Rockaway Quarry Reclamation Plan Project

SCH# 2020090036

Draft Environmental Impact Report

Prepared for
City of Pacifica

February 2022

Prepared by

RANEY PLANNING & MANAGEMENT, INC.
20 years
1501 Sports Drive, Suite A, Sacramento, CA 95834

Rockaway Quarry Reclamation Plan Project
Draft Environmental Impact Report

SCH# 2020090036

Lead Agency

City of Pacifica
Planning Department
540 Crespi Drive
Pacifica, CA 94044

Tina Wehrmeister
Planning Director/Assistant City Manager
(650) 738-7341

Prepared By

Raney Planning and Management, Inc.
1501 Sports Drive, Suite A
Sacramento, CA 95834
(916) 372-6100

Contact:
Rod Stinson
Vice President

TABLE OF CONTENTS

TABLE OF CONTENTS

CHAPTER **PAGE**

CHAPTER **PAGE**

CHAPTER **PAGE**

Appendices

LIST OF FIGURES

FIGURE **PAGE**

3. Project Description

4.1. Aesthetics

4.2. Air Quality and Greenhouse Gas Emissions

4.3. Biological Resources

4.5. Geology and Soils/Mineral Resources

4.6. Hydrology and Water Quality

FIGURE **PAGE**

4.10. Transportation

4.11. Utilities and Service Systems

6. Alternatives Analysis

LIST OF TABLES

TABLE **PAGE**

2. Executive Summary

3. Project Description

4.2. Air Quality and Greenhouse Gas Emissions

4.3. Biological Resources

4.6. Hydrology and Water Quality

4.7. Land Use and Planning

TABLE **PAGE**

4.8. Noise

4.10. Transportation

6. Alternatives Analysis

1. Introduction

1. INTRODUCTION

1.1 TYPE AND PURPOSE OF THE EIR

The Rockaway Quarry Reclamation Plan Project Environmental Impact Report (EIR) has been prepared in accordance with the California Environmental Quality Act (CEQA) of 1970, Pub. Res. Code Sections 21000-21178, as amended, and the Guidelines for Implementation of the California Environmental Quality Act, Cal. Code Regs. Title 14, Sections 15000-15387 (CEQA Guidelines). The City of Pacifica is the lead agency for the environmental review of the Rockaway Quarry Reclamation Plan Project (proposed project) evaluated herein and has the principal responsibility for approving the project. As required by Section 15121 of the CEQA Guidelines, this EIR will (a) inform public agency decision-makers, and the public generally, of the environmental consequences of approving the proposed project, (b) identify possible ways to minimize the significant adverse environmental effects, and (c) describe reasonable and feasible project alternatives which reduce environmental effects. The public agency shall consider the information in the EIR along with other information that may be presented to the agency.

As provided in the CEQA Guidelines Section 15021, public agencies are charged with the duty to avoid or minimize environmental damage where feasible. The public agency has an obligation to balance a variety of public objectives, including economic, environmental, and social issues. CEQA requires the preparation of an EIR prior to approving any project that may have a significant effect on the environment. For the purposes of CEQA, the term "project" refers to the whole of an action, which has the potential for resulting in a direct physical change or a reasonably foreseeable indirect physical change in the environment (CEQA Guidelines Section 15378[a]). With respect to the proposed project, the City has determined that the proposed reclamation is a *project* within the definition of CEQA, which has the potential for resulting in significant environmental effects.

The lead agency is required to consider the information in the EIR along with any other available information in deciding whether to approve the application. The basic requirements for an EIR include discussions of the environmental setting, environmental impacts, mitigation measures, alternatives, growth inducing impacts, and cumulative impacts.

The CEQA Guidelines identify several types of EIRs, each applicable to different project circumstances. This EIR has been prepared as a *project-level EIR* pursuant to CEQA Guidelines Section 15161, which is an analysis that examines the environmental impacts of a specific development project. A *project-level EIR* focuses primarily on the changes in the environment that would result from the development of the project, and examines all phases of the project including planning, construction, and operation.

Background

The Rockaway Quarry (Quarry) is a side hill, open pit mine, from which limestone, greenstone, shale, and chert were harvested, crushed, screened, and sold for construction purposes. The Quarry is located in the City of Pacifica on a site defined in this EIR as the Quarry Parcel, a 47.13-acre parcel located on the western side of Calera Creek. In addition, the 39.09-acre Eastern Parcel is located to the east of the Quarry Parcel, to the south and east of Calera Creek and to

the west of State Route (SR) 1 (see Figure 3-1 and Figure 3-2 in the Project Description chapter of this EIR). The Quarry has been active since the mid-1700s. From 1907 through 1920, the Ocean Shore Railroad ran through the site on its way to San Francisco. Extensive blasting was used in support of the mining in the 1920s and 1930s until blasting was halted by court order. By the 1970s, mining declined as the demand for limestone decreased. The last commercial operator, Quarry Products, closed the Quarry in 1987. Subsequently, the Quarry Parcel was partially filled with earth taken from the Vallemar Road cut, created for the expansion of SR 1. The Eastern Parcel of the Quarry was only used for associated buildings and settling ponds, quarry roads, conveyor belts, a truck scale, and washing area, but by 1993 the uses were removed and the parcel was filled.

Once the Quarry operations were suspended, the property was used for a variety of enterprises, including an annual rodeo. In 1996, the City received permits to construct the Calera Creek Water Recycling Plant on the north edge of the property. The permits also allowed the City to relocate Calera Creek, which had been a man-made ditch running through the center of the Eastern Parcel to a new, separate parcel of 17.21 acres running between the Quarry Parcel and the Eastern Parcel. As part of the permits, the City also agreed to grade the Eastern Parcel and to fill the old channelized creek and 7+ acres of previously damaged and scattered wetlands on site.

The Surface Mining and Reclamation Act of 1975 (SMARA, Public Resources Code Sections 2710-2796) provides a comprehensive surface mining and reclamation policy with the regulation of surface mining operations to assure that adverse environmental impacts are minimized and mined lands are reclaimed to a usable condition. Per the California Department of Conservation, in authorizing SMARA, the State intended to create and maintain an effective and comprehensive surface mining and reclamation policy with regulation of surface mining operations so as to assure that adverse environmental effects are prevented or minimized and that mined lands are reclaimed to a usable condition which is readily adaptable for alternative land uses. The production and conservation of minerals are encouraged, while giving consideration to values relating to recreation, watershed, wildlife, range and forage, and aesthetic enjoyment. Residual hazards to the public health and safety are eliminated. Reclamation means the combined process of land treatment that minimizes water degradation, air pollution, damage to aquatic or wildlife habitat, flooding, erosion, and other adverse effects from surface mining operations, including adverse surface effects incidental to underground mines, so that mined lands are reclaimed to a usable condition that is readily adaptable for alternate land uses and create no danger to public health or safety. The process may extend to affected lands surrounding mined lands, and may require backfilling, grading, re-soiling, revegetation, soil compaction, slope stabilization, or other measures.

As such, the proposed project seeks to restore the project site in accordance with SMARA and the City's General Plan by reclaiming the project site while meeting all applicable SMARA standards after reclamation. It should be noted that Quarry operations at the project site predate SMARA and the standards that were put in place surrounding reclamation of previously mined land. Reclamation of the site would include, but is not limited to, creating safe slopes in place of existing unsafe conditions to minimize potential danger to public health and safety; providing for safe pedestrian and emergency vehicle access to the project site; mitigating and restoring prior physical disturbances resulting from past quarrying activity; providing for erosion control measures, land stewardship, and maintenance to reduce sediment transport from the project site into Calera Creek (which drains into the Pacific Ocean) in order to improve the creek's water quality; and restoring the site to pre-quarry conditions so that views of the Pacific Ocean are maintained in a manner supporting a future alternate use.

This EIR has been prepared to identify and analyze the significant environmental effects of the proposed reclamation project.

1.2 PROJECT SUMMARY

The project site consists of slightly more than 86 acres across two parcels along the coast in the City of Pacifica. The two adjacent parcels are separated by Calera Creek (see Figure 3-2 in Chapter 3, Project Description, of this EIR). The project site includes the 47.13-acre Quarry Parcel, identified by Assessor's Parcel Number (APN) 018-150-120 and the 39.09-acre Eastern Parcel, identified by APN 018-150-150. The Quarry Parcel on the western side of Calera Creek consists of the former Rockaway Quarry and is dominated by often steep slopes, non-native plant species and informal accessways. The Eastern Parcel is located adjacent to and directly west of SR 1 and south of Calera Creek. The topography of the Eastern Parcel is relatively flat, with elevations ranging from approximately 20 feet to 65 feet above mean sea level. The parcel contains natural features such as wetlands and a small ephemeral ditch running through the southern portion of the site.

The City of Pacifica General Plan designates both parcels as Special Area and the sites are zoned Service Commercial (C-3) with a Hillside Preservation District (HPD) overlay. While located within the Coastal Zone, the Quarry Parcel and Eastern Parcel are located in an Area of Deferred Certification and are not included within the City of Pacifica's Local Coastal Program. Therefore, the California Coastal Commission retains coastal development permit issuance authority on the project site.

Surrounding existing land uses for the Quarry Parcel and Eastern Parcel include Mori Point Ridge and the Calera Creek Water Recycling Plant to the north, commercial businesses and single-family residential homes to the east across SR 1, commercial businesses and Rockaway Beach to the south, and the Pacific Ocean to the west.

The proposed project would include reclamation of the 87-acre Rockaway Quarry site, including both the Quarry and Eastern Parcels. The majority of the reclamation activity would occur on the westernmost Quarry Parcel with minor site improvements such as grading for access roads and through truck traffic occurring on the Eastern Parcel. The project would involve earthwork to regrade the over steepened slopes of the former Quarry into a safe condition, installation of new drainage infrastructure, and construction of new unpaved trails. Other proposed improvements include tree removal, revegetation, and general terrain improvements. All five sections of the Quarry Parcel and the entire Eastern Parcel are included in the Reclamation Plan, and the proposed improvements within each section can be seen in Figure 3-3 in Chapter 3, Project Description, of this EIR. The Eastern Parcel would be reclaimed to include a complex of four tiered seasonal wetlands totaling 1.55 acres and a 0.20-acre California red-legged frog pond.

1.3 EIR PROCESS

The EIR process begins with the decision by the lead agency to prepare an EIR, either during a preliminary review of a project or at the conclusion of an Initial Study. Once the decision is made to prepare an EIR, the lead agency sends a Notice of Preparation (NOP) to appropriate government agencies and, when required, to the State Clearinghouse (SCH) in the Office of Planning and Research (OPR), which will ensure that responsible and trustee State agencies reply within the required time. The SCH assigns an identification number to the project, which then becomes the identification number for all subsequent environmental documents on the project. Commenting agencies have 30 days to respond to the NOP and provide information

regarding alternatives and mitigation measures they wish to have explored in the Draft EIR and to provide notification regarding whether the agency will be a responsible agency or a trustee agency for the project.

Upon completion of the Draft EIR and prior to circulation to State and local agencies and interested members of the public, a notice of completion is filed with the SCH and a public notice of availability is published to inform interested parties that a Draft EIR is available for agency and public review. In addition, the notice provides information regarding the location where copies of the Draft EIR are available for public review and any public meetings or hearings that are scheduled. The Draft EIR is circulated for a minimum period of 45 days, during which time reviewers may submit comments on the document to the lead agency. The lead agency must respond to comments in writing. If significant new information, as defined in CEQA Guidelines Section 15088.5, is added to an EIR after public notice of availability is given, but before certification of the EIR, the revised EIR or affected chapters must be recirculated for an additional public review period with related comments and responses.

A Final EIR will be prepared, containing public comments on the Draft EIR and written responses to those comments, as well as a list of changes to the Draft EIR text necessitated by public comments, as warranted. Before approving a project, the lead agency shall certify that the EIR (consisting of the Draft EIR and Final EIR) has been completed in compliance with CEQA, and that the EIR has been presented to the decision-making body of the lead agency, which has reviewed and considered the EIR. The lead agency shall also certify that the EIR reflects the lead agency's independent judgment and analysis.

The findings prepared by the lead agency must be based on substantial evidence in the administrative record and must include an explanation that bridges the gap between evidence in the record and the conclusions required by CEQA. If the decision-making body elects to proceed with a project that would have unavoidable significant impacts on the environment, then a Statement of Overriding Considerations explaining the decision to balance the benefits of the project against unavoidable environmental impacts must be prepared.

1.4 SCOPE OF THE EIR

This EIR constitutes a project-level analysis for the Rockaway Quarry Reclamation Plan Project and, pursuant to CEQA Guidelines Section 15161, covers "all phases of the project including planning, construction, and operation." State CEQA Guidelines Section 15126.2(a) states, in pertinent part:

> An EIR shall identify and focus on the significant environmental effects of the proposed project. In assessing the impact of a proposed project on the environment, the lead agency should normally limit its examination to changes in the existing physical conditions in the affected area as they exist at the time the notice of preparation is published, or where no notice of preparation is published, at the time environmental analysis is commenced.

An Initial Study has not been prepared for the proposed project, as the EIR will address all CEQA-required environmental topics identified in the CEQA Guidelines. The following environmental issue areas are addressed in the EIR:

- Aesthetics
- Air Quality and GHG Emissions
- Biological Resources

- Cultural and Tribal Cultural Resources
- Geology and Soils/Mineral Resources
- Hydrology and Water Quality
- Land Use and Planning
- Noise
- Parks and Recreation
- Transportation
- Utilities and Service Systems

In addition to the foregoing resource areas, Chapter 4.12, Effects Not Found to be Significant, has been prepared to present information regarding resource areas and specific issue areas within the Geology and Soils/Mineral Resources and Noise resources areas, that the project has been found not to have the potential to affect.

The evaluation of effects is presented on a resource-by-resource basis in Chapters 4.1 through 4.11 of the EIR. Each chapter is divided into the following four sections: Introduction, Existing Environmental Setting, Regulatory Context, and Impacts and Mitigation Measures. Impacts that are determined to be significant in Chapters 4.1 through 4.11, and for which feasible mitigation measures are not available to reduce those impacts to a less-than-significant level, are identified as *significant and unavoidable*. Chapter 5 of the EIR presents a discussion of growth-inducing impacts, summary of cumulative impacts, energy impacts, and significant irreversible environmental changes associated with the project. Alternatives to the proposed project are discussed in Chapter 6 of the EIR.

1.5 SIGNIFICANCE CRITERIA

CEQA Guidelines Section 15382 defines a significant effect on the environment as "a substantial, or potentially substantial adverse change in any of the physical conditions within the area affected by the project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic and aesthetic significance." In addition, the Guidelines state, "An economic or social change by itself shall not be considered a significant effect on the environment. A social or economic change related to a physical change may be considered in determining whether the physical change is significant."

The level of significance of an impact prior to mitigation is included at the end of each impact discussion throughout the technical chapters of this EIR. The following levels of significance prior to mitigation are used in this EIR:

1) No Impact: An impact would not occur;
2) Less than Significant: Impacts that are adverse, but that do not exceed the specified thresholds of significance;
3) Significant: Impacts that exceed the defined standards of significance and require mitigation;
4) Less than Cumulatively Considerable: Where cumulative impacts have been identified, but the project's incremental contribution towards the cumulative impacts would not be considered significant; and
5) Cumulatively Considerable: Where cumulative impacts have been identified and the project's incremental contribution towards the cumulative impacts would be considered significant.

If an impact is determined to be significant or cumulatively considerable, mitigation is included in order to reduce the specific impact to the maximum extent feasible. A statement of the level of significance of an impact after mitigation is also included in each impact discussion throughout the technical chapters of this EIR. The following levels of significance are used in the EIR:

1) Less than Significant: Impacts that exceed the defined standards of significance but can be eliminated or reduced to a less-than-significant level through the implementation of feasible mitigation measures;
2) Less than Cumulatively Considerable: Where the project's incremental contribution towards cumulative impacts would be eliminated or reduced to a less than cumulatively considerable level through the implementation of feasible mitigation measures; and
3) Significant and Unavoidable: An impact (project-level or cumulative) that cannot be eliminated or reduced to a less-than-significant or less than cumulatively considerable level though the implementation of feasible mitigations measures.

Each environmental area of analysis uses a distinct set of significance criteria. Where measurable and explicit quantification of significance is identified, such as violation of an ambient noise level standard, this measurement is used to assess the level of significance of a particular impact in this EIR. If criteria for determining significance relative to a specific environmental resource impact are not identified in the CEQA Guidelines, criteria were developed for this Draft EIR.

The significance criteria are identified at the beginning of the Impacts and Mitigation Measures section in each of the technical chapters of this EIR. Although significance criteria are necessarily different for each resource considered, the provided significance levels ensure consistent evaluation of impacts for all resource areas evaluated.

1.6 NOTICE OF PREPARATION AND SCOPING

In accordance with CEQA Guidelines Section 15082, an NOP was circulated to the public, local, State and federal agencies, and other known interested parties for a 40-day public and agency review period from September 2, 2020 to October 12, 2020 (included as Appendix A), which is ten days beyond the 30-day review period required by CEQA. The purpose of the NOP was to provide notification that an EIR for the proposed project was being prepared and to solicit public input on the scope and content of the document.

In addition, pursuant to CEQA Guidelines Section 15082, the City held an NOP scoping meeting during the public review period on September 16, 2020, at 6:00 P.M., for the purpose of receiving comments on the scope of the environmental analysis to be prepared for the proposed project. Agencies and members of the public were invited to attend and provide input on the scope of the EIR. A total of seven comment letters were received during the NOP public review period. The comment letters are provided as Appendix B to this EIR. All comments were taken into consideration during the preparation of this Draft EIR, and a summary of the NOP comments received is provided in Section 1.7 below.

1.7 COMMENTS RECEIVED ON THE NOTICE OF PREPARATION

During the NOP public review period, the City received seven comment letters. A copy of each letter is provided in Appendix B of this EIR. The comment letters received during the NOP public review period were authored by the following representatives of public agencies and individual members of the public:

Public Agencies

- California Coastal Commission – Jeremy Smith;
- California Department of Conservation, Division of Mine Reclamation – Carol Atkins;
- California Department of Fish and Wildlife – Gregg Erickson; and
- Native American Heritage Commission – Nancy Gonzalez-Lopez.

Individuals

- Kelsey Mangione;
- Roger Mascio; and
- Claudia Reinhart.

The following list, categorized by issue, summarizes the concerns brought forth in the comment letters on the scope of the EIR:

Aesthetics *(Chapter 4.1)*	Concerns related to: • Aesthetic impacts of the proposed project from key vantage points, specifically: from the Coast Highway (SR 1), the Calera Creek Multi-Purpose (CCMP) trail, the newly proposed trails, and Rockaway Beach; • Changes in the pre-quarry visual character of the area; and • The visual impacts that may occur during the various phases of the project, including construction, early revegetation, and established revegetation.
Air Quality and GHG Emissions *(Chapter 4.2)*	Concerns related to: • Emissions that would be produced as a result of hauling imported fill; and • Dust impacts.

Biological Resources *(Chapter 4.3)*	Concerns related to:
	• Impacts to species or the habitat of:
	  • San Francisco garter snake;
	  • California red-legged frog;
	  • San Francisco common yellowthroat; and
	  • Pappose tarplant.
	• Impacts related to tree removal/potential loss of heritage trees;
	• Impacts to nesting birds if ground-disturbance occurs during the breeding season;
	• Appropriateness of native species mix proposed in the revegetation plan;
	• Seed sources that would ensure the genetic integrity of local plant populations, including through certified local harvest within coastal San Mateo County;
	• How impacts to wetlands, environmentally sensitive habitat area (ESHA), and trees will be mitigated;
	• Potential ecological effects of mitigating a mosaic of spatially dispersed smaller wetlands as one continuous larger feature;
	• Potential isolation from the riparian corridor at Calera Creek, surrounding upland resources, connections to Mori Point resources in the north, and potentially reduced habitat complexity;
	• The project's creation of a self-sustaining native vegetation community;

	• Potential for wildlife entanglement from plastic netting in erosion control products; and • Impacts of maintenance and vegetation management actions on vegetation survival.
Hydrology and Water Quality *(Chapter 4.6)*	Concerns related to: • Changes to the site's volume of runoff resulting from the increase in impervious surfaces; • The proposed vegetated swales and other best management practices (BMPs) should be sized to infiltrate, retain, and/or treat the volume of runoff produced by the 85th percentile 24-hour design storm from the tributary Drainage Management Area; • Changes in soil compaction, and potential effects to the site's natural infiltration capacity; • Potential use of landscaping chemicals for the revegetated areas; and • Potential adverse effects of dry-weather runoff resulting from irrigation.
Parks and Recreation *(Chapter 4.9)*	Concerns related to: • Improved access to fishing; • The type of maintenance that would be conducted; • Impacts of loss of the informal trails; and • Reestablishment of additional "informal"-type trails.
Utilities and Service Systems *(Chapter 4.11)*	Concerns related to: • The project's use of irrigation.
Alternatives Analysis *(Chapter 6)*	Concerns related to: • Potential alternatives to minimize impacts on coastal wetlands.

All of these issues are addressed in this EIR, in the relevant sections identified in the first column of the table above.

1.8 DRAFT EIR AND PUBLIC REVIEW

This Draft EIR is being circulated for public review and comment for a period of 45 days. During this period, the general public, organizations, and agencies can submit comments to the Lead Agency on the Draft EIR's accuracy and completeness. Release of the Draft EIR marks the beginning of a 45-day public review period pursuant to CEQA Guidelines Section 15105. The public can review the Draft EIR at the City's website at:

https://www.cityofpacifica.org/depts/planning/environmental_documents

or at the following address during normal business hours:

City of Pacifica, Planning Department
540 Crespi Drive
Pacifica, CA 94044

Comments may be submitted both in written form and/or orally at the public hearing on the Draft EIR. Notice of the time and location of the hearing will be published in local newspapers, mailed to property owners and residents surrounding the project, emailed to residents that have

requested to be placed on the project's email notification list, and posted on the City's website prior to the hearing.

