological resources encountered during project ground-disturbing activities. With implementation of the recommended mitigation, the project would not result the significant destruction, damage, or loss of scientifically important paleontological resources.

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