All comments or questions regarding the Draft EIR should be addressed to:

Christian Murdock, Deputy Director
City of Pacifica, Planning Department
540 Crespi Drive
Pacifica, CA 94044
(650) 738-7341
publiccomment@pacifica.gov

1.9 ORGANIZATION OF THE DRAFT EIR

The EIR is organized into the following sections:

Chapter 1 – Introduction

The Introduction chapter of the EIR provides an introduction and overview describing the intended use of the Draft EIR and the review and certification process, as well as summaries of the chapters included in the Draft EIR and summaries of the issues and concerns received from the public and public agencies during the NOP review period.

Chapter 2 – Executive Summary

The Executive Summary chapter of the EIR summarizes the elements of the project and the environmental impacts that would result from implementation of the proposed project, describes proposed mitigation measures, and indicates the level of significance of impacts after mitigation. In addition, the Executive Summary includes a summary of the project alternatives and areas of known controversy.

Chapter 3 – Project Description

The Project Description Chapter of the EIR provides a detailed description of the proposed project, including the project's location, background information, objectives, and technical characteristics.

Chapter 4.0 – Introduction to the Analysis

The Introduction to the Analysis chapter of the EIR provides a list of issues addressed in the EIR and presents the format of each technical chapter.

Chapter 4.1 – Aesthetics

The Aesthetics chapter of the EIR describes existing aesthetic resources for the project area and the region, and evaluates potential aesthetic impacts of the project. According to CEQA, the concept of aesthetic resources refers to scenic vistas, scenic resources (such as trees, rock outcroppings, and historic buildings within a State Scenic Highway), the existing visual character or quality of the project area, and light and glare impacts.

Chapter 4.2 – Air Quality and GHG Emissions

The Air Quality and GHG Emissions chapter of the EIR describes the impacts of construction and operation of the proposed project related to air quality and global climate change. The chapter was prepared using methodologies and assumptions recommended within the CEQA Air Quality Handbook of the Bay Area Air Quality Management District.

Chapter 4.3 – Biological Resources
The Biological Resources chapter of the EIR evaluates the biological resources known to occur or potentially occur within the proposed project area. The chapter describes potential impacts to those resources and identifies measures to eliminate or substantially reduce those impacts to the maximum extent feasible.

Chapter 4.4 – Cultural and Tribal Cultural Resources
The Cultural and Tribal Cultural Resources chapter of the EIR evaluates archaeological, historical, and tribal resources known to be located within the proposed project area. The chapter summarizes the existing setting with respect to the aforementioned resources, identifies thresholds of significance and project impacts to such resources, and sets forth mitigation measures that would be necessary to reduce impacts to the maximum extent feasible.

Chapter 4.5 – Geology and Soils/Mineral Resources
The Geology and Soils/Mineral Resources chapter of the EIR describes the geologic and soil characteristics of the project site and evaluates the extent to which implementation of the proposed project could be affected by seismic hazards such as ground shaking, liquefaction, and expansive soil characteristics. In addition, the chapter evaluates known mineral resources on the project site, evaluates any potential adverse effects of the proposed project on the availability of such resources and presents an analysis related to paleontological resources.

Chapter 4.6 – Hydrology and Water Quality
The Hydrology and Water Quality chapter of the EIR describes existing drainage and stormwater conditions for the project site, as well as current stormwater flows and stormwater infrastructure, and potential for flooding. The chapter evaluates potential impacts of the proposed project with respect to increases in impervious surface area and associated stormwater flows, degradation of water quality, groundwater recharge, and on- and off-site flooding.

Chapter 4.7 – Land Use and Planning
The Land Use and Planning chapter of the EIR examines the proposed project's compatibility with existing and planned land uses in the area, current General Plan policies, and zoning designations. The chapter further evaluates the potential of the proposed project to divide an established community.

Chapter 4.8 – Noise
The Noise chapter of the EIR describes the existing noise environment in the project vicinity and identifies potential impacts and mitigation measures related to the construction and operation of the proposed project. The method by which the potential impacts are analyzed is discussed, followed by the identification of potential impacts and the recommended mitigation measures designed to reduce significant impacts to the maximum extent feasible.

Chapter 4.9 – Parks and Recreation
The Parks and Recreation chapter of the EIR identifies potential new demands resulting from the proposed project on parks and recreation facilities. The analysis focuses on potential impacts that would require the development of new facilities or expansion of existing facilities, the construction of which could have adverse physical effects on the environment.

Chapter 4.10 – Transportation
The Transportation chapter of the EIR discusses existing transportation conditions within the project area and the effects to the roadway network as a result of the proposed project and future, projected growth. The analysis includes consideration of automobile traffic impacts on transit, bicycle, and pedestrian facilities; vehicle miles traveled impacts; and impacts related to emergency access and roadway safety.

Chapter 4.11 – Utilities and Service Systems
The Utilities and Service Systems chapter of the EIR summarizes the setting information and identifies potential new demands resulting from the proposed project related to water supply, wastewater systems, and solid waste disposal.

Chapter 4.12 – Effects Not Found to be Significant
The Effects Not Found to be Significant chapter of the EIR addresses the project's effects that were determined not to be significant. CEQA Guidelines Section 15128 requires a brief discussion explaining why these effects were not found to be significant.

Chapter 5 – Statutorily Required Sections
The Statutorily Required Sections chapter of the EIR provides discussions required by CEQA regarding impacts that would result from the proposed project, including a summary of cumulative impacts, potential growth-inducing impacts, impacts related to energy in accordance with Appendix F and G of the CEQA Guidelines, significant and unavoidable impacts, and significant irreversible changes to the environment.

Chapter 6 – Alternatives Analysis
The Alternatives Analysis chapter of the EIR describes and evaluates the alternatives to the proposed project. It should be noted that the alternatives will be analyzed at a level of detail less than that of the proposed project; however, the analyses will include sufficient detail to allow for a meaningful comparison of impacts.

Chapter 7 – References
The References chapter of the EIR provides bibliographic information for all references and resources cited.

Chapter 8 – EIR Authors and Persons Consulted
The EIR Authors and Persons Consulted chapter of the EIR lists EIR and technical report authors who provided technical assistance in the preparation and review of the EIR.

Appendices
The Appendices include the NOP, comments received during the NOP comment period, the proposed project's Soil Management Plan and Submittal Guidelines for Imported Soil, and all technical reports prepared for the proposed project.

1.10 FINAL EIR AND EIR CERTIFICATION
Upon completion of the public review period, a Final EIR will be prepared that will include written comments on the Draft EIR received during the public review period and responses to those comments. The Final EIR will also include the Mitigation Monitoring and Reporting Plan (MMRP) prepared in accordance with Section 21081.6 of the Public Resources Code. The Final EIR will include any revisions to the Draft EIR made in response to public comments. The Draft EIR and

Final EIR together will comprise the EIR for the proposed project. Before the City can consider approval of the project, it must first certify that the EIR has been completed in compliance with CEQA, that the City Council has reviewed and considered the information in the EIR, and that the EIR reflects the independent judgment of the City. The City will also be required to adopt Findings of Fact, and, for any impacts determined to be significant and unavoidable, adopt a Statement of Overriding Considerations.

2. Executive Summary

2. EXECUTIVE SUMMARY

2.1 INTRODUCTION

The Executive Summary chapter of the EIR provides an overview of the proposed project (see Chapter 3, Project Description, for further details) and provides a table summary of the conclusions of the environmental analysis provided in Chapters 4.1 through 4.11. This chapter also summarizes the alternatives to the proposed project that are described in Chapter 6, Alternatives Analysis, and identifies the Environmentally Superior Alternative. Table 2-1 contains the environmental impacts associated with the proposed project, the significance of the impacts, the proposed mitigation measures for the impacts, and the significance of the impacts after implementation of the mitigation measures.

2.2 SUMMARY DESCRIPTION OF THE PROPOSED PROJECT

The project site consists of 86 acres across two separated parcels along the coast in the City of Pacifica. The two adjacent parcels are separated by Calera Creek. The two parcels are: the 47.13-acre Quarry Parcel, identified by Assessor's Parcel Number (APN) 018-150-120 and the 39.09-acre Eastern Parcel, identified by APN 018-150-150. The Quarry Parcel on the western side of Calera Creek consists of the former Rockaway Quarry and is dominated by steep slopes, non-native plant species and informal accessways. The Eastern Parcel is located adjacent to and directly west of State Route (SR) 1 and south of Calera Creek. The parcel contains natural features such as wetlands and a small ephemeral ditch running through the southern portion of the site.

The City of Pacifica General Plan designates both parcels of the Quarry site as Special Area and the sites are zoned Service Commercial (C-3) with Hillside Preservation District (HPD) overlay zone. While located within the Coastal Zone, the Quarry Parcel and Eastern Parcel are located in an Area of Deferred Certification and are not included within the City of Pacifica's Local Coastal Program. Therefore, the California Coastal Commission retains coastal development permit issuance authority on the project site.

Surrounding existing land uses for the Quarry Parcel and Eastern Parcel include Mori Point Ridge and the Calera Creek Water Recycling Plant to the north, commercial businesses and single-family residential homes to the east across SR 1, commercial businesses and Rockaway Beach to the south, and the Pacific Ocean to the west.

The proposed project would include reclamation of the 87-acre Rockaway Quarry site, including both the Quarry and Eastern Parcels. The majority of the reclamation activity would occur on the westernmost Quarry Parcel with minor site improvements such as grading for access roads and through truck traffic occurring on the Eastern Parcel. The project would involve earthwork to regrade the over steepened slopes of the former Quarry into a safe condition, installation of new drainage infrastructure, and construction of new unpaved trails. Other proposed improvements include tree removal, revegetation, and general trail improvements. All five sections of the Quarry Parcel and the entire Eastern Parcel are included in the Reclamation Plan, and the proposed improvements within each section can be seen in Figure 3-3 in Chapter 3, Project Description, of this EIR. The Eastern Parcel would be reclaimed to include a complex of four tiered seasonal

wetlands totaling 1.55 acres and a 0.20-acre California red-legged frog pond. The Reclamation Plan and the proposed improvements can be seen in Figure 3-3 of Chapter 3 of this EIR.

Implementation of the proposed project would require the following discretionary actions by the City of Pacifica:

- Certification and adoption of the Rockaway Quarry Reclamation Plan EIR and Mitigation Monitoring and Reporting Program;
- Approval of a Quarry Use Permit pursuant to Pacifica Municipal Code (PMC) Section 9-2.04;
- Approval of a Variance from the HPD land coverage control standard in PMC Section 9-4.2257, pursuant to PMC Section 9-4.3404;
- Rezoning to the P-D (Planned Development) zoning district pursuant to PMC Section 9-4.2256;
- Approval of a Development Plan pursuant to PMC Section 9-4.2203;
- Approval of a Specific Plan pursuant to PMC Section 9-4.2212;
- Approval of a Heritage tree removal authorization for removal of 16 heritage trees, pursuant to PMC Section 4-12.05; and
- Approval of a logging operation pursuant to Ordinance Nos. 636-C.S. and 673-C.S.

The proposed project would require the following discretionary approvals from other agencies:

- Coastal Development Permit (California Coastal Commission);
- Clean Water Act Section 404 Permit (United States Army Corps of Engineers [USACE]);
- Section 7 Biological Opinion (US Fish and Wildlife Service);
- Clean Water Act Section 401 Water Quality Certification/Waiver or Issuance of Waste Discharge Requirements (San Francisco Bay Regional Water Quality Control Board [RWQCB]); and
- Surface Mining and Reclamation Act (SMARA) Compliance Review (California Department of Conservation, Division of Mine Reclamation).

Please refer to Chapter 3, Project Description, of this EIR for a detailed description of the proposed project, as well as a full list of the project objectives.

2.3 ENVIRONMENTAL IMPACTS AND PROPOSED AND RECOMMENDED MITIGATION

Under CEQA Guidelines Section 15382, a significant effect on the environment is defined as a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project, including land, air, water, mineral, flora, fauna, ambient noise, and objects of historic or aesthetic significance. Mitigation measures must be implemented as part of the proposed project to reduce potential adverse impacts to a less-than-significant level. Such mitigation measures are included in this EIR and are found in the following technical chapters: Aesthetics; Air Quality and Greenhouse Gas Emissions; Biological Resources; Cultural and Tribal Cultural Resources; Geology and Soils/Mineral Resources; Hydrology and Water Quality; Land Use and Planning; Noise; Parks and Recreation; Transportation; and Utilities and Service Systems. The mitigation measures presented in the EIR will form the basis of the Mitigation Monitoring and Reporting Program. Any impact that remains significant after implementation of mitigation measures is considered a significant and unavoidable impact.

A summary of the identified impacts in the technical chapters of the EIR is presented in Table 2-1 at the end of this chapter. In Table 2-1, the proposed project impacts are identified for each technical chapter (Chapters 4.1 through 4.11) of the EIR. In addition, Table 2-1 includes the level of significance of each impact, any mitigation measures required for each impact, and the resulting level of significance after implementation of mitigation measures for each impact.

2.4 SUMMARY OF PROJECT ALTERNATIVES

The following section presents a summary of the evaluation of the alternatives considered for the proposed project, which include the following:

1. No Project Alternative;
2. Single Access Alternative;
3. Reduced Fill Alternative; and
4. Open Trails Alternative.

For a more thorough discussion of project alternatives, please refer to Chapter 6, Alternatives Analysis. In addition, the Project Objectives 1-10 are listed in Section 3.5, Project Objectives, in Chapter 3, Project Description.

1. No Project Alternative

The No Project Alternative assumes that the proposed project site would remain in its current condition and would not be reclaimed. It should be noted, however, that under the No Project Alternative, the project applicant would be reasonably assumed to apply for a new project to reclaim the project site, per SMARA and Section 9-2.12(c) of the City's Municipal Code. Therefore, reclamation of the project site would be assumed to eventually occur. The No Project Alternative would not meet any of the project objectives.

2. Single Access Alternative

Under the Single Access Alternative, the ingress and egress to the project site would not be provided through a route that loops through the proposed project's Eastern Parcel, but instead, through a single access point at the State Route (SR) 1/Reina Del Mar Avenue intersection. All other aspects of the proposed project would remain the same. This alternative would only partially meet Objectives #1, #3, #6, #9, and #10. The alternative would fully meet Objectives #2, #4, #5, #7, and #8.

3. Reduced Fill Alternative

Under the Reduced Fill Alternative, the proposed project would implement the components of the Reclamation Plan, but with alterations to the project's filling and grading components, due to a reduction in the amount of imported fill. The minimum fill required to meet SMARA requirements and slope stability would be imported. While the minimum fill would alter the amount of fill within the Quarry Pit, the alternative would still complete the remaining reclamation activities proposed under the proposed project, including the installation of new trails, improvements to existing trails, addition of hazard signs, regrading of loose soil, installation of new wetlands, installation of temporary and permanent culverts, and revegetation plan. The Reduced Fill Alternative would generally be capable of meeting all of the project objectives.

4. Open Trails Alternative

Under the Open Trails Alternative, the proposed project's components in the Eastern Parcel would remain the same, but work in the Quarry Parcel, including the project's soil hauling, slope cuts, and grading components, would be implemented in two primary phases, such that temporary closures of the existing, on-site trails as a result of reclamation-related activities would be reduced to the maximum extent feasible. The four sub-phases of the proposed project would instead be constrained to two primary phases for reclamation activities within the Quarry Parcel under this alternative. The Open Trails Alternative would generally be capable of meeting all of the project objectives.

Environmentally Superior Alternative

An EIR is required to identify the environmentally superior alternative from among the range of reasonable alternatives that are evaluated. Section 15126(e)(2) of the CEQA Guidelines requires that an environmentally superior alternative be designated and states, "If the environmentally superior alternative is the 'no project' alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives." As discussed throughout the Alternatives Analysis chapter, the Reduced Fill Alternative would meet all project objectives and would result in similar or fewer impacts as compared to the proposed project. Therefore, Alternative 3 would be the Environmentally Superior Alternative.

2.5 AREAS OF KNOWN CONTROVERSY

Areas of controversy that were identified in NOP comment letters, and are otherwise known for the project area, include the following:

- Views of the ocean and coastline;
- Air quality impacts;
- Biological impacts associated with wildlife and plant habitats (including wetlands);
- Increased stormwater runoff causing soil erosion, flooding, or pollution;
- Traffic increases along existing surrounding roadways associated with truck hauling; and
- Recreational opportunities.

Table 2-1
Summary of Impacts and Mitigation Measures

Impact		Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
4.1 Aesthetics				
4.1-1	**Have a substantial adverse effect on a scenic vista.**	LS	*None required.*	N/A
4.1-2	**In a non-urbanized area, 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 a publicly accessible vantage point) or, in an urbanized area, conflict with applicable zoning and other regulations governing scenic quality.**	LS	*None required.*	N/A
4.1-3	**Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State Scenic highway.**	LS	*None required.*	N/A
4.1-4	**Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.**	LS	*None required.*	N/A
4.1-5	**Long-term changes in visual character associated with cumulative development of the proposed project in**	LS	*None required.*	N/A

NI = No Impact; N/A = *Not Applicable*; LS = *Less Than Significant*; LCC = *Less Than Cumulatively Considerable*; S = *Significant*; CC = *Cumulatively Considerable*; SU = *Significant and Unavoidable*

Table 2-1
Summary of Impacts and Mitigation Measures

	Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
	combination with future buildout of the City of Pacifica General Plan.			
4.1-6	**Creation of new sources of light or glare associated with cumulative development of the proposed project in combination with future buildout of the City of Pacifica General Plan.**	LS	*None required.*	N/A
	4.2 Air Quality and Greenhouse Gas Emissions			
4.2-1	**Conflict with or obstruct implementation of the applicable air quality plan during reclamation.**	LS	*None required.*	N/A
4.2-2	**Conflict with or obstruct implementation of the applicable air quality plan during project operation.**	LS	*None required.*	N/A
4.2-3	**Expose sensitive receptors to substantial pollutant concentrations.**	LS	*None required.*	N/A
4.2-4	**Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.**	LS	*None required.*	N/A
4.2-5	**Result in a cumulatively considerable net increase of any criteria pollutant for which**	LS	*None required.*	N/A

NI = No Impact; N/A = *Not Applicable*; LS = *Less Than Significant*; LCC = *Less Than Cumulatively Considerable*; S = *Significant*; CC = *Cumulatively Considerable*; SU = *Significant and Unavoidable*

Table 2-1
Summary of Impacts and Mitigation Measures

	Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
	the project region is in non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).			
4.2-6	**Generation of GHG emissions that may have a significant impact on the environment or conflict with an applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of GHGs.**	LS	*None required.*	N/A
	4.3 Biological Resources			
4.3-1	**Have a substantial adverse effect, either directly (e.g., threaten to eliminate a plant community) or through habitat modifications, on any plant species identified as a candidate, sensitive, or special-status species.**	S	*4.3-1(a)* *Prior to the commencement of reclamation activities associated with the proposed project, protocol-level, focused plant surveys shall be conducted by a qualified biologist during the documented bloom periods of pappose tarplant, San Francisco Bay spineflower, and rose leptosiphon. Two site visits, including one early-season (May) and one late-season (August) shall be sufficient to cover the blooming periods of the three species with moderate potential to occur. Survey timing may fluctuate based on blooming periods of appropriate reference site locations. If the special-status plant species are not observed during the focused plant surveys, no*	LS

NI = No Impact; N/A = *Not Applicable*; LS = *Less Than Significant*; LCC = *Less Than Cumulatively Considerable*; S = *Significant*; CC = *Cumulatively Considerable*; SU = *Significant and Unavoidable*

Table 2-1
Summary of Impacts and Mitigation Measures

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		impact to special-status plant species would occur, and no mitigation would be required. The results of the surveys shall be submitted to the City's Planning Department.	
		4.3-1(b) If special-status plants are identified on-site during the focused plant surveys, the project applicant shall be responsible for ensuring reclamation activities avoid special-status plants through preparation and submittal to the City's Planning Department of an Avoidance Plan Report detailing protection and avoidance criteria, measures, and the extent to which special-status plants were successfully avoided. The Avoidance Plan Report shall be subject to verification from the City's Planning Department. *If avoidance is infeasible, the qualified biologist shall ensure seed collection for affected special-status plants is completed and plants are re-established at a minimum of a one-to-one ratio (number of newly established plants relative to the number of plants impacted) in a preserved, suitable habitat approved by City. The project applicant shall document and submit proof of compliance to the City's Planning Department.*	
		4.3-1(c) Re-established special-status plant populations shall be monitored annually by the project applicant in accordance with an approved Habitat Mitigation	

NI = No Impact; N/A = *Not Applicable*; LS = *Less Than Significant*; LCC = *Less Than Cumulatively Considerable*; S = *Significant*; CC = *Cumulatively Considerable*; SU = *Significant and Unavoidable*

Table 2-1
Summary of Impacts and Mitigation Measures

Impact	Level of Significance Prior to Mitigation	Mitigation Measures		Level of Significance After Mitigation
			and Monitoring Plan prepared in consultation with the City's Planning Department, with annual monitoring taking place for a minimum of five years. The Habitat Mitigation and Monitoring Plan shall include criteria, subject to approval by all applicable agencies, including the City's Planning Department, USFWS, and CDFW, detailing the survival ratio required of re-established populations and performance standards for further replanting for any re-established special-status plant species that do not survive. Reports describing performance results shall be prepared and submitted for years one, three, and five of the monitoring period.	
4.3-2 Have a substantial adverse effect, either directly (e.g., cause a wildlife population to drop below self-sustaining levels, threaten to eliminate an animal community) or through habitat modifications, on California red-legged frog and San Francisco garter snake.	S	*4.3-2(a)*	*Prior to beginning any ground-disturbing work at the project site, the project applicant shall ensure employees of the proposed project attend a Worker Environmental Awareness Training Program (WEAP). The WEAP shall consist of a brief presentation by a USFWS-approved biologist, which may be given either in-person or via an online teleconferencing presentation. The program shall include a description of visual identification of any special-status species and required habitat, an explanation of the status of these species and their protection, consequences of non-compliance, and a description of the project-specific measures being taken to reduce effects to these species. Documentation of the training (i.e., a sign-in sheet) shall be retained at the site and shall be submitted*	LS

NI = No Impact; N/A = *Not Applicable*; LS = *Less Than Significant*; LCC = *Less Than Cumulatively Considerable*; S = *Significant*; CC = *Cumulatively Considerable*; SU = *Significant and Unavoidable*

Table 2-1
Summary of Impacts and Mitigation Measures

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		with applicable reports to the City's Planning Department. *4.3-2(b)* *Prior to initiation of reclamation activities, a take permit shall be obtained by the project applicant from USFWS for CRLF. As part of acquiring a take permit, a Biological Opinion from the USFWS shall be acquired through Section 7 Consultation. The project applicant shall adhere to all compliance measures in the Biological Opinion, which shall be incorporated into the Section 404 Nationwide Permit issued by USACE. Proof of compliance shall be submitted to the City's Planning Department.* *4.3-2(c)* *Prior to initiation of reclamation activities, a qualified biologist shall place exclusionary fencing around the project's proposed areas of disturbance (i.e., where reclamation is proposed to occur in the Quarry Parcel and Eastern Parcel) to prevent CRLF and SFGS from entering such locations. Fencing shall consist of silt fence or suitable substitute (e.g., ERTEC 48-inch high-visibility orange fencing), which shall be buried at least six inches below the surface (or sealed in a like manner) to prevent incursion under the fence, and will stand at least 36 inches above ground. The fence shall also be made of an opaque material. Exit funnels shall be installed to allow any animals that may be occupying the project's areas of disturbance to escape. Exclusionary fencing shall be inspected by and*	

NI = No Impact; N/A = *Not Applicable*; LS = *Less Than Significant*; LCC = *Less Than Cumulatively Considerable*; S = *Significant*; CC = *Cumulatively Considerable*; SU = *Significant and Unavoidable*

Table 2-1
Summary of Impacts and Mitigation Measures

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		maintained throughout the areas of disturbance by the qualified biologist. Fencing shall be removed only when all reclamation equipment is removed from the site. The exclusionary fence shall be checked for breaches on a daily basis by the qualified biologist. However, if a qualified biologist is not required to be on-site for biological monitoring or other tasks, an on-site representative may be appointed to check the fence on a daily basis and conduct repairs. If an on-site representative is conducting inspections and repairs, a qualified biologist shall verify the fence status on a weekly basis to assure repairs are occurring as needed. A comprehensive fencing plan shall be submitted for appropriate agency approval to the City's Planning Department. *4.3-2(d)* *Within 48 hours prior to any reclamation activities, a qualified biologist shall conduct surveys for CRLF and SFGS in and adjacent to the project's proposed areas of disturbance. A qualified biologist shall conduct the foregoing surveys on an ongoing basis before commencement of any reclamation activity. A qualified biologist shall be on-site during ground-disturbing activities, including fence installation and the operation of heavy equipment (e.g., during grading). The qualified biologist(s) shall be given authority to stop any work that may result in take of a listed species. If at any time a CRLF is observed on-site and relocation is necessary, the biologist*	

NI = No Impact; N/A = *Not Applicable*; LS = *Less Than Significant*; LCC = *Less Than Cumulatively Considerable*; S = *Significant*; CC = *Cumulatively Considerable*; SU = *Significant and Unavoidable*

Table 2-1
Summary of Impacts and Mitigation Measures

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		shall transport and release the animal to a suitable relocation site within Calera Creek, outside of the areas of disturbance. If a SFGS is observed within the areas of disturbance, work shall be halted until the animal leaves the location of its own volition. If CRLF or SFGS is observed, the qualified biologist shall document the occurrence and submit proof of compliance to the City's Planning Department. *4.3-2(e) At the close of each working day, to prevent inadvertent entrapment of wildlife, any excavated, steep-walled holes or trenches more than 12 inches deep shall either be covered or have one or more escape ramps installed that are constructed of earth fill or wooden planks. Before any such holes or trenches are filled, they shall be inspected for wildlife by a qualified biologist. The qualified biologist shall document and submit proof of compliance to the City's Planning Department.* *4.3-2(f) Prior to and throughout reclamation activities, the project applicant shall ensure the following measures are implemented at the project site to additionally protect against take of CRLF and SFGS: (1) The proposed project shall not involve the operation of heavy equipment on-site from 30 minutes before sunset to 30 minutes after sunrise, year-round, thereby avoiding disturbances during the most active times for CRLF and SFGS; (2) The boundaries of the areas of disturbance shall be*	

NI = No Impact; N/A = *Not Applicable*; LS = *Less Than Significant*; LCC = *Less Than Cumulatively Considerable*; S = *Significant*; CC = *Cumulatively Considerable*; SU = *Significant and Unavoidable*

Table 2-1
Summary of Impacts and Mitigation Measures

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		clearly delineated with highly visible stakes, fencing, or flagging; (3) Any food-related trash shall be disposed of in closed containers and removed from the project site daily, to eliminate attractants of predators; (4) Monofilament netting or similar material shall not be used on any erosion control devices specified in the Stormwater Pollution Prevention Program (SWPPP); and (5) All vehicle traffic shall be restricted to established or temporary access roads and reclamation areas, and a site-wide 20 mph speed limit shall be observed. The project applicant shall document and submit proof of compliance to the City's Planning Department. *4.3-2(g)* *Prior to the issuance of a grading permit, the Final Dust Control Plan shall include the following recommendations, which shall be subject to review and approval by the City Engineer:* • *The potential application area shall be checked by the project contractor prior to application to ensure that wildlife is not entrapped in a location where any wildlife species would come in direct contact with the compound.*	
4.3-3 Have a substantial adverse effect, either directly (e.g., cause a wildlife population to drop below self-sustaining	S	*4.3-3(a)* *Reclamation activities, such as tree and vegetation removal, grading, or initial ground-disturbance, shall be conducted between September 1 and January 31 (outside of the February 1 to August 31 nesting*	LS

NI = No Impact; N/A = *Not Applicable*; LS = *Less Than Significant*; LCC = *Less Than Cumulatively Considerable*; S = *Significant*; CC = *Cumulatively Considerable*; SU = *Significant and Unavoidable*

Table 2-1
Summary of Impacts and Mitigation Measures

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
levels, threaten to eliminate an animal community) or through habitat modifications, on American peregrine falcon, white-tailed kite, San Francisco common yellowthroat, yellow warbler, and migratory birds protected under the MBTA.		*season) to the greatest extent feasible. If reclamation activities associated with the proposed project must be conducted during the nesting season, a pre-construction nesting bird survey shall be conducted by a qualified biologist no more than 14 days prior to vegetation removal or initial ground disturbance. The survey shall include the proposed areas of disturbance and surrounding 250 feet to identify the location and status of any nests that could potentially be affected either directly or indirectly by activities associated with the proposed project. The results of the survey shall be submitted to the City's Planning Department.* *4.3-3(b)* *If active nests of native nesting bird species are located during the nesting bird survey, a work exclusion zone shall be established around each nest by the qualified biologist. Established exclusion zones shall remain in place until all young in the nest have fledged or the nest otherwise becomes inactive (e.g., due to predation). Appropriate exclusion zone sizes shall be determined by a qualified biologist and shall vary based on species, nest location, existing visual buffers, anticipated noise levels from reclamation activities proposed in the vicinity of the nest, and other factors. An exclusion zone radius may be as small as 50 feet for common, disturbance-adapted species, or as large as 250 feet or more for raptors. Exclusion zone size shall be reduced from established levels by a qualified biologist, if nest*	

NI = No Impact; N/A = *Not Applicable*; LS = *Less Than Significant*; LCC = *Less Than Cumulatively Considerable*; S = *Significant*; CC = *Cumulatively Considerable*; SU = *Significant and Unavoidable*

Table 2-1
Summary of Impacts and Mitigation Measures

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		monitoring findings indicate that reclamation-related activities do not adversely impact the nest, and if a reduced exclusion zone would not adversely affect the nest. Proof of compliance shall be documented by a qualified biologist and submitted to the City's Planning Department.	
4.3-4 Have a substantial adverse effect on any riparian habitat or other sensitive natural community.	LS	*None required.*	N/A
4.3-5 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.	S	*4.3-5(a) Prior to initiation of reclamation activities, the project applicant shall obtain the following aquatic resource permits to proceed with proposed impacts to seasonal wetlands: (1) a Section 404 Nationwide Permit from the USACE, (2) a Section 401 water quality certification from the RWQCB, and (3) a CDP from the CCC. All compliance measures included in these permits shall be adhered to by the project applicant. Proof of compliance shall be submitted to the City's Planning Department* *4.3-5(b) During reclamation, the project applicant shall ensure the proposed project includes a 4-to-1 on-site wetland replacement for impacts to Waters of the U.S./State. Newly created wetlands shall total 1.75 acres of seasonal wetlands and be implemented within the Eastern Parcel.*	

NI = No Impact; N/A = *Not Applicable*; LS = *Less Than Significant*; LCC = *Less Than Cumulatively Considerable*; S = *Significant*; CC = *Cumulatively Considerable*; SU = *Significant and Unavoidable*

Table 2-1
Summary of Impacts and Mitigation Measures

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		A complex of four tiered seasonal wetlands totaling 1.55 acres shall be constructed in an upland portion of the Eastern Parcel that is currently composed of non-native annual grassland and coyote brush. In addition, a 0.20-acre bentonite clay-lined pond shall be constructed to the west of the four seasonal wetlands, providing high-quality breeding habitat for CRLF and habitat for SFGS. Existing foot trails shall be used for construction access to minimize the temporary impact footprint associated with pond construction. All work required to construct the 1.75 acres of mitigation wetlands shall avoid existing wetlands in the Eastern Parcel. A wetland maintenance and monitoring program, consistent with the performance standards established by the Section 404 and Section 401 permits and the CDP, shall be adopted in coordination with the City's Planning Department to ensure that newly created wetlands maintain long-term functionality. The wetland maintenance and monitoring program shall stipulate that the proposed project shall result in no net loss of waters.	
4.3-6 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	LS	*None required.*	N/A

NI = No Impact; N/A = *Not Applicable*; LS = *Less Than Significant*; LCC = *Less Than Cumulatively Considerable*; S = *Significant*; CC = *Cumulatively Considerable*; SU = *Significant and Unavoidable*

Table 2-1
Summary of Impacts and Mitigation Measures

	Impact	Level of Significance Prior to Mitigation		Mitigation Measures	Level of Significance After Mitigation
	impede the use of native wildlife nursery sites.				
4.3-7	**Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.**	S	*4.3-7(a)*	*Prior to the removal of any on-site trees, the project applicant shall obtain authorization for heritage tree removal from the Planning Commission or City Council, and shall obtain authorization of a logging operation by the Planning Commission or City Council. All trees removed (heritage trees and non-heritage trees) shall be replaced in like kind in the case of native species or with a native species in the case of non-native species. Minimum replacement size shall be 24-inch box unless a smaller size is recommended by a landscape architect licensed to practice in the State of California in order to increase the likely survivability of the replacement tree. Tree replacement shall occur at a ratio of three replacement trees per one removed tree. The specific placement of the replacement trees shall be determined by a qualified biologist in consultation with a licensed landscape architect. The final Tree Replacement Plan, which shall include the foregoing information, shall include requirements for monitoring and shall be subject to review and approval by the City's Planning Department.*	LS
			4.3-7(b)	*Prior to the commencement of any reclamation activity, a qualified arborist, horticulturist, landscape architect, or other qualified person shall prepare a Tree Protection Plan to protect in place the existing*	

NI = No Impact; N/A = *Not Applicable*; LS = *Less Than Significant*; LCC = *Less Than Cumulatively Considerable*; S = *Significant*; CC = *Cumulatively Considerable*; SU = *Significant and Unavoidable*

Table 2-1
Summary of Impacts and Mitigation Measures

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		trees located within the Eastern Parcel. The Tree Protection Plan shall be consistent with all applicable requirements set forth in Section 4-12.07 of the Pacifica Municipal Code and detail the installation and maintenance of any measures necessary to protect trees within the Eastern Parcel. The Tree Protection Plan shall be subject to review and approval by the City's Planning Department.	
4.3-8 Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.	NI	*None required.*	N/A
4.3-9 Cumulative impact on biological resources.	LS	*None required.*	N/A
4.4 Cultural Resources			
4.4-1 Cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines, Section 15064.5.	LS	*None required.*	N/A
4.4-2 Cause a substantial adverse change in the significance of a unique archeological resource pursuant to CEQA Guidelines, Section 15064.5 or disturb any human remains, including	S	*4.4-2(a) In the event of the accidental discovery or recognition of any human remains, further excavation or disturbance of the find or any nearby area reasonably suspected to overlie adjacent human remains shall not occur until compliance with the provisions of CEQA Guidelines Section*	LS

NI = No Impact; N/A = *Not Applicable*; LS = *Less Than Significant*; LCC = *Less Than Cumulatively Considerable*; S = *Significant*; CC = *Cumulatively Considerable*; SU = *Significant and Unavoidable*

Table 2-1
Summary of Impacts and Mitigation Measures

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
those interred outside of dedicated cemeteries.		*15064.5(e)(1) and (2) has occurred. The Guidelines specify that in the event of the discovery of human remains other than in a dedicated cemetery, no further excavation at the site or any nearby area suspected to contain human remains shall occur until the County Coroner has been notified to determine if an investigation into the cause of death is required. If the Coroner determines that the remains are Native American, then, within 24 hours, the Coroner must notify the Native American Heritage Commission, which in turn will notify the most likely descendants who may recommend treatment of the remains and any grave goods. If the Native American Heritage Commission is unable to identify a most likely descendant or most likely descendant fails to make a recommendation within 2448 hours after notification by the Native American Heritage Commission, or the landowner or his authorized agent rejects the recommendation by the most likely descendant and mediation by the Native American Heritage Commission fails to provide a measure acceptable to the landowner, then the landowner or his authorized representative shall rebury the human remains and grave goods with appropriate dignity at a location on the property not subject to further disturbances. If human remains are encountered, a copy of the resulting County Coroner report noting any written consultation with the Native American Heritage Commission shall be submitted*	

NI = No Impact; N/A = *Not Applicable*; LS = *Less Than Significant*; LCC = *Less Than Cumulatively Considerable*; S = *Significant*; CC = *Cumulatively Considerable*; SU = *Significant and Unavoidable*

Table 2-1
Summary of Impacts and Mitigation Measures

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		as proof of compliance to the City of Pacifica Planning Department. *4.4-2(b)* *If any prehistoric or historic artifacts, other indications of cultural deposits, such as historic privy pits or trash deposits, or Tribal Cultural Resources, are found once ground disturbing activities are underway, all work within the vicinity of the find(s) shall cease and the find(s) shall be immediately evaluated by a qualified archaeologist and appropriate Native American Tribe, if applicable. If the find is determined to be a historical or unique archaeological resource, the applicant shall make available contingency funding and a time allotment to allow for implementation of avoidance measures or appropriate mitigation (CEQA Guidelines Section 15064.5). Work may continue on other parts of the project site while historical or unique archaeological resource mitigation takes place (Public Resources Code Sections 21083 and 21087).* *The requirements of Mitigation Measures 4.4-2(a) and 4.4-2(b) shall be included via notation on all project grading plans prior to the issuance of grading permits, to the satisfaction of the Planning Director.*	
4.4-3 Cause a substantial adverse change in the significance of a Tribal Cultural Resource as	S	*4.4-3* *Implement Mitigation Measures 4.4-2(a) and 4.4-2(b).*	LS

NI = No Impact; N/A = *Not Applicable*; LS = *Less Than Significant*; LCC = *Less Than Cumulatively Considerable*; S = *Significant*; CC = *Cumulatively Considerable*; SU = *Significant and Unavoidable*

Table 2-1
Summary of Impacts and Mitigation Measures

	Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
	defined in Public Resources Code, Section 21074.			
4.4-4	**Cause a cumulative loss of cultural resources.**	LS	*None required.*	N/A
	4.5 Geology and Soils/Mineral Resources			
4.5-1	**Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, strong seismic ground shaking, seismic-related ground failure, including liquefaction, and landslides.**	LS	*None required.*	N/A
4.5-2	**Result in substantial soil erosion or the loss of topsoil.**	LS	*None required.*	N/A
4.5-3	**Be located on a geological unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse, or be located on expansive soil, as defined in Table 18-1B of the Uniform Building Code.**	S	*4.5-3* *Prior to approval of Improvement Plans, a qualified geotechnical engineer, in coordination with the City Engineer, shall review the improvement plans and specifications to assess whether all recommendations from the Geotechnical Investigation report prepared for the proposed project have been properly implemented and shall evaluate if additional analysis and/or recommendations are required. The recommendations include, but are not limited to: the installation of subdrains; the installation of keyways; benches with paved drainage ditches within the 2:1 cut slopes below the Hilltop; grading to address*	LS

NI = No Impact; N/A = *Not Applicable*; LS = *Less Than Significant*; LCC = *Less Than Cumulatively Considerable*; S = *Significant*; CC = *Cumulatively Considerable*; SU = *Significant and Unavoidable*

Table 2-1
Summary of Impacts and Mitigation Measures

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		areas containing undocumented fill; and several recommendations regarding the materials used for fill, such as requiring the use of well-graded import material with very low to moderate expansion potential (Expansion Index less than 90), a Plasticity Index less than 20, and that is free of organic material and construction debris.	
4.5-4 Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of wastewater.	NI	*None required.*	N/A
4.5-5 Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.	S	*4.5-5 In the event that paleontological resources, including individual fossils or assemblages of fossils, are encountered during construction activities all ground disturbing activities shall immediately halt and a qualified paleontologist shall be procured to evaluate the discovery for the purpose of recording, protecting, or curating the discovery as appropriate. The qualified paleontologist shall provide the City of Pacifica Planning Department with a report detailing the findings and method of curation or protection of the resources for review and approval by City Planning staff prior to recommencing reclamation activities.*	LS
4.5-6 Result in the loss of availability of a known mineral resource that would be of	LS	*None required.*	N/A

NI = No Impact; N/A = *Not Applicable*; LS = *Less Than Significant*; LCC = *Less Than Cumulatively Considerable*; S = *Significant*; CC = *Cumulatively Considerable*; SU = *Significant and Unavoidable*

Table 2-1
Summary of Impacts and Mitigation Measures

	Impact	Level of Significance Prior to Mitigation		Mitigation Measures	Level of Significance After Mitigation
	value to the region and the residents of the State or of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan.				
4.5-7	**Cumulative increase in the potential for geological related impacts and hazards.**	LS	*None required.*		N/A
	4.6 Hydrology and Water Quality				
4.6-1	**Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality during implementation.**	S	*4.6-1*	*Prior to the issuance of a grading permit, the Final Dust Control Plan shall include the following recommendations, which shall be subject to review and approval by the City Engineer:* • *Dust palliative (e.g., Gorilla-Snot) shall not be applied immediately before or after a precipitation event in order to prevent potential runoff of the compound while it is in liquid form. Rather, the compound shall be applied to dry soil and allowed to cure completely before water is applied to the road surface by either artificial means or by precipitation;* • *Spill containment materials shall be kept on-hand during application to prevent the compound from entering Calera Creek. Such materials may include sand, clay, or other*	LS

NI = No Impact; N/A = *Not Applicable*; LS = *Less Than Significant*; LCC = *Less Than Cumulatively Considerable*; S = *Significant*; CC = *Cumulatively Considerable*; SU = *Significant and Unavoidable*

Table 2-1
Summary of Impacts and Mitigation Measures

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		suitable absorbent materials. Any spills shall be attended to immediately, and abatement materials shall be properly disposed of in an approved landfill; and • *Care shall be taken to ensure that applied dust palliative does not enter any sensitive habitat area. Application of the compound shall occur in a localized fashion such that it is only applied on roadways in need of dust control.*	
4.6-2 Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality during operations.	LS	*None required.*	N/A
4.6-3 Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin or conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.	LS	*None required.*	N/A

NI = No Impact; N/A = *Not Applicable*; LS = *Less Than Significant*; LCC = *Less Than Cumulatively Considerable*; S = *Significant*; CC = *Cumulatively Considerable*; SU = *Significant and Unavoidable*

Table 2-1
Summary of Impacts and Mitigation Measures

Impact		Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
4.6-4	**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: result in substantial erosion or siltation on- or offsite; substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site; or create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.**	LS	*None required.*	N/A
4.6-5	**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 impede or redirect flood flows.**	LS	*None required.*	N/A

NI = No Impact; N/A = *Not Applicable*; LS = *Less Than Significant*; LCC = *Less Than Cumulatively Considerable*; S = *Significant*; CC = *Cumulatively Considerable*; SU = *Significant and Unavoidable*

Table 2-1
Summary of Impacts and Mitigation Measures

Impact		Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
4.6-6	**In a flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation.**	LS	*None required.*	N/A
4.6-7	**Cumulative impacts related to hydrology and water quality.**	LS	*None required.*	N/A
4.7 Land Use and Planning				
4.7-1	**Physically divide an established community.**	LS	*None required.*	N/A
4.7-2	**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.**	LS	*None required.*	N/A
4.7-3	**Cause a significant cumulative 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.**	LS	*None required.*	N/A
4.8 Noise				
4.8-1	**Generation of a substantial temporary increase in ambient noise levels in the vicinity of**	S	*4.8-1* *Prior to the issuance of a grading permit, the Final Dust Control Plan shall include the exact location at which the off-site water truck would refill. Filling of*	LS

NI = No Impact; N/A = *Not Applicable*; LS = *Less Than Significant*; LCC = *Less Than Cumulatively Considerable*; S = *Significant*; CC = *Cumulatively Considerable*; SU = *Significant and Unavoidable*

Table 2-1
Summary of Impacts and Mitigation Measures

	Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
	the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.		*the water truck shall occur only between the hours of 8:00 AM and 5:00 PM. The location of the water source shall not be within 250 feet of any residence, school, park, or religious facility. The Final Dust Control Plan, including the identified water refill location, shall be subject to review and approval by the City Engineer.*	
4.8-2	**Generation of a substantial 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.**	LS	*None required.*	N/A
4.8-3	**Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels.**	LS	*None required.*	N/A
4.8-4	**Cumulative noise impacts.**	LS	*None required.*	N/A
	4.9 Parks and Recreation			
4.9-1	**Result in an increase in 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.**	LS	*None required.*	N/A

NI = No Impact; N/A = *Not Applicable*; LS = *Less Than Significant*; LCC = *Less Than Cumulatively Considerable*; S = *Significant*; CC = *Cumulatively Considerable*; SU = *Significant and Unavoidable*

Table 2-1
Summary of Impacts and Mitigation Measures

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
4.9-2 Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.	LS	*None required.*	N/A
4.9-3 Cumulative impacts to parks and recreation facilities.	LS	*None required.*	N/A
4.10 Transportation			
4.10-1 Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.	LS	*None required.*	N/A
4.10-2 Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b).	LS	*None required.*	N/A
4.10-3 Substantially increase hazards to vehicle safety due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment), or result in inadequate emergency access.	S	*4.10-3(a) During soil hauling activities conducted as part of the proposed Reclamation Plan, including the off-site water truck refilling conducted as part of the Dust Control Plan, the project applicant shall have a flagperson stationed at the project egress to manage haul truck queues in order to ensure full, unobstructed public use of the public parking lot located west of the SR 1/Reina Del Mar Avenue intersection is maintained and project haul truck queues do not exceed the 140-foot storage limit for eastbound traffic at the SR 1/Reina Del Mar Avenue*	LS

NI = No Impact; N/A = *Not Applicable*; LS = *Less Than Significant*; LCC = *Less Than Cumulatively Considerable*; S = *Significant*; CC = *Cumulatively Considerable*; SU = *Significant and Unavoidable*

Table 2-1
Summary of Impacts and Mitigation Measures

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		intersection. The inclusion of a flagperson to manage truck queues at the foregoing location shall be included in the Final Reclamation Plan, subject to review and verification by the City of Pacifica Planning Director. *4.10-3(b)* *Prior to the issuance of a grading permit, the Final Dust Control Plan shall be revised as required by Mitigation Measure 4.8-1 to include the exact location at which the off-site water truck would refill and to establish a time limitation of 8:00 AM to 5:00 PM for water truck refilling. The City Engineer shall further restrict the time period and location for water truck refilling, as necessary, to abide by the following standards:* • *The project applicant shall submit to the City Engineer the truck turning template for the specific model of water truck to be used;* • *The project applicant shall submit to the City Engineer a plan of the streets that would be located within 500 feet of the approved water refill location, which shall include street widths and grades;* • *The final water refill location shall provide sufficient space to accommodate the water truck's movements, including turns and reverses, based on the truck turning template*	

NI = No Impact; N/A = *Not Applicable*; LS = *Less Than Significant*; LCC = *Less Than Cumulatively Considerable*; S = *Significant*; CC = *Cumulatively Considerable*; SU = *Significant and Unavoidable*

Table 2-1
Summary of Impacts and Mitigation Measures

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		for the specific model of water truck to be used; and • *Temporary parking restrictions shall be put in place near the final water refill location, as necessary, to ensure that adequate width is available to enable the water truck's movements based on the truck turning template for the specific model of water truck to be used.* *Proof of compliance with the foregoing standards, which shall be documented in the Final Dust Control Plan, shall be subject to review and approval by the City Engineer.* *4.10-3(c) Implement Mitigation Measure 4.8-1.*	
4.10-4 Cumulative impacts to transportation.	LS	*None required.*	N/A
4.11 Utilities and Service Systems			
4.11-1 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	LS	*None required.*	N/A

NI = No Impact; N/A = *Not Applicable*; LS = *Less Than Significant*; LCC = *Less Than Cumulatively Considerable*; S = *Significant*; CC = *Cumulatively Considerable*; SU = *Significant and Unavoidable*

Table 2-1
Summary of Impacts and Mitigation Measures

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
significant environmental effects.			
4.11-2 Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years.	NI	*None required.*	N/A
4.11-3 Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.	LS	*None required.*	N/A
4.11-4 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, or conflict with federal, State, and local management and reduction statutes and regulations related to solid waste.	LS	*None required.*	N/A

NI = No Impact; N/A = *Not Applicable*; LS = *Less Than Significant*; LCC = *Less Than Cumulatively Considerable*; S = *Significant*; CC = *Cumulatively Considerable*; SU = *Significant and Unavoidable*

Table 2-1
Summary of Impacts and Mitigation Measures

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
4.11-5 Increase in demand for utilities and service systems associated with the proposed project, in combination with future buildout of the City.	LS	*None required.*	N/A

NI = No Impact; N/A = *Not Applicable*; LS = *Less Than Significant*; LCC = *Less Than Cumulatively Considerable*; S = *Significant*; CC = *Cumulatively Considerable*; SU = *Significant and Unavoidable*

3. Project Description

3. PROJECT DESCRIPTION

3.1 INTRODUCTION

Section 15124 of CEQA Guidelines requires an EIR to contain a project description, including the location and boundaries of the project, statement of project objectives, general description of the project's technical, economic and environmental characteristics, and a statement briefly describing the intended uses of the EIR.

The Project Description chapter of the EIR provides a comprehensive description of the Rockaway Quarry Reclamation Plan Project (proposed project) in accordance with Section 15124. Please note that this chapter also provides an overall general description of the existing environmental conditions; however, detailed discussions of the existing setting in compliance with CEQA Guidelines Section 15125, as it relates to each given potential impact area, is included in each technical chapter of this EIR.

3.2 PROJECT LOCATION

The project site is located at the Rockaway Quarry (Quarry) on the San Mateo County Coast in the City of Pacifica, California (see Figure 3-1 and Figure 3-2). The site is bound by Rockaway Beach to the south, Mori Point Ridge to the north, the Pacific Ocean to the west, and State Route (SR) 1 to the east. The project site includes two parcels: the 47.13-acre Quarry Parcel, identified by Assessor's Parcel Number (APN) 018-150-120 and the 39.09-acre Eastern Parcel, identified by APN 018-150-150. The Quarry Parcel and the Eastern Parcel are divided by a parcel comprised of Calera Creek and a multi-use trail owned by the City of Pacifica. The Quarry Parcel is located to the west of Calera Creek and the Eastern Parcel is located to the east.

3.3 BACKGROUND

The Quarry is a side hill, open pit mine, from which limestone, greenstone, shale, and chert were harvested, crushed, screened, and sold for construction purposes. The Quarry has been active since the mid-1700s when Spanish soldiers quarried lime for the Presidio in San Francisco, California. Under ownership of the E.B. and A.L. Stone Company, the Quarry supplied limestone for the rebuilding of San Francisco after the 1906 earthquake.

From 1907-1920, the Ocean Shore Railroad ran through the site on its way to San Francisco. Extensive blasting was used in support of the mining in the 1920s and 1930s until blasting was halted by court order. By the 1970s, mining declined as the demand for limestone decreased, and the last commercial operator, Quarry Products, closed the Quarry in 1987. Subsequently, the Quarry parcel was partially filled with earth taken from the Vallemar Road cut, created for the expansion of SR 1. The Eastern Parcel of the Quarry was only used for associated buildings and settling ponds, quarry roads, conveyor belts, a truck scale, and washing area, but by 1993 the uses were removed and the parcel was filled.

Figure 3-1
Regional Project Location

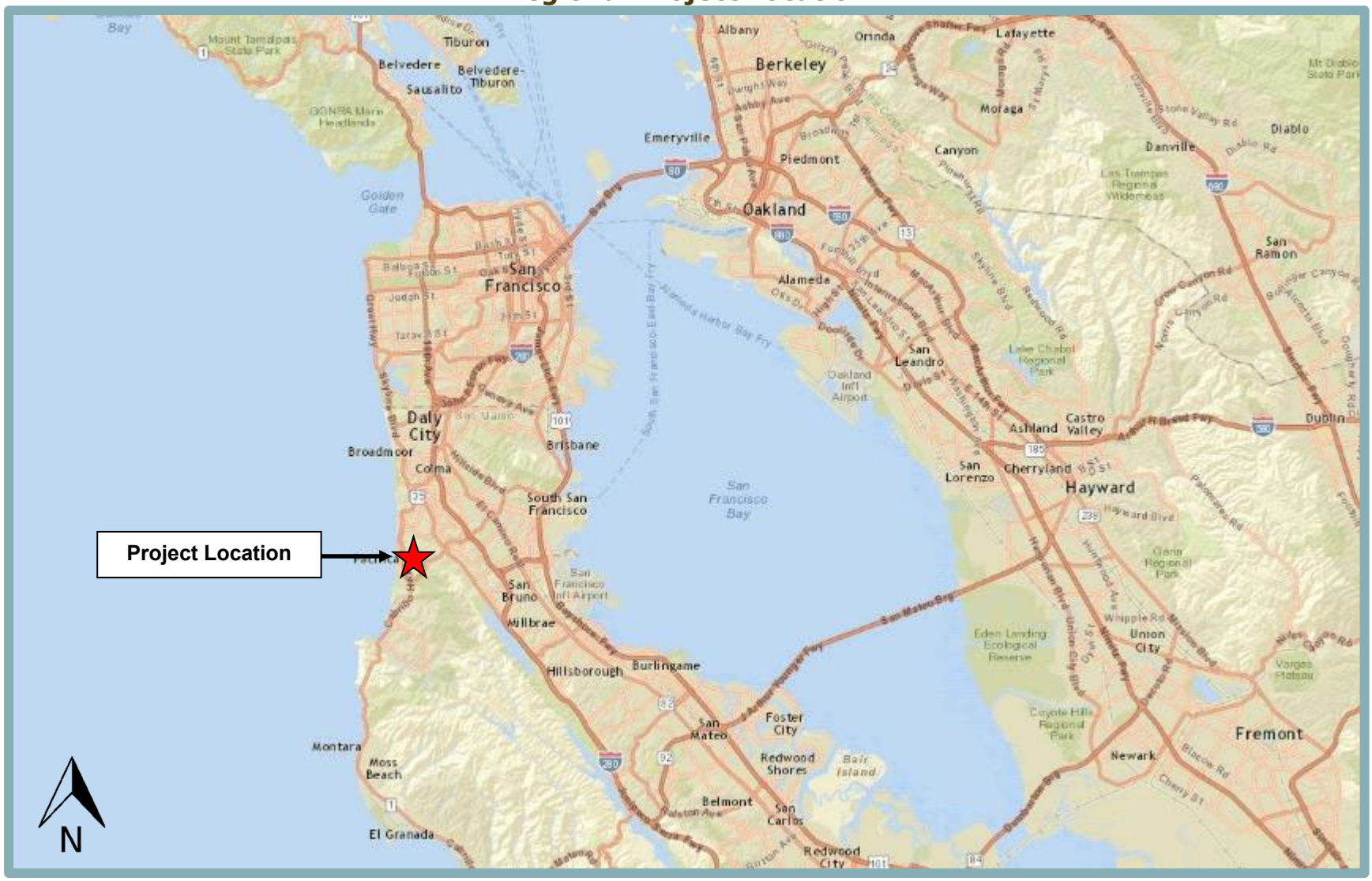


Figure 3-2
Project Location Map

Once the Quarry operations were suspended, the property was used for a variety of enterprises, including an annual rodeo. In 1996, the City received permits to construct the Calera Creek Water Recycling Plant (CCWRP) on the north edge of the property. The permits also allowed the City to relocate Calera Creek, which had been a man-made ditch running through the center of the Eastern Parcel to a new, separate parcel of 17.21 acres running between the Quarry Parcel and the Eastern Parcel. As part of the permits, the City also agreed to grade the Eastern Parcel and to fill the old channelized creek and 7+ acres of previously damaged and scattered wetlands on site.

3.4 PROJECT SETTING AND SURROUNDING LAND USES

The project site consists of slightly more than 86 acres across two separated parcels along the coast in the City of Pacifica. The two adjacent parcels are separated by Calera Creek. The 47.13-acre Quarry Parcel on the western side of Calera Creek consists of the former Rockaway Quarry and is dominated by steep slopes (elevations range from seven feet to 274 feet above mean sea level), non-native plant species and informal accessways. The Quarry Parcel can be separated into five sections: the Hilltop (the high ground on the north edge of the parcel); the East Flank (the hillside comprised mostly of old quarry debris on the east slope of the Quarry parcel); the Quarry Face (the scarp left by mining in the parcel center, consisting of limestone beds); the Quarry Pit (the bowl remaining in the bottom of the old Quarry); and the Southern Bluff (the old edge of the Quarry on the south adjacent to the ocean).

The 39.09-acre Eastern Parcel is located adjacent to and directly west of SR 1 and south of Calera Creek. The topography of the Eastern Parcel is relatively flat, with elevations ranging from approximately 20 feet to 67 feet above mean sea level. The parcel contains natural features such as wetlands and a small ephemeral ditch running through the southern portion of the site. Although the Eastern Parcel was used in support of the Quarry operations and has been significantly disturbed, the parcel has been partially reclaimed by the City of Pacifica as part of construction of the CCWRP to the north.

The City of Pacifica General Plan designates both parcels Special Area and the sites are zoned Service Commercial with voter approval requirement to rezone to residential (C-3X) with a Hillside Preservation District (HPD) overlay. The site is also located within the Coastal Zone and is in an area of deferred certification in the City of Pacifica Local Coastal Program, with the California Coastal Commission reserving authority for issuance of coastal development permits on both parcels. The City reserves coastal development permit authority for areas immediately surrounding the Quarry, including the SR 1 public right-of-way located immediately to the east of the Quarry site where physical impacts from the proposed project could occur. The City has agreed to a consolidated coastal development permit process with the project applicant and the California Coastal Commission under which the California Coastal Commission will process any and all required coastal development permits for the proposed project, including any areas within the City's coastal development permit jurisdiction. The California Coastal Commission will perform environmental review of the coastal development permit under its CEQA-equivalent process (State Public Resources Code Sections 21080.5 and 21080.9, and State CEQA Guidelines Sections 15250, 15251(f) and 15265).

The City is in the process of updating its General Plan, which may include land use designation changes for the Quarry site. However, the project includes reclamation activities to restore the Quarry to a safe, undeveloped condition with improved trails for public use. Because the project does not include additional development or a change in use of the Quarry, any future changes to

the land use designations applicable to the project site are not directly relevant to the reclamation project for purposes of the EIR.

Surrounding existing land uses for the Quarry Parcel and Eastern Parcel include Mori Point Ridge (part of the Golden Gate National Recreation Area) and the CCWRP to the north, commercial businesses and single-family residential homes to the east across SR 1, commercial businesses and single-family residential homes in Rockaway Beach to the south, and the Pacific Ocean to the west, and a City-owned multi-use trail located between the Quarry Parcel and the Eastern Parcel.

3.5 PROJECT OBJECTIVES

The project applicant has indicated that the purpose of the proposed project is to restore the mined lands to a condition that is readily adaptable to alternate land uses in accordance with the City of Pacifica General Plan. The project applicant has identified the following specific objectives for the proposed project:

1. Protect Public Health and Safety: Create safe slopes in place of existing unsafe conditions in order to minimize potential danger to public health and safety.

2. Minimize Grading: Minimize grading to the maximum extent practicable in a manner that is consistent with the other objectives and maintains an average 2:1 slope on project site.

3. Safe Pedestrian and Emergency Vehicle Access: Provide for safe pedestrian and emergency vehicle access to the project site based on Reclamation Plan elevations.

4. Provide Dedicated Public Trails to Provide Safe Pedestrian Access: Establish dedicated trails that allow safe public access through the project site between the Rockaway Beach commercial district and the Mori Point segment of the Golden Gate National Recreation Area in accordance with the Coastal Act.

5. Restoration: Mitigate and restore prior physical disturbances resulting from past quarrying activity on the project site.

6. Improved Water Quality: Provide for erosion control measures, land stewardship and maintenance to reduce sediment transport from the project site into Calera Creek (which drains into the Pacific Ocean) in order to improve the creek's water quality.

7. Discourage Illegal Trespassing: Reclaim the project site in a manner that provides secure and safe public access and use in lieu of the existing homeless encampments, vagrancy and threats to the potential public use which characterize the existing conditions on the project site due to the cessation of quarrying activities.

8. Improved Scenic Corridor and Aesthetics: Restore the project site to pre-quarry conditions so that views of the Pacific Ocean are maintained in a manner supporting a future alternate use in accordance with the Surface Mining and Reclamation Act (SMARA) and the Pacifica General Plan.

9. Self-sustaining: Reclaim the property such that additional maintenance or other management activities are not required.

10. Meet All SMARA Standards: Reclaim the project site such that it meets all applicable SMARA standards after reclamation.

The project applicant indicates that for the purposes of the project objectives above, implementing a self-sustaining reclamation means enabling the restoration of mined lands in a timely manner in accordance with SMARA, while achieving the above-mentioned basic and interrelated project objectives.

3.6 PROJECT COMPONENTS

The Quarry is currently owned by Preserve at Pacifica LLC and the reclamation activities will be operated by Baylands Soil Pacifica LLC.

The SMARA of 1975, as amended, requires that the mine be reclaimed. Reclamation is the combined process by which adverse environmental effects of surface mining are minimized and mined lands are returned to a beneficial end use. Some components of reclamation include practices that control erosion and sedimentation, stabilize slopes, and avoid and repair impacts to wildlife habitat. The final step is typically topsoil replacement and revegetation with suitable plant species. Future uses may be open space, wildlife habitat, agriculture, or residential and commercial development.

The proposed project would include reclamation of the Quarry site. The majority of the reclamation activity would occur on the westernmost Quarry Parcel, with minor site improvements such as grading for access roads and through truck traffic occurring on the Eastern Parcel. The Eastern Parcel would be reclaimed to include a complex of four tiered seasonal wetlands totaling 1.55 acres and a 0.20-acre California red-legged frog (CRLF) pond. The details of the project components are discussed below.

Reclamation Plans

Reclamation of the former Quarry would be performed in accordance with Chapter 2 of Title 9 of the City of Pacifica Municipal Code. Figure 3-3 shows all five sections of the Quarry Parcel and the entire Eastern Parcel included in the Reclamation Plan. The proposed improvements within each section are discussed below.

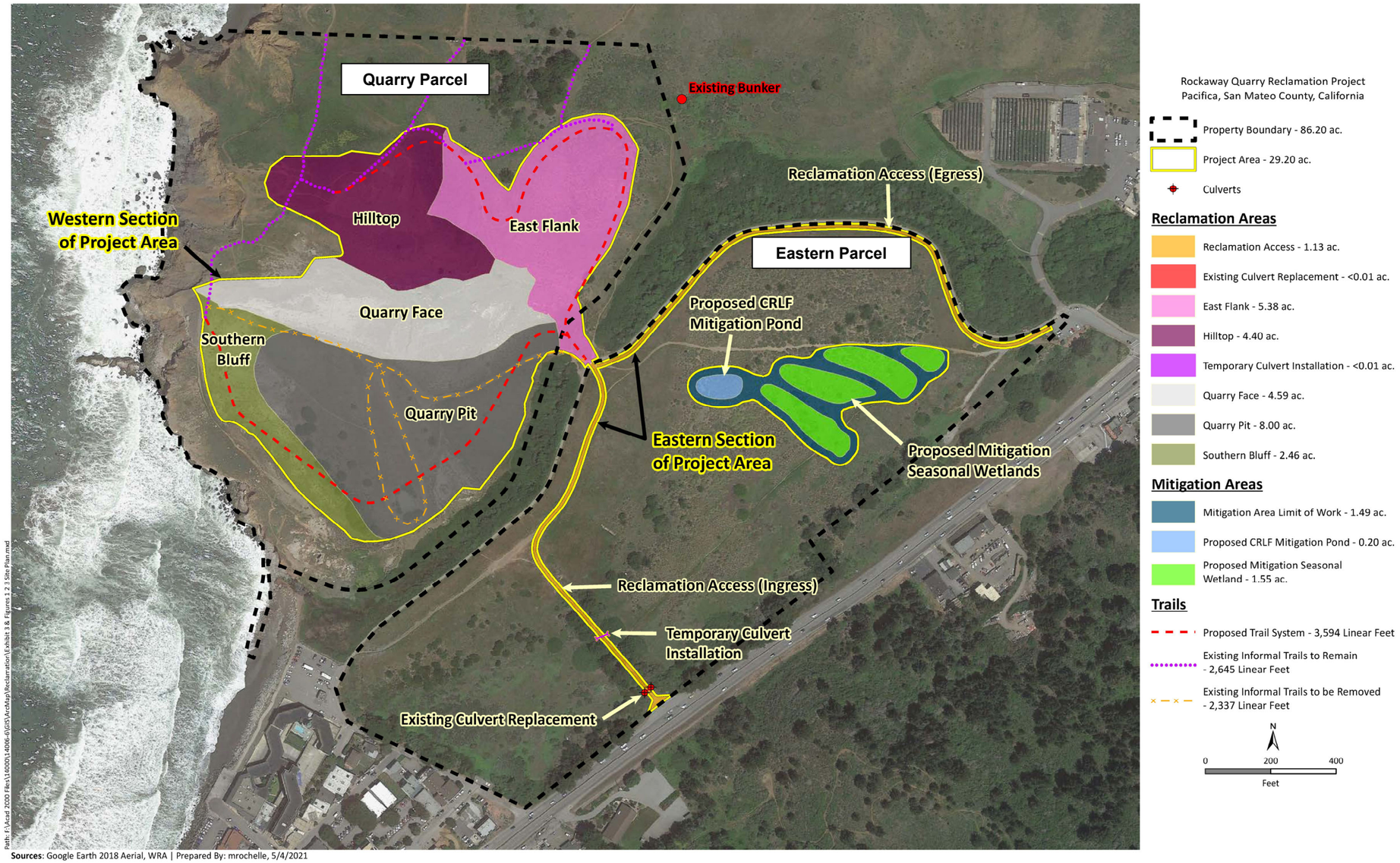
Quarry Parcel Reclamation

The following is an overview of the reclamation plans for the Quarry Parcel of the project site. It should be noted that due to the extent of grading activities associated with the parcel, the proposed project could require a Variance from HPD land coverage control standards, as set forth in Pacifica Municipal Code (PMC) Section 9-4.2257, a Rezone to the Planned Development (P-D) zoning district, pursuant to PMC Section 9-4.2256, approval of a Development Plan, pursuant to PMC Section 9-4.2203, and approval of a Specific Plan, in accordance with PMC Section 9-4.2212.

Hilltop

The Hilltop area of the Quarry Parcel currently consists of a mix of fill and cuts with mounds and hillocks of material at elevations ranging between 230 feet and 270 feet. The Reclamation Plan seeks to create a more natural, rounded appearance on the Hilltop, provide a safe accessway between the Hilltop and the ocean bluff, and even the slope on the south and southeast to provide for the transition of 2:1 slope above the preserved limestone face.

Figure 3-3
Reclaimed Site Plan



Sources: Google Earth 2018 Aerial, WRA | Prepared By: mrochelle, 5/4/2021

East Flank

Currently, the East Flank is an unevenly sloped area that includes both old quarry fills and a stable slope. The northern portion of the East Flank also includes remnant native-dominated vegetation, which would be preserved with reclamation. The Reclamation Plan would include development of a multi-use trail that curves across the southern side of the East Flank to the top of the Hilltop. The new trails would replace the existing, heavily eroded informal trails that currently cross the slope area. The existing and proposed trail system is discussed in further detail below.

Quarry Face

The Quarry Face area currently consists of a steep rock face with a geologic shear zone. However, the slope has been determined to be geologically stable and would not require grading. In accordance with the Reclamation Plan, the Quarry Face would be preserved in the current state; however, some safety features, such as hazard signs, would be implemented.

Quarry Pit

Currently, the Quarry Pit consists of an uneven mix of pits, fills, and slopes. The Reclamation Plan includes filling the area to its natural pre-mining slope as determined from historic photographs. Additionally, a multi-use trail would be constructed in order to provide access to the existing lookout located on the western end of the property.

Southern Bluff

The Southern Bluff area consists of steep-sided remnants of the old hillside transformed by quarry mining and backfilled by old quarry fills. The Reclamation Plan includes regrading of the loose soil and uneven surface on the top of the southern end of the bluff to form a stable, gently sloping surface that would also afford ocean views. The existing elevation of the Southern Bluff would be preserved at 90 to 110 feet.

Eastern Parcel Reclamation

Under existing conditions, the Eastern Parcel is a relatively flat area containing several natural features such as wetlands and an ephemeral stream. The only work that would occur on the Eastern Parcel would be wetland mitigation and temporary reclamation improvements. The wetland mitigation would consist of a CRLF Mitigation Pond and a mitigation seasonal wetland. The CRLF Mitigation Pond would be a bentonite clay-lined pond that would mitigate for impacts to an existing man-made seasonal wetland pond on the Quarry Parcel. Existing access roads and trails would be used for temporary construction access and would then be left in place and only maintained as necessary. In addition, improvements to the drainage system are proposed, including placement of a temporary culvert and ultimate replacement of the culvert located near the site entrance along SR 1. Further discussion related to the proposed mitigation seasonal wetland and the proposed drainage system improvements are provided below.

Trail Improvements

Internal access throughout the Quarry property is comprised of the following three components: the City of Pacifica's Calera Creek Multi-Purpose (CCMP) Trail, a network of well-used informal trails, and a number of lesser-used informal trails, as shown in Figure 3-4. The CCMP Trail is a paved, Americans with Disabilities Act (ADA) accessible trail that is a part of the City's Coastal Trail Network. The length of the CCMP Trail through the property is approximately 0.35 miles. The trail connects a parking lot at the western end of San Marlo Way to a parking lot at the western end of Reina Del Mar Avenue, adjacent to the CCWRP parking lot.

Figure 3-4
Existing Trails

The internal Quarry trail system is currently composed of a variety of secondary and minor informal trails that extend to Mori Point on the north end of the site, through the Quarry Pit, up the slopes of the Southern Bluff, and throughout the Eastern Parcel. Access to the Quarry trails is provided by the CCMP Trail. Most of the trail area is relatively narrow and unmaintained.

The Reclamation Plan includes several measures to improve the safety, quality, and appearance of the internal trails as shown in Figure 3-5. For example, the existing Eastern Trail would be improved to provide a more stable, safer surface for walking and a more-level slope from the Calera Creek crossing to the Hilltop area within the northwestern portion of the site. The improved Eastern Trail would connect to several existing coastal trails, which continue to Mori Point to the north of the site. Native vegetation and landscaping would also be included. In addition, a new trail, known as the Western Trail, would be constructed from the Calera Creek crossing, running to the west and then climbing along the Southern Bluff, where the trail would eventually reach existing trails leading to Mori Point. The trail would be set back from the bluff to avoid potentially erosive areas and to prevent potential hazards. Both trails would be 17 feet wide and constructed with 12 inches of aggregate and four inches of decomposed granite. Additionally, three hazard signs warning of steep slopes would be placed along the coastal bluffs. The placement of the signs would be determined once the major ground-disturbing activities of the Reclamation Plan are complete.

The existing trails other than the Eastern Trail within the Eastern Parcel (shown in Figure 3-4) are currently in good condition and would be maintained as necessary. Access to the trails on the Eastern Parcel is provided from Rockaway Beach through the existing CCMP Trail. The proposed trails after reclamation can be seen in Figure 3-5.

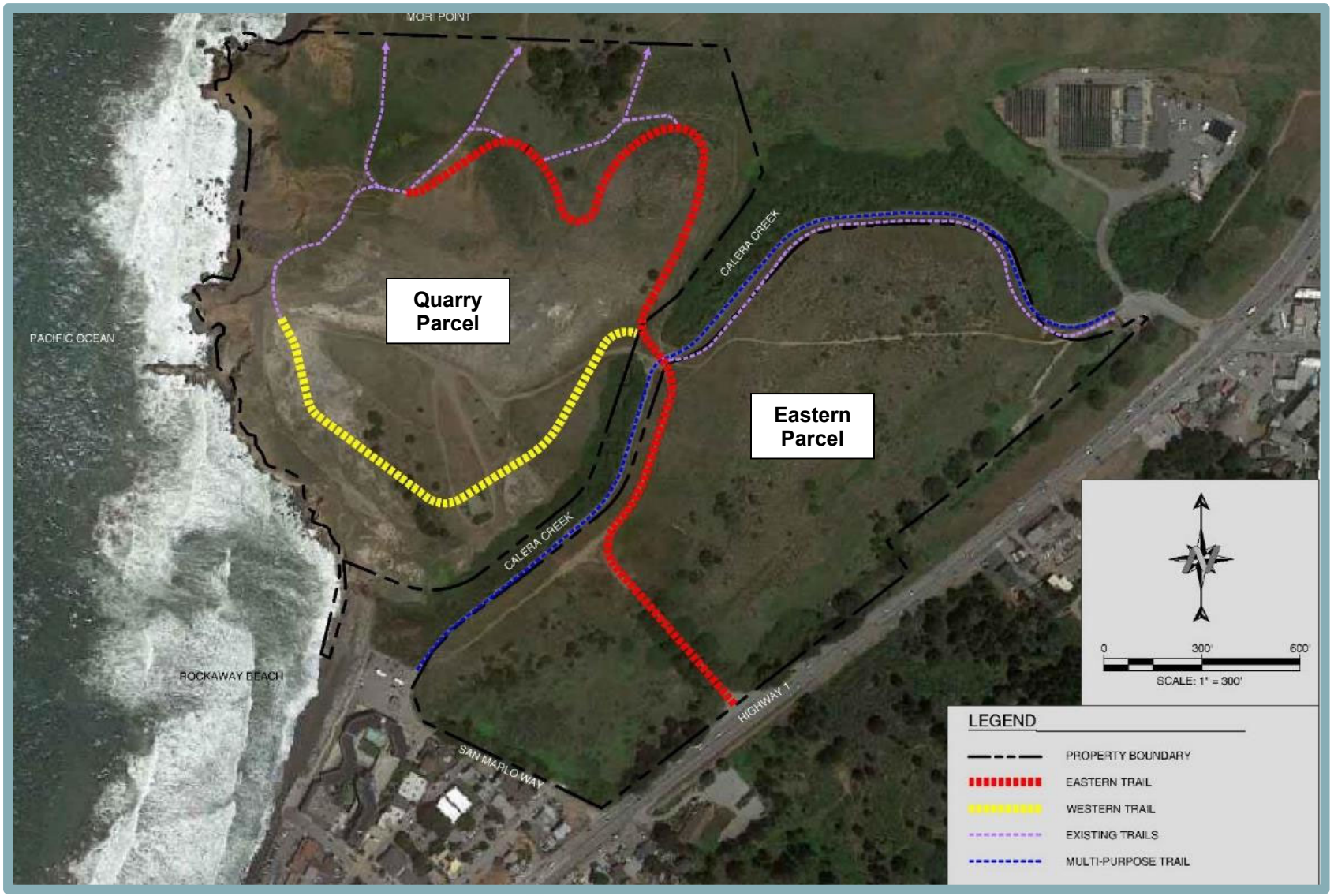
Throughout reclamation, which has been projected to require four years to implement, the reclamation activities could involve closure of on-site trails for periods of time. Trails within the project's grading footprint would be closed throughout reclamation; however, the Eastern Trail laying outside the grading footprint within the Quarry Parcel would remain open. The movement of reclamation equipment and materials between the Quarry Parcel and Eastern Parcel would cause temporary closure of the CCMP Trail from the CCWRP parking lot to the Calera Creek crossing. The closure would mostly occur during the initial three to four days and the last three to four days of reclamation work. The closure would be done in order to transport equipment to the Quarry Parcel.

Closures would be minimized and constrained to low-use times to the greatest extent feasible. For the duration of reclamation activities, there would be trucks crossing at the Calera Creek crossing between the Eastern Parcel and Quarry Parcel. A flagman would be posted at the crossing to ensure pedestrians could cross safely during reclamation activities. It should be noted that in addition to the CCMP Trail, various portions of the Eastern Parcel trails would also have occasional closures to accommodate reclamation equipment access.

Wetlands

The majority of the project site contains uplands, composed primarily of grasslands, dominated by invasive upland species and exposed rock slopes.

Figure 3-5
New Reclamation Trails



In total, the project site contains approximately 2.02 acres of features that could potentially be considered within the jurisdiction of the U.S. Army Corps of Engineers (USACE) or the San Francisco Bay Regional Water Quality Control Board (RWQCB), including 0.25 acres of seasonal wetlands in the Quarry Parcel, 0.86 acres of scrub-shrub wetlands in the Eastern Parcel, 0.88 acres of emergent wetlands in the Eastern Parcel, and 0.03 acres of ephemeral ditches in the Eastern Parcel. Of the total 2.02 acres, approximately 0.25 acres of jurisdictional wetlands would be impacted by grading (see Figure 3-6).

The wetlands on the Quarry Parcel would be graded and filled as part of the reclamation activities. In order to mitigate for the loss of wetlands on the Quarry Parcel, 1.75 acres of mitigation seasonal wetlands would be created on the Eastern Parcel, as shown in Figure 3-3, to account for a 4:1 mitigation-to-impact ratio required by the California Coastal Commission, based on the project applicant's discussions with that agency (in excess of the typical 2:1 mitigation-to-impact ratio typically required by USACE). The newly created wetlands would include a complex of four tiered seasonal wetlands totaling 1.55 acres in an upland portion of the Eastern Parcel. In addition, a 0.20-acre bentonite clay-lined pond would be constructed to the west of the four seasonal wetlands to provide high-quality breeding habitat for California red-legged frog and San Francisco garter snake. The constructed wetlands would restore the ecological function and values of wetlands on the site, as the wetlands would provide a large, contiguous source of on-site hydrology and wetland habitat.

Revegetation

The current vegetation on the project site consists primarily of the invasive shrub, pampas grass. However, the northern portion of the site is dominated by native vegetation associations. The Hilltop area, for example, is dominated by pampas grass but also includes the native coyote bush. The bottom of the East Flank is also dominated by pampas grass while the upper slope contains a variety of native coastal shrubs. The Quarry Face is predominately covered in non-native grasses, as is the Southern Bluff.

The project includes the revegetation of the project site to restore and blend native vegetation into the surrounding landscape, including the reclamation of disturbed lands to a self-sustaining community of native species. After regrading, revegetation would be designed to meet the post-extractive and unmanaged land use goals of the Revegetation Plan and stabilize the surface against the effects of long-term erosion. The planned end use of the area is open space, pursuant to the Reclamation Plan. As a result, revegetation would be intended to visually integrate with the surrounding open space areas and provide for permanent soil protection. All proposed revegetation would be accomplished through hydroseeding, which would take place between October 15 and November 15 with an appropriate tackifier, such as wood fiber mulch. The Revegetation Plan is shown in Figure 3-7.

Additionally, as discussed further in Chapter 4.11, Utilities and Service Systems, of this EIR, as part of the Revegetation Plan, revegetation activities would not require installation of any permanent irrigation measures, as rains during the wet season are anticipated to provide sufficient hydrology. However, in the event the wet season is not able to provide the requisite amount of rainfall to satisfactorily complete the Revegetation Plan, an on-site water truck could be used to aid in seed germination and proliferation.

Figure 3-6
Jurisdictional Wetland Delineation

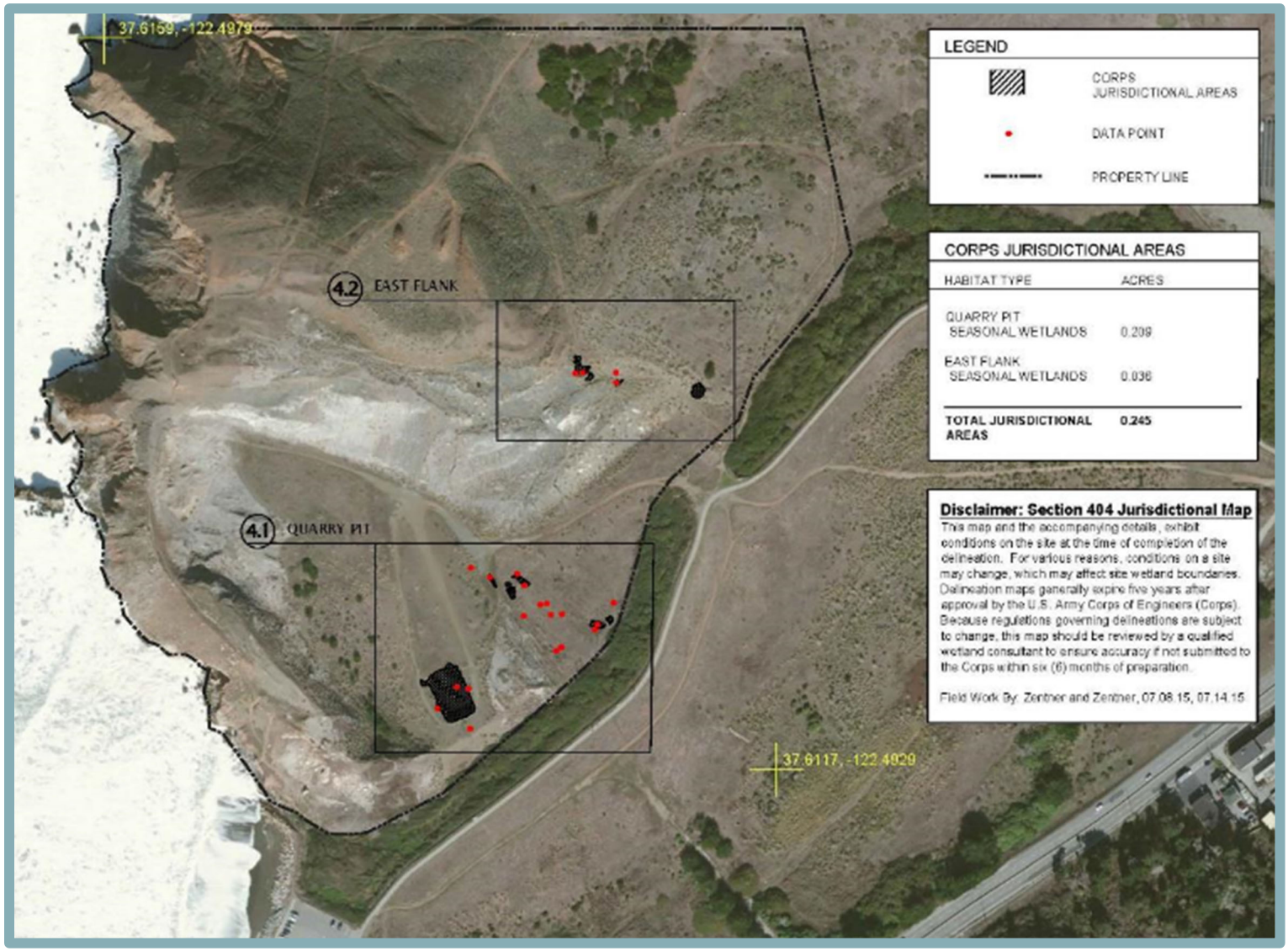


Figure 3-7
Revegetation Map

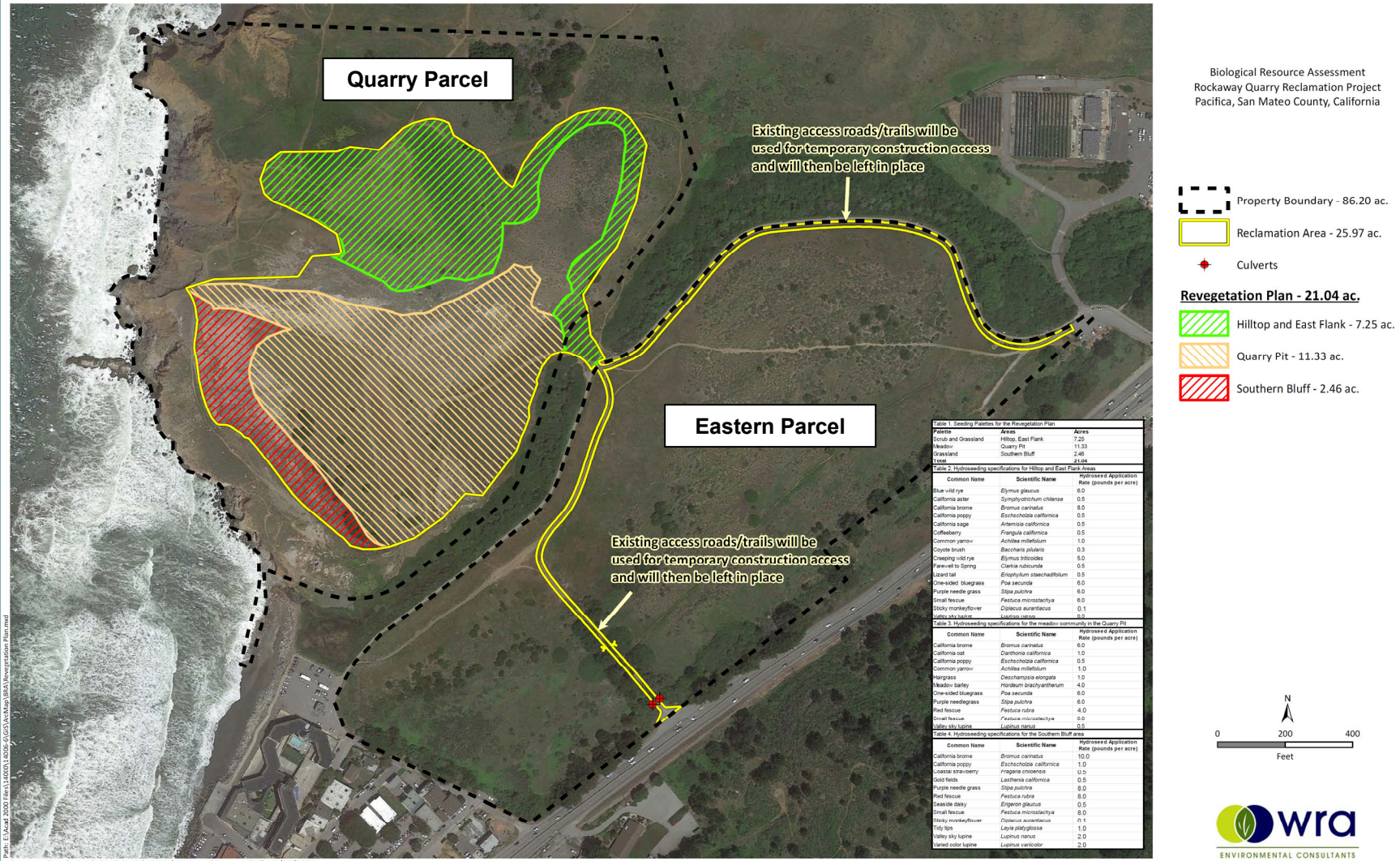


Table 1. Seeding Palettes for the Revegetation Plan

Palette	Areas	Acres
Scrub and Grassland	Hilltop, East Flank	7.25
Meadow	Quarry Pit	11.33
Grassland	Southern Bluff	2.46
Total		21.04

Table 2. Hydroseeding specifications for Hilltop and East Flank Areas

Common Name	Scientific Name	Hydroseed Application Rate (pounds per acre)
Blue wild rye	*Elymus glaucus*	6.0
California aster	*Symphyotrichum chilense*	0.5
California brome	*Bromus carinatus*	8.0
California poppy	*Eschscholzia californica*	0.5
California sage	*Artemisia californica*	0.5
Coffeeberry	*Frangula californica*	0.5
Common yarrow	*Achillea millefolium*	1.0
Coyote brush	*Baccharis pilularis*	0.3
Creeping wild rye	*Elymus triticoides*	5.0
Farewell to Spring	*Clarkia rubicunda*	0.5
Lizard tail	*Eriophyllum staechadifolium*	0.5
One-sided bluegrass	*Poa secunda*	6.0
Purple needle grass	*Stipa pulchra*	6.0
Small fescue	*Festuca microstachya*	6.0
Sticky monkeyflower	*Diplacus aurantiacus*	0.1
Valley sky lupine	*Lupinus nanus*	0.5

Table 3. Hydroseeding specifications for the meadow community in the Quarry Pit

Common Name	Scientific Name	Hydroseed Application Rate (pounds per acre)
California brome	*Bromus carinatus*	6.0
California oat	*Danthonia californica*	1.0
California poppy	*Eschscholzia californica*	0.5
Common yarrow	*Achillea millefolium*	1.0
Hairgrass	*Deschampsia elongata*	1.0
Meadow barley	*Hordeum brachyantherum*	4.0
One-sided bluegrass	*Poa secunda*	6.0
Purple needlegrass	*Stipa pulchra*	6.0
Red fescue	*Festuca rubra*	4.0
Small fescue	*Festuca microstachya*	6.0
Valley sky lupine	*Lupinus nanus*	0.5

Table 4. Hydroseeding specifications for the Southern Bluff area

Common Name	Scientific Name	Hydroseed Application Rate (pounds per acre)
California brome	*Bromus carinatus*	10.0
California poppy	*Eschscholzia californica*	1.0
Coastal strawberry	*Fragaria chiloensis*	0.5
Gold fields	*Lasthenia californica*	0.5
Purple needle grass	*Stipa pulchra*	8.0
Red fescue	*Festuca rubra*	8.0
Seaside daisy	*Erigeron glaucus*	0.5
Small fescue	*Festuca microstachya*	8.0
Sticky monkeyflower	*Diplacus aurantiacus*	0.1
Tidy tips	*Layia platyglossa*	1.0
Valley sky lupine	*Lupinus nanus*	2.0
Varied color lupine	*Lupinus variicolor*	2.0

Drainage

The proposed project includes a drainage plan, which would ensure that drainage after reclamation is conveyed through a series of concrete ditches, vegetated swales, and pipes to the ultimate discharge point of Calera Creek. Further details regarding the drainage plan for the Quarry Parcel and the Eastern Parcel are provided below.

Quarry Parcel

The proposed drainage plan for the Quarry Parcel is described in further detail below.

Hilltop

The upper section of the Hilltop would be graded to a rounded hillock that drains in a southerly direction. Two drainage terraces with a concrete ditch would be built along the graded slope on a southern face of the Hilltop to collect runoff. Both the upper six-foot wide drainage terrace and the lower 12-foot wide drainage terrace would be bordered by a two- to three-foot wide, v-shaped concrete ditch that would be built along the graded slope on the southern face of the Hilltop. The two terraces would run parallel to each other, with the lower terrace approximately 30 feet below the upper terrace. An earthen berm would be installed at the top of the slope. Concrete ditches on the perimeter of the terraces would capture runoff from the hillside below the Hilltop. The ditches would convey flows into a sub-surface storm drain system that would follow the existing CCMP Trail into a 10-foot-deep sedimentation junction structure with a 24-inch-wide opening (covered by a manhole grate), located where the CCMP Trail would cross Calera Creek.

East Flank

The East Flank of the project site would be left in the current condition with the exception of a concrete ditch along the existing CCMP Trail and a four-foot wide vegetated swale also along the CCMP Trail. The ditch would have inflows to the storm drain system at various intervals. The storm drain would convey flows down the CCMP Trail and into the sedimentation junction structure referenced above.

Quarry Face and Pit

The Quarry Face and Pit would be filled in with a slope that would mimic natural conditions, and drainage would travel through sheet flow down the hillside to the concrete ditch located alongside the proposed multi-use Western Trail. Additionally, a graded terrace with a concrete ditch would be constructed to prevent direct runoff into Calera Creek. Both the runoff from the hillside and the runoff collected in the terrace would be conveyed to the aforementioned sedimentation junction structure.

Southern Bluff

Runoff associated with the Southern Bluff would drain via sheet flow to a newly constructed four-foot-wide vegetated swale that would be located along the base of the bluff. From there, runoff flows would tie into an existing 24-inch corrugated metal pipe (protected in place) that is located in the southwestern portion of the Quarry Parcel and then to Calera Creek.

Eastern Parcel

The Eastern Parcel would continue to drain to the culverts located at the southwest corner of the property, where stormwater ultimately discharges to Calera Creek. In addition, some rainwater would sheet flow down existing slopes and would pond in the proposed mitigation wetlands. To avoid an impact to existing site drainage, two temporary 24-inch culverts would be used to convey

drainage from one side of the project ingress route to the other. Near SR 1 and along the ingress route in the Eastern Parcel, a 12-inch culvert that is not currently functional would be replaced by a 12-inch reinforced concrete pipe culvert. The culvert replacement would improve the functionality of the existing drainage ditch that flows below the ingress route.

Grading Activities

The grading plan is meant to respond to the site's geotechnical issues and create safe slopes, safe drainage, safe access, or other conditions that conform to surrounding topography. The slope stability would be established to reflect the requirements set by the State Division of Mine Reclamation, which would require that slopes steeper than 2:1 be stabilized – a standard requirement unless the slope is an exposed rock face with a relatively high integrity.

The Reclamation Plan includes cut slopes in only the following two areas: the south slope of the Hilltop area, where the greenstone layer at the shear zone and above is being cut to a 2:1 slope, to provide safe pedestrian access and a more natural form; and a small area at the south end of the Southern Bluff where an area of unstable dumped fill is removed, that also would provide improved pedestrian access and views. Fill would occur on the inside of the Southern Bluff, where existing slopes are very steep. Where the fill is relatively minimal (the southern end), a 2:1 slope is proposed. Where the fill is more extensive (the northern end), a 5:1 slope is proposed. Fill would also occur within the Quarry Pit, which would be filled in and restored to natural conditions. Details regarding the phasing and amount of fill is provided below under Phasing Plan.

Soil hauling to grade the Quarry site would require approximately 970,000 cubic yards of imported fill. Fill material generated for transportation and re-use in the reclamation project will be sourced from San Francisco, San Mateo, and Santa Clara Counties only. The soil acceptance criteria and environmental screening process are detailed in the Soil Management Plan prepared for the proposed project (included as Appendix C to this EIR).[1] Additionally, the project's Submittal Guidelines for Imported Soil set forth the environmental screening levels and other testing requirements that would apply to all soil imported as part of the project (included as Appendix D to this EIR).[2]

Based on the amount of fill, the project is anticipated to result in an average of approximately 161 truck trips per day plus 10 employee trips per day, including 17 truck trips during the AM and PM hours. It should be noted that that haul truck trips would not be net new trips, but instead would be the same number of existing haul truck trips that are redirected from their current destinations at other existing soil disposal sites. Specifically, soil haul trucks currently take or deliver soil to six disposal sites across the Bay Area region. Delivery to the project site would result in a reduction in overall vehicle miles travelled, as discussed in greater detail in Chapter 4.10, Transportation, of this EIR.

Trucks hauling fill to the site would come from the north and access the project site from southbound SR 1 through the Old Quarry Road connection, an existing dirt access road located approximately one-third mile south of Reina Del Mar Avenue. Vehicle egress from the site would be accommodated at the existing traffic signal at SR 1/Reina Del Mar Avenue. Trucks would turn left onto SR 1 and return to the north via Interstate 280. Trucks would not use City streets at any time.

---

1 Baylands Soils Pacifica, LLC. *Soil Management Plan for The Preserve at Pacifica, LLC Amended Reclamation Plan at the Pacifica Quarry, Pacifica, California*. September 2021.

2 Baylands Soil Pacifica, LLC. *Submittal Guidelines for Imported Soil*. 2021.

Dust Control Plan

The proposed project would include a Dust Control Plan to minimize dust nuisance during site disturbance activities, which would be accomplished primarily through use of an on-site water truck that would potentially be used to also assist in revegetation of the project site. On-site dust control activities would involve the spraying of water on all exposed earth surfaces during site clearing, grading, earthmoving, and other site-preparation activities during implementation of the Reclamation Plan. The Dust Control Plan currently the use of a liquid vinyl copolymer dust palliative manufactured by Soilworks (Gorilla-Snot) that binds to soil and sediment to reduce the ability of particles to become airborne. The use of Gorilla-Snot would additionally reduce the number of off-site water trucks necessary to implement the Dust Control Plan. Dust control would be conducted in accordance with the California Department of Transportation (Caltrans) 2018 Standard Plans and Standard Specifications and all applicable provisions of the Pacifica Municipal Code, including those set forth in Chapter 12 – Storm Water Management and Discharge Control.

The Dust Control Plan is anticipated to also use an off-site water truck, which would feature a larger capacity relative to the on-site water truck and would replenish a high-volume frac tank once per day. The frac tank would be situated near the Calera Creek crossing and would allow for the on-site water truck to refill at the crossing, thereby, reducing the number of off-site truck trips necessary for water. The off-site water truck would fill up at an appropriate location in the project vicinity at regularly scheduled intervals.

The off-site water truck would access the frac tank by way of the project ingress from southbound SR 1 (see Figure 3-3). The ingress would proceed through the Eastern Parcel along Old Quarry Road until reaching the Calera Creek crossing. The off-site water truck would exit the Eastern Parcel, as needed, through the project egress, at the existing traffic signal at the SR 1/Reina Del Mar Avenue intersection.

Tree Removal

Heritage trees are defined by the City of Pacifica as trees, other than eucalyptus trees, that have a circumference of 50 inches or more as measured at 24 inches above the natural grade, or a tree or grove of trees, including eucalyptus, designated by resolution of the Council to be of special historical, environmental, or aesthetic value. (Pacifica Municipal Code Section 4-12.02(c)). The proposed reclamation work would require removal of 38 trees in the Quarry Parcel, which are located in the parcel's areas of disturbance, including 16 heritage trees (15 Monterey Cypress and one Monterey pine) primarily in the Southern Bluff and the Quarry Pit (see Figure 3-8). The proposed project does not include any replacement plantings.

Phasing Plan

The proposed phasing plan is presented in Table 3-1 and described in further detail below. Actual phasing is dependent upon approvals by other regulatory agencies following approval by the City of Pacifica and cannot be stated with certainty in this EIR.

Figure 3-8
Heritage Tree Survey

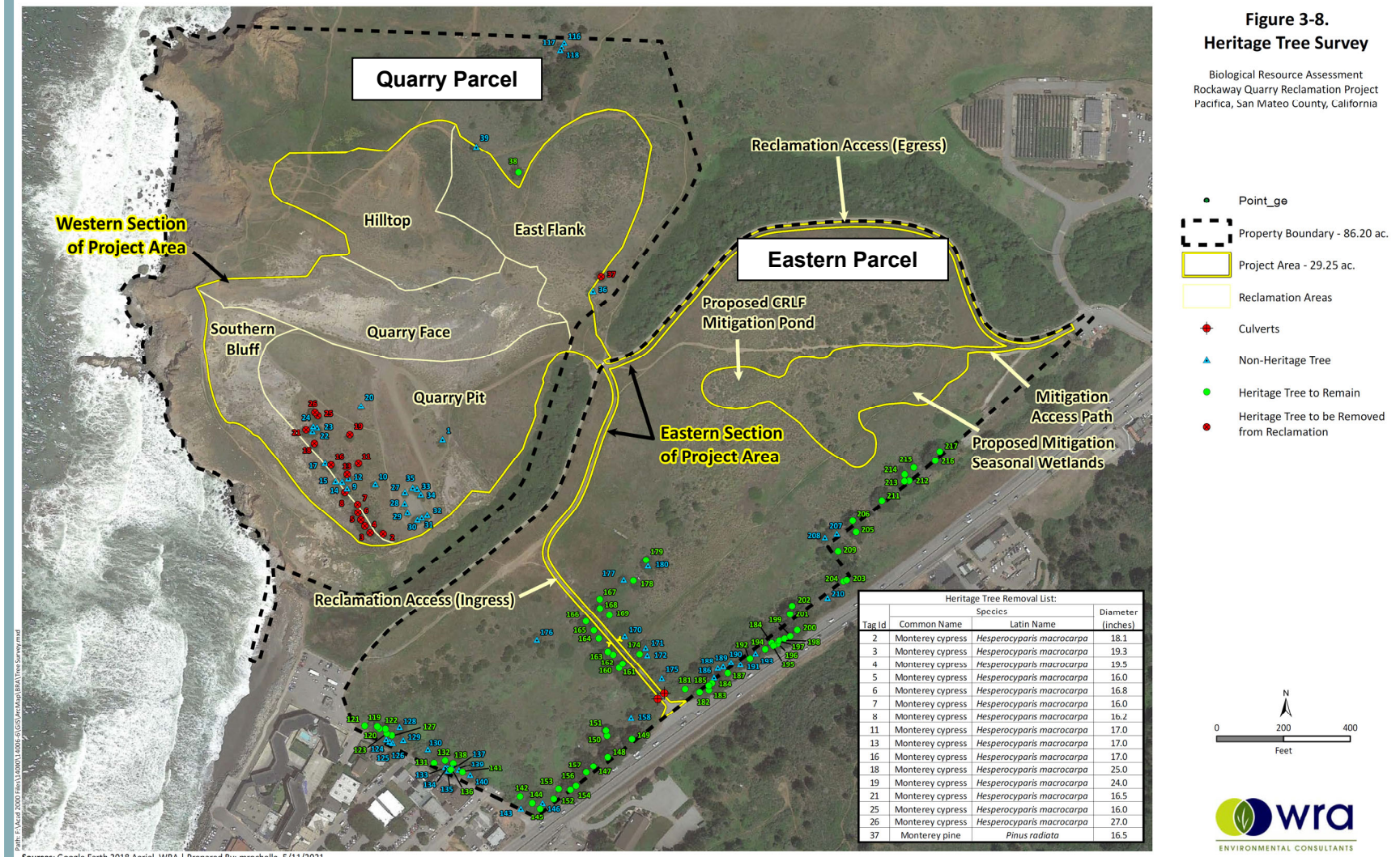


Table 3-1
Proposed Phasing Plan

Phase	Benchmark	Approximate Time Frame
1A	250,000 cubic yards (CY) of soil imported and deposited on site in accordance with Reclamation Plan	12 months after approval of the Reclamation Plan by the City
1B	500,000 CY of soil imported and deposited on site in accordance with Reclamation Plan	24 months after approval of the Reclamation Plan by the City
1C	750,000 CY of soil imported and deposited on site in accordance with Reclamation Plan	36 months after approval of the Reclamation Plan by the City
1D	970,000 CY of soil imported and deposited on site in accordance with Reclamation Plan	48 months after approval of the Reclamation Plan by the City
End Use	Grading of the site completed in accordance with the Reclamation Plan	48 months after approval of the Reclamation Plan by the City
	Revegetation of the site completed in accordance with the Reclamation Plan	48 months after approval of the Reclamation Plan by the City
	All of the work is completed in accordance with the Reclamation Plan	48 months after approval of the Reclamation Plan by the City

Phase 1 – Quarry Parcel

Work would be completed on the Quarry Parcel in four sub-phases: Phase 1A, 1B, 1C and 1D, which are described in further detail below.

Phase 1A

The initial Phase 1A would include site preparation and site clearing of the Quarry Parcel and Calera Creek culvert crossing. Work would also include placement of 250,000 CY of imported fill in the areas at the Calera Creek culvert crossing and the Quarry Pit; however, it should be noted that placement of fill within Calera Creek would not occur.

Phase 1B

Phase 1B would include excavation of 85,000 CY of cut material at the top of the Quarry Face, East Flank, and Quarry Pit for rough grading of the access path/multi-use trail and stabilization of the top of the hillside. This phase would also include placement of an additional 250,000 CY of imported fill in the Quarry Pit and East Flank to raise the grade and generate the rough grades for the access path/multi-use trail along the East Flank up to the top of the Quarry Face.

Phase 1C

Phase 1C would include placement of an additional 250,000 CY of imported fill in the Quarry Pit. Additional work in Phase 1C would include construction of the concrete lined drainage ditches, swales, storm drain lines, and drop inlets along the access path/multi-use trail and Hilltop located on the upper Quarry Face and East Flank. Phase 1C would also include the sedimentation junction structure and culvert tie-in located at the Calera Creek crossing.

Phase 1D

The final phase on the Quarry Parcel would include placement of an additional 220,000 CY of imported fill at the Quarry Pit and rough grading for the access path/multi-use trail within the Quarry Pit area. Phase 1D would also include construction of the swales, concrete lined drainage

ditches, storm drain lines, drop inlets and the junction structure located in the Quarry Pit area. Additional work would include fine grading and construction of the structural section of the full length of the multi-use trail on the Quarry Parcel.

End Use and Operations

The end use for the reclamation work would be open land, which refers to an open space condition without unsafe or hazardous site conditions. Site operations would include use of the new or rehabilitated trails on the Quarry Parcel and Eastern Parcel. Future mining of the former Quarry parcel would not occur.

3.7 REQUESTED DISCRETIONARY ACTIONS

Implementation of the proposed project would require the following discretionary actions by the City of Pacifica:

- Certification and adoption of the Quarry Reclamation Plan EIR and Mitigation Monitoring and Reporting Program;
- Approval of a Quarry Use Permit pursuant to PMC Section 9-2.04;
- Approval of a Variance from the HPD land coverage control standard in PMC Section 9-4.2257, pursuant to PMC Section 9-4.3404;
- Rezoning to the P-D (Planned Development) zoning district pursuant to PMC Section 9-4.2256;
- Approval of a Development Plan pursuant to PMC Section 9-4.2203;
- Approval of a Specific Plan pursuant to PMC Section 9-4.2212;
- Approval of a Heritage Tree removal authorization for removal of 16 heritage trees, pursuant to PMC Section 4-12.05; and
- Approval of a logging operation pursuant to Ordinance Nos. 636-C.S. and 673-C.S.

The proposed project would require the following discretionary approvals from other agencies:

- Coastal Development Permit (California Coastal Commission);
- Clean Water Act Section 404 Permit (USACE);
- Section 7 Biological Opinion (U.S. Fish and Wildlife Service);
- Clean Water Act Section 401 Water Quality Certification/Waiver or Issuance of Waste Discharge Requirements (San Francisco Bay RWQCB); and
- SMARA Compliance Review (California Department of Conservation, Division of Mine Reclamation).

4.0 Introduction to the Analysis

4.0 INTRODUCTION TO THE ANALYSIS

4.0.1 INTRODUCTION

The technical chapters of this EIR include the analysis of the potential impacts of buildout of the proposed project on a range of environmental issue areas. Chapters 4.1 through 4.11 describe the focus of the analysis, references and other data sources for the analysis, the environmental setting related to each specific issue area, project-specific impacts and mitigation measures, and the cumulative impacts of the project for each issue area. The format of each of the technical chapters is described at the end of this chapter.

4.0.2 DETERMINATION OF SIGNIFICANCE

Under CEQA, a significant effect is defined as a substantial or potentially substantial adverse change in the environment (Public Resources Code Section 21068). The CEQA Guidelines require that the determination of significance be based on scientific and factual data. The specific criteria for determining the significance of a particular impact are identified within in each technical chapter, and are consistent with significance criteria set forth in the CEQA Guidelines or as based on the professional judgment of the EIR preparers.

4.0.3 ENVIRONMENTAL ISSUES ADDRESSED IN THIS EIR

The EIR provides the analysis necessary to address the environmental impacts of the proposed project. The following environmental issues are addressed in separate technical chapters of this EIR:

- Aesthetics
- Air Quality and GHG Emissions
- Biological Resources
- Cultural and Tribal Cultural Resources
- Geology and Soils/Mineral Resources
- Hydrology and Water Quality
- Land Use and Planning
- Noise
- Parks and Recreation
- Transportation
- Utilities and Service Systems

In addition to the foregoing resource areas, Chapter 4.12, Effects Not Found to be Significant, has been prepared to present information regarding resource areas, and specific issue areas within the Geology and Soils/Mineral Resources and Noise resources areas, that the project has been found not to have the potential to affect. Chapter 5 of the EIR presents a discussion and comprehensive list of all significant and unavoidable impacts identified in Chapters 4.1 through 4.11.

4.0.4 CHAPTER FORMAT

Each technical chapter addressing a specific environmental issue begins with an **introduction** describing the purpose of the chapter. The introduction is followed by a description of the project's **existing environmental setting** pertaining to that particular environmental issue. The setting description is followed by the **regulatory context** and the **impacts and mitigation measures** discussion. The discussion contains the **standards of significance**, followed by the **method of analysis**. The standards of significance section includes references to the specific Initial Study checklist questions consistent with Appendix G of the CEQA Guidelines. The **impacts and mitigation measures** discussion includes impact statements prefaced by a number in bold-faced type. An explanation of each impact and an analysis of the impact's significance follow each impact statement (see below), followed by all mitigation measures pertinent to each individual impact. The degree of relief provided by identified mitigation measures is also evaluated. An example of the format is shown below.

4.x-1 Statement of Impact

Discussion of impact for the proposed project in paragraph format.

Statement of ***level of significance*** of impact without implementation of mitigation is included at the end of each impact discussion. The following levels of significance without implementation of mitigation will be utilized in the EIR: no impact, less than significant, and significant. If an impact is determined to be significant, mitigation will be included in order to reduce the specific impact to the maximum extent feasible. Impacts that cannot be reduced to a less-than-significant level with implementation of all feasible mitigation would be considered to remain significant and unavoidable.

Mitigation Measure(s)
Statement of *level of significance* of impact with implementation of mitigation is included immediately preceding the mitigation measures.

4.x-1(a) *Required mitigation measure presented in italics.*

4.x-1(b) *Additional required mitigation measure(s) presented in italics and listed in consecutive order.*

4.1 Aesthetics

4.1 AESTHETICS

4.1.1 INTRODUCTION

The Aesthetics chapter of the EIR describes existing aesthetic resources in the area of the proposed project and the broader region, and evaluates the potential aesthetic impacts of the project. CEQA describes the concept of aesthetic resources in terms of scenic vistas, scenic resources (such as trees, rock outcroppings, and historic buildings within a State scenic highway), and the existing visual character or quality of the project area. In addition, pursuant to CEQA Guidelines, this chapter describes potential impacts related to light and glare. The following analysis is based on information drawn from the City of Pacifica General Plan.[1]

4.1.2 EXISTING ENVIRONMENTAL SETTING

The following setting information provides an overview of the existing conditions of visual resources in the vicinity of the project site, which is located at the Rockaway Quarry on the San Mateo County Coast in the City of Pacifica, California.

Visual Character of the Region

The project site is located in the central portion of the City of Pacifica. The City of Pacifica is situated with the Pacific Ocean to the west, the crest of Sweeney Ridge to the East, and San Pedro Mountain to the south. Currently, the visual character of the City is defined by residential and commercial development, juxtaposed with parks and undeveloped land, all set against the backdrop of the Pacific Ocean. Regional topography consists of sloping, open ridge lines.

State Scenic Highways

According to the California Department of Transportation (Caltrans) map of designated and eligible scenic routes under the California Scenic Highway Program, officially-designated State scenic highways do not exist within the vicinity of the project site or in the City of Pacifica.[2] However, State Route (SR) 1 and Sharp Park Road have been identified by the State and County as eligible for scenic highway status.

Visual Character of the Project Site and Surrounding Area

The project site consists of 86 acres across two separated parcels along the coast in the City of Pacifica: the Quarry Parcel and the Eastern Parcel. The two adjacent parcels are separated by Calera Creek. The 47.13-acre Quarry Parcel on the western side of Calera Creek consists of the former Rockaway Quarry and is dominated by steep slopes, non-native plant species, and informal accessways. The parcel contains natural features such as wetlands and a small ephemeral ditch running through the southern portion of the parcel. Although the Eastern Parcel was used in support of the quarry operations and has been significantly disturbed, the parcel has been partially reclaimed by the City of Pacifica as part of construction of the Calera Creek Water Recycling Plant (CCWRP) to the north.

---

1 City of Pacifica. *City of Pacifica General Plan.* Adopted 1980.

2 Department of Transportation. *California Scenic Highway System Lists.* Available at: https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways. Accessed July 2021.

Figure 4.1-2 through Figure 4.1-7 below provide representative views of the project site from the adjacent public access points, including roadways in the vicinity of the project site and public trails along the project site boundaries (see Figure 4.1-1). Two of the representative views, provided by Figure 4.1-4 and Figure 4.1-5, show views from the western portions of the Quarry Parcel toward the project site. This grouping of photos does not comprise an exhaustive collection of every view that includes the project site from all vantage points, but is meant to show representative views toward the site from the most prominent public areas.

Surrounding existing land uses in the vicinity of the project site include Mori Point Ridge to the north, the CCWRP to the northeast, commercial businesses and single-family residential homes to the east across SR 1, commercial businesses, multi-family residences, and Rockaway Beach to the south, and the Pacific Ocean to the west. Generally, areas to the east and south of the site are primarily characterized by existing residential and commercial development, while views to the north and west across the site consist of natural, undeveloped spaces. The nearest residence to the east of the site is approximately 125 feet from the site boundary, and the nearest home to the north is located approximately 615 feet from the site boundary. Our Savior's Lutheran Church is located to the southeast of the site, across SR 1. Further beyond Mori Point Ridge to the north are existing single-family homes and the Sharp Park Golf Course in the West Fairway Park neighborhood.

Viewer Types

Viewer types in the vicinity that have views of the project site include the following:

- *Motorists* along SR 1 have existing views of the project site while driving past the site.
- *Pedestrians and bicyclists* along SR 1 and the Calera Creek Multi-Purpose (CCMP) Trail have existing views of the site. The section of SR 1 adjacent to the site does not include a wide shoulder or sidewalks; thus, bicycle and pedestrian traffic along SR 1 in the project vicinity is limited. In addition, views from the CCMP Trail are partially obstructed due to the sloping terrain and existing vegetation along the trail.
- *Residents* of the existing single-family homes to the east of the site across SR 1 have views of the site; views are partially obstructed due to the sloping terrain of the area. To the south of the site, views are partially obscured by dense vegetation located along the northern edge of San Marlo Way.
- *Church members* at Our Savior's Lutheran Church located southeast of the site have views of the site; views are partially obstructed due to the existing trees and vegetation along the site boundary.
- *Patrons* of the commercial businesses to the south and to the east of the site have views of the site. Views are partially obstructed due to the existing trees along the sites border and the common sloping terrain.
- *Beachgoers* at Rockaway Beach to the southeast of the site have views of the Quarry Parcel within the western portion of the project site. Views are partially obstructed due to the sloping terrain and existing vegetation along the southern portion of the project site.

Figure 4.1-1
Overview Map of Picture Locations

Figure 4.1-2
Existing View of Project Site from Rockaway Beach Looking North

Figure 4.1-3
Existing View of Project Site from Rockaway Beach Looking East

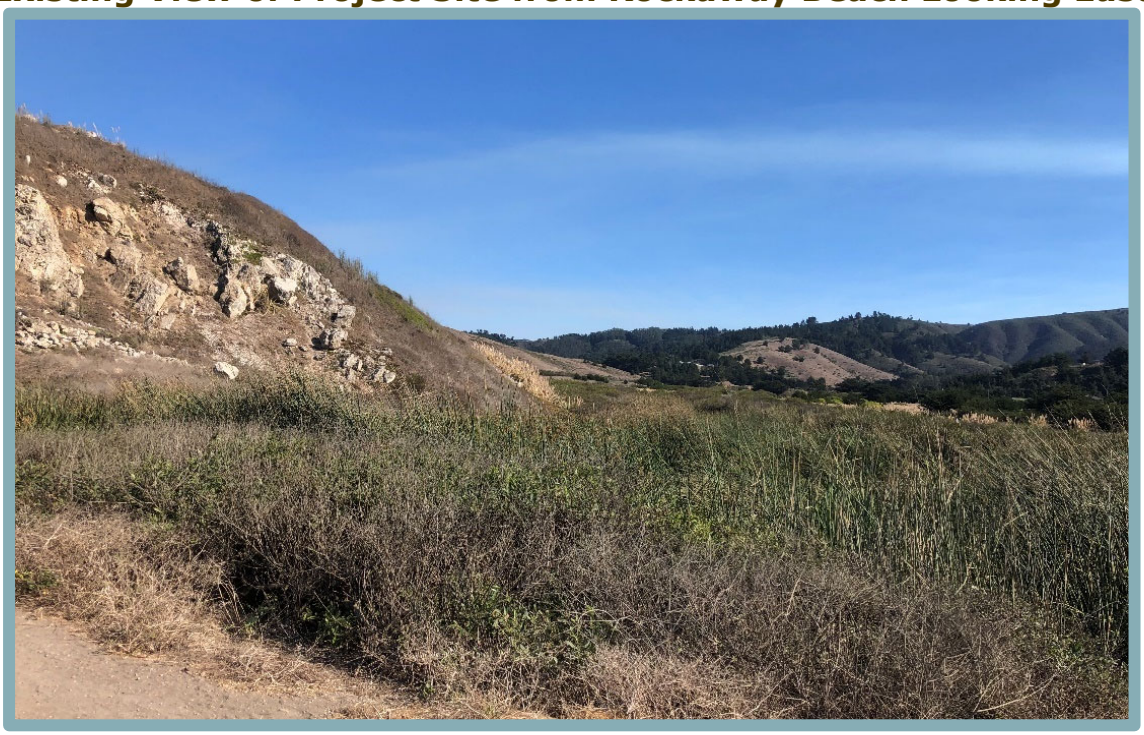


Figure 4.1-4
Existing View of Eastern Parcel from West End of Quarry Face Looking East

Figure 4.1-5
Existing View of Quarry Parcel from Hilltop Area Looking South

Figure 4.1-6
Existing View from SR 1 Looking Northwest

Figure 4.1-7
Existing View from SR 1 and Reina Del Mar Avenue Looking West

Public Versus Private Views

It is important to distinguish between public and private views. Private views are views seen from privately-owned land and are typically viewed by individual viewers, including views from private residences. Public views are views that are experienced by the collective public. In the case of the proposed project, public views consist primarily of views from existing public trails within the project site such as the Calera Creek Multi-Purpose Trail, as well as views from SR 1, San Marlo Way, and Rockaway Beach in the project vicinity. Private views of the project site include views from the existing single-family residences to the east of the project site across from SR 1 and to the south of the site across from San Marlo Way.

The thresholds of significance established in Appendix G of the CEQA Guidelines address impacts on public, rather than private, views. Further, CEQA case law holds that CEQA impacts should be analyzed based on impacts to the environment in general, not particular persons. (See, e.g., *Association for Protection etc. Values v. City of Ukiah* (1991) 2 Cal.App.4th 720 [3 Cal. Rptr.2d 488]; *Topanga Beach Renters Assn. v. Department of General Services* (1976) 58 Cal.App.3d 188 [129 Cal.Rptr. 739].) Therefore, it is appropriate to focus the aesthetic impact analysis on potential impacts to public views, rather than private views.

Existing Conditions of Key Viewpoints

A number of key viewpoints that would most clearly exemplify the proposed project's potential visual effects have been selected for in-depth analysis. For the purpose of this analysis, views from SR 1 and Rockaway Beach within the project vicinity are characterized as key viewpoints. It should be noted that views from the existing public trails within the project site contain similar visual characteristics as views from Rockaway Beach and SR 1, as evidenced by Figure 4.1-4 through Figure 4.1-7. Thus, views from the internal public trails are not analyzed as separate key viewpoints.

Existing Views from SR 1

The visual character of the project area, as viewed from SR 1, reflects a transition between the vegetated, undeveloped landscape of the project site and the area to the north of the site and the more developed urban landscape to the south of the site. In some areas, views of the Quarry and Eastern Parcels are available, while other views are obstructed by trees, vegetation, and slight hills along the site boundary.

Existing Views from Rockaway Beach

Views of the project site from Rockaway Beach consist primarily of the Southern Bluff, as well as the relatively flat area of the Quarry Parcel and Eastern Parcel that consists of moderate vegetation with various grasses. The Southern Bluff abuts the Pacific Ocean to the south, is steeply sloped, and includes moderate vegetation cover. The Southern Bluff is beginning to show signs of erosion near the existing trail. Dense vegetation associated with Calera Creek, as well as vegetation along SR 1, is visible in the distance.

Light Pollution and Glare

Light pollution refers to all forms of unwanted light in the night sky, including glare, light trespass, sky glow, and over-lighting. Views of the night sky can be an important part of the natural environment, particularly in communities surrounded by extensive open space. Excessive light and glare can also be visually disruptive to humans and nocturnal animal species.

The project site does not contain any existing sources of light or glare. However, the project site is located within the vicinity of existing residential and commercial development to the south and east. Lighting associated with such development, as well as street lighting along SR 1 and headlights from vehicles traveling on SR 1, contributes to the overall nighttime lighting environment of the project area.

4.1.3 REGULATORY CONTEXT

Applicable federal laws or regulations pertaining to the aesthetic quality of the project area do not exist. State and local laws and regulations applicable to the proposed project are listed below.

State Regulations

The following is an applicable State regulation related to aesthetic resources.

California Coastal Commission

The California Coastal Commission (CCC) regulates development within the California Coastal Zone. Section 30251, Scenic and Visual Qualities, would be applicable to the proposed project, and reads as follows:

> The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas. New development in highly scenic areas such as those designated in the California Coastline Preservation and Recreation Plan prepared by the Department of Parks and Recreation and by local government shall be subordinate to the character of its setting.

California Scenic Highway Program

The State Scenic Highway System includes a list of highways that are either eligible for designation as scenic highways or have been so designated. Such highways are identified in Section 263 *et seq*. of the California Streets and Highways Code.

The City does not contain any Officially Designated Scenic Highways.[3] SR 1, which is located east of the project site, is an Eligible State Scenic Highway, but is not officially designated.

Local Regulations

The following are local policies related to aesthetic resources.

City of Pacifica General Plan

The following policies from the 1980 City of Pacifica General Plan are applicable to the proposed project.

Community Design Element

Policy 1 Preserve the unique qualities of existing neighborhoods.

Policy 3 Protect the City's irreplaceable scenic and visual amenities.

[3] California Scenic Highway Mapping System. *San Mateo County*. Available at: http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/. Accessed January 3, 2017.

Land Use Element

Policy 6 Local access roads and trails may be allowed on visually prominent ridgelines provided they follow contours, minimize grading, and are unobtrusive in their design.

Policy 8 Land use and development shall protect and enhance the individual character of each neighborhood.

Open Space Element

Policy 1 Retain open space which preserves natural resources, protects visual amenities, prevents inappropriate development, provides for the managed use of resources, and protects the public health and safety.

Policy 2 Provide outdoor recreation in local parks, open space, and school playgrounds in keeping with the need, scale and character of the City and of each neighborhood.

Policy 4 Promote communitywide links to open space and recreation facilities which do not abuse the open space resource or threaten public safety.

City of Pacifica Design Guidelines

The City of Pacifica Design Guidelines were adopted by the City of Pacifica Planning Commission and revised on April 23, 1990. The overall purpose of the City of Pacifica Design Guidelines is to help City staff, prospective developers, and stakeholders maintain the quality of the City's physical development and improve the quality of the development, where such attributes are lacking. The Guidelines are used to assist the Planning Commission and planning staff when reviewing and evaluating the design of all new development and additions to existing development in the City.

City of Pacifica Local Coastal Land Use Plan

The City of Pacifica's Local Coastal Land Use Plan in conjunction with the associated Implementation Program comprises the City's Local Coastal Program (LCP). The California Coastal Act of 1976, enacted to protect coastal resources and maximize public access to the shoreline, allows local governments to prepare and implement LCPs, which are certified by the CCC. The CCC delegates responsibility for issuing coastal permits for most new development to the local jurisdiction, subject to the standards established in the jurisdiction's certified LCP.

The City's LCP includes the following policies, applicable to the proposed project, which pertain to the preservation and enhancement of coastal views, viewsheds, and vegetation:

Policy 24 The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public. importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural landforms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas. New development in highly scenic areas -such. as those designated in the California Coastline Preservation and Recreation Plan, prepared by the Department of Parks and Recreation and by local government, shall be subordinate to the character of its setting. (CN, OS, CD, LU)

4.1.4 IMPACTS AND MITIGATION MEASURES

This section describes the standards of significance and methodology used to analyze and determine the proposed project's potential impacts related to aesthetics. A discussion of the project's impacts, as well as mitigation measures where necessary, is also presented.

Standards of Significance

Consistent with Appendix G of the CEQA Guidelines, an aesthetic impact is considered significant if the proposed project would:

- Have a substantial adverse effect on a scenic vista;
- Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway;
- In a non-urbanized area, 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 a publicly accessible vantage point) or, in an urbanized area, conflict with applicable zoning and other regulations governing scenic quality; or
- Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

Method of Analysis

The following analysis utilizes a methodology based upon the Federal Highway Administration (FHWA) publication *Visual Impact Assessment for Highway Projects* (1988), and supplemented by the FHWA's *Guidelines for the Visual Impact Assessment of Highway Projects* (January 2015), combined with the State CEQA Guidelines' Appendix G Checklist questions for Aesthetics. Together, both documents provide the key analytical framework and guide the visual impact assessment process for the proposed project. Although the FHWA guidelines were initially created to provide an analytical framework for identifying and assessing qualitative changes to the visual environment that could be introduced as part of a transportation project, this methodology has become an industry standard for evaluating visual impacts associated with local and state non-transportation projects as well. Generally, the process includes the following basic steps:

- Define the project setting and viewshed.
- Assess existing visual resources and character of the project site and immediate vicinity.
- Identify viewer types.
- Assess visual quality of the subject site.
- Identify key viewpoints and assess visual character and quality of viewpoints.
- Assess the visual impacts of the proposed project as seen from the viewpoints.
- Propose methods to mitigate adverse visual impacts, if necessary.

As part of the analysis, an evaluative framework that defines the visual setting in terms of key views is used. A key view is a point from which a select view is analyzed from the perspective of potential viewer groups.

The following analysis assesses the anticipated changes in visual character (e.g., descriptive, non-evaluative characteristics such as land use, topography, scale, form, and color) and visual quality, evaluating them with respect to anticipated viewer response.

It should be noted that CEQA requires an analysis of environmental impacts resulting from a proposed project as compared to the baseline physical conditions (see CEQA Guidelines Section 15125). As such, consistent with CEQA Guidelines, this analysis does not include an evaluation of the pre-quarry visual character of the area. The baseline physical conditions of the project site are described under the Existing Environmental Setting section above.

Project-Specific Impacts and Mitigation Measures

The following discussion of impacts related to aesthetics is based on implementation of the proposed project in comparison to existing conditions and the standards of significance presented above.

4.1-1 Have a substantial adverse effect on a scenic vista. Based on the analysis below, the impact is *less than significant*.

Typical scenic vistas often include mountain ranges, ridgelines, or bodies of water as viewed from a highway, public space, or other area designated for the express purpose of viewing and sightseeing. In general, a project's impact to a scenic vista would occur if development of the project would substantially change or remove a scenic vista. Mori Point is located north of the site and is one of the most substantial headlands in the City. The City of Pacifica General Plan characterizes Mori Point as a scenic vista.[4] The City's General Plan does not specifically identify any other scenic vistas in the City; however, the General Plan does consider the City's prominent hills and ridgelines as visual resources.

The City of Pacifica General Plan designates both the Quarry and Eastern Parcels as Special Area and the sites are zoned Service Commercial (C-3) with a Hillside Preservation District (HPD) overlay. The Quarry and Eastern Parcels are also the subject of limited discussion in the Rockaway Beach Specific Plan[5] with indicated uses including a combination of visitor commercial and business commercial uses. However, with respect to consistency with the General Plan and the Rockaway Beach Specific Plan, it should be noted that the proposed project is a reclamation project and does not include development of new structures or infrastructure. Rather, the proposed Reclamation Plan is intended to alleviate existing erosion issues, restore prior physical disturbances resulting from past quarrying activity on the project site, and ensure compliance with State Mining and Reclamation Act (SMARA) standards related to mine reclamation. Given that the proposed project would include reclamation of the site to open space and recreational uses, the project would not substantially alter views of the site relative to existing conditions and, thus, would not create any inconsistencies with the site's General Plan land use designation. Furthermore, the proposed grading and trail improvements would not alter views of Mori Point from SR 1 or other public vantage points in the project vicinity. Therefore, the proposed project would not have a substantial adverse effect on a scenic vista, and a ***less-than-significant*** impact would occur.

Mitigation Measure(s)

None required.

4 City of Pacifica. *City of Pacifica General Plan.* Adopted 1980.
5 City of Pacifica. *Rockaway Beach Specific Plan*. Amended 1992.

4.1-2 In a non-urbanized area, 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 a publicly accessible vantage point) or, in an urbanized area, conflict with applicable zoning and other regulations governing scenic quality. Based on the analysis below, the impact is *less than significant*.

The areas to the south and east of the site are built out residences and various commercial uses. While the project site and the area to the north of the site is currently undeveloped, the analysis within this chapter considers the project area to be an urbanized area in accordance with the definition of "urbanized area"[6] for purposes of CEQA. The entirety of the City of Pacifica is considered an urbanized area because it is an incorporated city which had a population of 37,234 persons as of the 2010 U.S. Census, and is contiguous with the incorporated City of Daly City which had a population of 101,123 persons as of the 2010 U.S. Census.

The proposed project would include reclamation of the Quarry site. The majority of the reclamation activity would occur on the Quarry Parcel, with minor site improvements such as grading for access roads and through truck traffic occurring on the Eastern Parcel. The project would involve earthwork to regrade the over steepened slopes of the former Quarry into a safe condition, installation of new drainage infrastructure, and construction of new unpaved trails. The Eastern Parcel would be reclaimed to include 1.55 acres of new seasonal wetlands and a new 0.20-acre California red-legged frog pond. A total of 38 trees, including 16 heritage trees, located primarily within the Southern Bluff and Quarry Pit areas, would require removal as part of the project. However, a substantial number of trees would be retained along the Eastern Parcel boundary.

During the grading phase of reclamation, the views of the project site would be characterized by the presence of off-road equipment, haul trucks, and denuded soils. However, the grading phase would be temporary, and following grading, the Reclamation Plan includes revegetation. Under existing conditions, the project site primarily consists of non-native grasses and barren slopes largely devoid of vegetation (see Figure 4.3-1, in chapter 4.3, Biological Resources, of this EIR). Therefore, even following initial vegetation removal and during early revegetation, the visual quality of the project site associated with plant life would be largely unchanged. As discussed in further detail below, once established, the revegetation would improve the overall visual quality of the project site. The survival of the vegetation would be ensured through the proposed Revegetation Plan.

Per the City's General Plan, the City has anticipated and encouraged reclamation of the project site.[7] Thus, the proposed reclamation activities are consistent with improvements that have been previously anticipated by the City. Furthermore, various landscaping features would be provided throughout the project site, and would enhance the visual quality of the area. Nevertheless, the project represents a change

6 Public Resources Code § 21071 and CEQA Guidelines Section 15387.
7 City of Pacifica. *City of Pacifica General Plan* [pg. 115]. Adopted 1980.

in the character of the site, and further analysis is required to ensure that such a change does not have a negative impact on public views in the surrounding area.

Changes to the public views of the site that would occur due to the proposed project are discussed below.

Views from SR 1

Views of the site from SR 1 are relatively limited due to trees, vegetation, and the sloping topography of the area. During implementation of the proposed project, construction equipment associated with reclamation activities could be visible from certain portions of SR 1; however, such views would be relatively limited. Additionally, reclamation activities would be temporary and would be entirely completed after approximately four years; following completion of reclamation, views of the site from SR 1 would be enhanced by the proposed grading and revegetation. With implementation of the proposed project, views of the project site from SR 1 would not change significantly. While the project would require removal of a small number of existing trees, the majority of the existing riparian vegetation on-site would be retained as part of the project. Within the Quarry Parcel, the project would include revegetation of areas of the site that have been disturbed by prior mining activities, creating a self-sustaining community of native species. Motorists traveling along SR 1 are also afforded views of the Eastern Parcel. Given that the proposed improvements within the Eastern Parcel would be primarily limited to creation of new wetland habitat, and would not include substantial grading activities, the project would ultimately improve views of the Eastern Parcel from SR 1.

Furthermore, public views of the project site from SR 1 would be temporary, occurring only as motorists, pedestrians, and cyclists pass by the site. Based on the above, the visual character and quality of the project site as viewed from SR 1 would not be substantially degraded as a result of the proposed project. In fact, through implementation of the Reclamation Plan, the visual character and quality of the project site as viewed from SR 1 could be improved.

Views from Rockaway Beach

As shown in Figure 4.1-2 and Figure 4.1-3, existing views of the project site from Rockaway Beach consist of the Southern Bluff, as well as the relatively flat area of the Quarry Parcel and Eastern Parcel. As noted in Section 4.1.2 above, the Southern Bluff abuts the Pacific Ocean to the southwest, is steeply sloped, and includes moderate vegetation cover. The Southern Bluff is beginning to show signs of erosion due to prior mining activities at the Quarry parcel. The proposed reclamation activities would regrade the area to form a stable, gently sloping surface and return the area to a more natural pre-mining appearance. As such, the proposed reclamation activities would retain the visual character of the site, while improving the visual quality of the site.

Similar to views from SR 1, with implementation of the proposed project, views of the project site from Rockaway Beach would primarily change through revegetation and trail improvements. The ultimate goal of revegetation would be intended to visually integrate the surrounding open space areas. As such, the visual character and quality of the project site as viewed from Rockaway Beach would not be substantially

degraded, and implementation of the Reclamation Plan could improve the visual character and quality of the project site as viewed from Rockaway Beach.

Conclusion

As discussed above, views of the site from SR 1, Rockaway Beach, and from on-site trails would be enhanced by the proposed grading and revegetation activities within the project site. In addition, all project elements would comply with applicable guidelines and regulations contained in the City's General Plan and Municipal Code. Therefore, the proposed project would not substantially degrade the existing visual character or quality of public views of the site and its surroundings, or conflict with applicable zoning and other regulations governing scenic quality. Thus, a ***less-than-significant*** impact would occur.

Mitigation Measure(s)

None required.

4.1-3 Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State Scenic highway. Based on the analysis below, the impact is *less than significant*.

The City does not contain any Officially Designated Scenic Highways.[8] SR 1, which is located east of the project site, is an Eligible State Scenic Highway, but is not officially designated. As discussed above, while portions of the project site are visible to motorists travelling along SR 1, the proposed reclamation activities would ultimately improve the visual quality of the site by regrading and revegetating portions of the Quarry Parcel that have been subject to prior disturbance as a result of mining activities. While a limited number of trees within the Quarry Parcel would require removal as part of the project in order to accommodate the proposed improvements, such trees are not visible from SR 1. All the existing trees within the Eastern Parcel, located adjacent to SR 1, would be retained. The project would include alterations to the exposed mining scars and rock outcroppings that comprise the Quarry Face area, which is currently visible from portions of SR 1; however, the improvements would generally return the exposed rock face to a state that more closely resembles the pre-mining condition of the area. Thus, the project would not substantially damage trees or rock outcroppings that are visible from SR 1. The site does not contain any historic buildings.

Based on the above, the proposed project would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State Scenic Highway. As such, a ***less-than-significant*** impact would occur.

Mitigation Measure(s)

None required.

[8] California Scenic Highway Mapping System. *San Mateo County*. Available at: http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/. Accessed January 3, 2017.

4.1-4 Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area. Based on the analysis below and with implementation of mitigation, the impact is *less than significant*.

As noted previously, the project site does not contain existing sources of light or glare. The proposed project would consist of reclamation of the project site and improvement of on-site trail systems. The project would not include any improvements that would introduce permanent sources of light or glare which would adversely affect day or nighttime views in the area.

During implementation of the proposed project, temporary lighting may be used for certain reclamation activities. However, as noted in Conservation Measure 9 of the proposed Reclamation Plan, all lighting would be turned off thirty minutes prior to sunset, unless required for safety or security purposes. Additionally, all project lighting left on after sunset would be directed towards on-site areas where improvements are occurring to avoid light spillage to sensitive areas outside of the project limits.

Based on the above, the proposed project would not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area. Thus, a ***less-than-significant*** impact would occur.

Mitigation Measure(s)

None required.

Cumulative Impacts and Mitigation Measures

As defined in Section 15355 of the CEQA Guidelines, "cumulative impacts" refers to two or more individual effects which, when considered together, are considerable, compound, or increase other environmental impacts. The individual effects may be changes resulting from a single project or a number of separate projects. The cumulative impact from several projects is the change in the environment that results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects.

Some types of impacts to aesthetic resources are localized and not cumulative in nature. For example, the creation of glare or shadows at one location is not worsened by glare or shadows created at another location. Rather these effects are independent, and the determination as to whether they are adverse is specific to the project and location where they are created. Projects that block a view or affect the visual quality of a site also have localized aesthetic impacts. The impact occurs specific to a site or area and remains independent from another project elsewhere that may block a view or degrade the visual environment of a specific site.

Two types of aesthetic impacts may be additive in nature and thus cumulative, including night sky lighting and overall changes in the visual environment as the result of increasing urbanization of large areas. As development in one area increases and possibly expands over time and meets or connects with development in an adjoining exurban area, the effect of night sky lighting experienced outside of the region may increase in the form of larger and/or more intense nighttime glow in the viewshed.

Similarly, as development in one area changes from rural to urban, and this pattern continues to occur throughout the undeveloped areas of a jurisdiction, the changes in visual character may become additive and cumulatively considerable. The proposed project's incremental contribution to night sky lighting and changes in visual character are addressed below.

4.1-5 Long-term changes in visual character associated with cumulative development of the proposed project in combination with future buildout of the City of Pacifica General Plan. Based on the analysis below, the project's incremental contribution to this significant cumulative impact is *less than significant*.

As discussed above under Impacts 4.1-1 through 4.1-4, the proposed project would not include development of any buildings or structures. The proposed reclamation activities would consist of grading, revegetation, and trail improvements. By correcting existing erosion issues and re-grading the over steepened slopes of the former Quarry into a safe condition, the project would improve the visual quality of portions of the site that have been subject to prior disturbance as a result of mining activities. The proposed project would retain the undeveloped, scenic character of the project site. Furthermore, the proposed reclamation activities are consistent with improvements that have been anticipated for the site per the City's General Plan. The proposed project would not result in any significant project-level impacts related to long-term changes in the visual character of the site.

Cumulative development occurring within the City of Pacifica pursuant to the General Plan has the potential to result in significant impacts related to degradation of visual character. However, the proposed project does not include new development and would not contribute towards urbanization of the project area. Rather, the proposed project would serve to improve the safety and appearance of an important undeveloped property within the City. By improving the visual quality of the site and fixing unsafe trail conditions on the Quarry parcel, the project would provide a net benefit to the visual character of the City.

Based on the above, the project's incremental contribution towards cumulative aesthetic impacts associated with buildout of the City of Pacifica General Plan would be ***less than significant***.

Mitigation Measure(s)

None required.

4.1-6 Creation of new sources of light or glare associated with cumulative development of the proposed project in combination with future buildout of the City of Pacifica General Plan. Based on the analysis below, the cumulative impact is *less than significant*.

Cumulative effects of lighting are visible over a wide area, due to the potential for lighting from a number of projects to create sky glow. Cumulative development

throughout the City of Pacifica planning area has the potential to introduce new sources of light and glare, thereby contributing to sky glow in the area. As discussed under Impact 4.1-4 above, the project would not introduce new permanent sources of light and glare at the project site. Nighttime lighting required during implementation of the proposed Reclamation Plan would be limited to lighting required for safety or security, and would be directed towards the proposed improvement areas. The project would not result in any light spillage to off-site areas during project implementation.

Cumulative development occurring within the City of Pacifica pursuant to the General Plan has the potential to result in significant impacts related to the creation of new sources of light and glare. However, the proposed project does not include new development and would not contribute any new sources of light and glare. Rather, the proposed project would serve to improve the safety and appearance of an important undeveloped property within the City.

Based on the above, the project's incremental contribution to new sources of light and glare impacts would be ***less than significant***.

Mitigation Measure(s)

None required.

4.2 Air Quality and Greenhouse Gas Emissions

4.2 AIR QUALITY AND GREENHOUSE GAS EMISSIONS

4.2.1 INTRODUCTION

The Air Quality and Greenhouse Gas Emissions chapter of the EIR describes the potential impacts of the proposed project on local and regional air quality and greenhouse gas (GHG). The chapter includes a discussion of the existing air quality and GHG setting, reclamation-related air quality impacts resulting from grading and equipment emissions, direct and indirect emissions associated with the project, the impacts of these emissions on both the local and regional scale, and mitigation measures warranted to reduce or eliminate any identified significant impacts. This chapter is based on the Pacifica General Plan[1] the Pacifica Climate Action Plan,[2] the Bay Area Air Quality Management District (BAAQMD) CEQA Guidelines,[3] a Greenhouse Gas Emissions Analysis Study (Appendix G of this EIR) prepared for the proposed project,[4] and a technical analysis performed by Raney Planning and Management, Inc.

4.2.2 EXISTING ENVIRONMENTAL SETTING

The following information provides an overview of the existing environmental setting in relation to air quality and GHGs within the proposed project area. Air basin characteristics, ambient air quality standards (AAQS), attainment status and regional air quality plans, local air quality monitoring, odors, sensitive receptors, and GHGs are discussed.

Air Basin Characteristics

The project site is located in the western portion of the nine-county San Francisco Bay Area Air Basin (SFBAAB), and is within the jurisdictional boundaries of the BAAQMD. The topography of the SFBAAB if characterized by coastal mountain ranges, inland valleys, and bays. The complex terrain of the Bay Area distorts wind flow and substantially influences local atmospheric conditions and air quality. The Golden Gate and Carquinez Strait provide major gaps in the Coast Range, allowing air to pass between the Pacific Ocean and the Central Valley.

The City of Pacifica lies in the northwestern portion of the Bay Area's peninsula, on the coastal side of the Santa Cruz Mountains. Air quality in Pacifica tends to be better than the air quality in the Bay Area overall. Due to the City's position relative to wind flow patterns and local topography, winds from the ocean are generally strong enough to carry away local emissions.

Existing Sources of Air Quality Emissions

Currently, the project site consists mainly of steep slopes, non-native plants, and informal trails. Structures do not exist on the project site. As such, the only source of emissions associated with the project site are generated from motorists who are visiting the site for recreational purposes.

---

1 City of Pacifica. *City of Pacifica General Plan.* Adopted 1980.
2 City of Pacifica. *Pacifica Climate Action Plan*. July 14, 2014.
3 Bay Area Air Quality Management District. *CEQA Air Quality Guidelines*. May, 2017.
4 Rincon Consultants, Inc. *Rockaway Quarry Reclamation Project Greenhouse Gas Emissions Analysis Study*. July 2020.

Ambient Air Quality Standards

Both the U.S. Environmental Protection Agency (USEPA) and the California Air Resources Board (CARB) have established ambient air quality standards for common pollutants. The federal standards are divided into primary standards, which are designed to protect the public health, and secondary standards, which are designed to protect the public welfare. The ambient air quality standards for each contaminant represent safe levels that avoid specific adverse health effects. Pollutants for which air quality standards have been established are called "criteria" pollutants. Table 4.2-1 identifies the major pollutants, characteristics, health effects and typical sources. The federal and California ambient air quality standards (NAAQS and CAAQS, respectively) are summarized in Table 4.2-2. The NAAQS and CAAQS were developed independently with differing purposes and methods. As a result, the federal and State standards differ in some cases. In general, the State of California standards are more stringent than the federal standards, particularly for ozone and particulate matter (PM).

A description of each criteria pollutant and its potential health effects is provided in the following section.

Ozone/Ozone Precursors

Ozone is a reactive gas consisting of three oxygen atoms. In the troposphere, ozone is a product of the photochemical process involving the sun's energy, and is a secondary pollutant formed as a result of a complex chemical reaction between reactive organic gases (ROG) and oxides of nitrogen (NO_X) emissions in the presence of sunlight. As such, unlike other pollutants, ozone is not released directly into the atmosphere from any sources. In the stratosphere, ozone exists naturally and shields Earth from harmful incoming ultraviolet radiation. The primary source of ozone precursors is mobile sources, including cars, trucks, buses, construction equipment, and agricultural equipment. Ground-level ozone reaches the highest level during the afternoon and early evening hours. High levels occur most often during the summer months. Ground-level ozone is a strong irritant that could cause constriction of the airways, forcing the respiratory system to work harder in order to provide oxygen. Ozone at the Earth's surface causes numerous adverse health effects and is a major component of smog. High concentrations of ground level ozone can adversely affect the human respiratory system and aggravate cardiovascular disease and many respiratory ailments.

Reactive Organic Gas

ROG is a reactive chemical gas composed of hydrocarbon compounds typically found in paints and solvents that contributes to the formation of smog and ozone by involvement in atmospheric chemical reactions. A separate health standard does not exist for ROG. However, some compounds that make up ROG are toxic, such as the carcinogen benzene.

Oxides of Nitrogen

NO_X are a family of gaseous nitrogen compounds and are precursors to the formation of ozone and PM. The major component of NO_X, nitrogen dioxide (NO_2), is a reddish-brown gas that discolors the air and is toxic at high concentrations. NO_X results primarily from the combustion of fossil fuels under high temperature and pressure. On-road and off-road motor vehicles and fuel combustion are the major sources of NO_X. NO_X reacts with ROG to form smog, which could result in adverse impacts to human health, damage the environment, and cause poor visibility. Additionally, NO_X emissions are a major component of acid rain.

Table 4.2-1
Summary of Criteria Pollutants

Pollutant	Characteristics	Health Effects	Major Sources
Ozone	A highly reactive gas produced by the photochemical process involving a chemical reaction between the sun's energy and other pollutant emissions. Often called photochemical smog.	• Eye irritation • Wheezing, chest pain, dry throat, headache, or nausea • Aggravated respiratory disease such as emphysema, bronchitis, and asthma	Combustion sources such as factories, automobiles, and evaporation of solvents and fuels.
Carbon Monoxide	An odorless, colorless, highly toxic gas that is formed by the incomplete combustion of fuels.	• Impairment of oxygen transport in the bloodstream • Impaired vision, reduced alertness, chest pain, and headaches • Can be fatal in the case of very high concentrations	Automobile exhaust, combustion of fuels, and combustion of wood in woodstoves and fireplaces.
Nitrogen Dioxide	A reddish-brown gas that discolors the air and is formed during combustion of fossil fuels under high temperature and pressure.	• Lung irrigation and damage • Increased risk of acute and chronic respiratory disease	Automobile and diesel truck exhaust, industrial processes, and fossil-fueled power plants.
Sulfur Dioxide	A colorless, irritating gas with a rotten egg odor formed by combustion of sulfur-containing fossil fuels.	• Aggravation of chronic obstruction lung disease • Increased risk of acute and chronic respiratory disease	Diesel vehicle exhaust, oil-powered power plants, and industrial processes.
Particulate Matter (PM_{10} and $PM_{2.5}$)	A complex mixture of extremely small particles and liquid droplets that can easily pass through the throat and nose and enter the lungs.	• Aggravation of chronic respiratory disease • Heart and lung disease • Coughing • Bronchitis • Chronic respiratory disease in children • Irregular heartbeat • Nonfatal heart attacks	Combustion sources such as automobiles, power generation, industrial processes, and wood burning. Also from unpaved roads, farming activities, and fugitive windblown dust.
Lead	A metal found naturally in the environment as well as in manufactured products.	• Loss of appetite, weakness, apathy, and miscarriage • Lesions of the neuromuscular system, circulatory system, brain, and gastrointestinal tract	Industrial sources and combustion of leaded aviation gasoline.

Sources:

- ***California Air Resources Board. California Ambient Air Quality Standards (CAAQS). Available at: https://ww2.arb.ca.gov/resources/california-ambient-air-quality-standards. Accessed January 2021.***
- ***Sacramento Metropolitan, El Dorado, Feather River, Placer, and Yolo-Solano Air Districts, Spare the Air website. Air Quality Information for the Sacramento Region. Available at: sparetheair.com. Accessed January 2021.***
- ***California Air Resources Board. Glossary of Air Pollution Terms. Available at: https://ww2.arb.ca.gov/glossary. Accessed January 2021.***

Table 4.2-2
Ambient Air Quality Standards

Pollutant	Averaging Time	CAAQS	NAAQS	
			Primary	Secondary
Ozone	1 Hour	0.09 ppm	-	Same as primary
	8 Hour	0.070 ppm	0.070 ppm	
Carbon Monoxide	8 Hour	9 ppm	9 ppm	-
	1 Hour	20 ppm	35 ppm	
Nitrogen Dioxide	Annual Mean	0.030 ppm	53 ppb	Same as primary
	1 Hour	0.18 ppm	100 ppb	-
Sulfur Dioxide	24 Hour	0.04 ppm	-	-
	3 Hour	-	-	0.5 ppm
	1 Hour	0.25 ppm	75 ppb	-
Respirable Particulate Matter (PM_{10})	Annual Mean	20 ug/m^3	-	Same as primary
	24 Hour	50 ug/m^3	150 ug/m^3	
Fine Particulate Matter ($PM_{2.5}$)	Annual Mean	12 ug/m^3	12 ug/m^3	15 ug/m^3
	24 Hour	-	35 ug/m^3	Same as primary
Lead	30 Day Average	1.5 ug/m^3	-	-
	Calendar Quarter	-	1.5 ug/m^3	Same as primary
Sulfates	24 Hour	25 ug/m^3	-	-
Hydrogen Sulfide	1 Hour	0.03 ppm	-	-
Vinyl Chloride	24 Hour	0.010 ppm	-	-
Visibility Reducing Particles	8 Hour	see note below	-	-

ppm = parts per million
ppb = parts per billion
µg/m^3 = micrograms per cubic meter

Note: Statewide Visibility Reducing Particle Standard (except Lake Tahoe Air Basin): Particles in sufficient amount to produce an extinction coefficient of 0.23 per kilometer when the relative humidity is less than 70 percent. This standard is intended to limit the frequency and severity of visibility impairment due to regional haze and is equivalent to a 10-mile nominal visual range.

Source: California Air Resources Board. Ambient Air Quality Standards. May 4, 2016. Available at: https://ww2.arb.ca.gov/sites/default/files/2020-07/aaqs2.pdf. Accessed January 2021.

Health effects related to NO_X include lung irritation and lung damage and can cause increased risk of acute and chronic respiratory disease.

Carbon Monoxide

Carbon monoxide (CO) is a colorless, odorless, poisonous gas produced by incomplete burning of carbon-based fuels such as gasoline, oil, and wood. When CO enters the body, the CO combines with chemicals in the body, which prevents blood from carrying oxygen to cells, tissues, and organs. Symptoms of exposure to CO can include problems with vision, reduced alertness, and general reduction in mental and physical functions. Exposure to CO can result in chest pain, headaches, reduced mental alertness, and death at high concentrations.

Sulfur Dioxide

Sulfur Dioxide (SO_2) is a colorless, irritating gas with a rotten egg odor formed primarily by the combustion of sulfur-containing fossil fuels from mobile sources, such as locomotives, ships, and off-road diesel equipment. SO_2 is also emitted from several industrial processes, such as petroleum refining and metal processing. Similar to airborne NO_X, suspended sulfur oxide particles contribute to poor visibility. The sulfur oxide particles are also a component of PM_{10}.

Particulate Matter

Particulate matter, also known as particle pollution or PM, is a complex mixture of extremely small particles and liquid droplets. Particle pollution is made up of a number of components, including acids (such as nitrates and sulfates), organic chemicals, metals, and soil or dust particles. The size of particles is directly linked to their potential for causing health impacts. The USEPA is concerned about particles that are 10 micrometers in diameter or smaller (PM_{10}) because those are the particles that generally pass through the throat and nose and enter the lungs. Once inhaled, the particles could affect the heart and lungs and cause serious health effects. USEPA groups particle pollution into three categories based on their size and where they are deposited:

- "Inhalable coarse particles ($PM_{2.5-10}$)," which are found near roadways and dusty industries, are between 2.5 and 10 micrometers in diameter. $PM_{2.5-10}$ is deposited in the thoracic region of the lungs.
- "Fine particles ($PM_{2.5}$)," which are found in smoke and haze, are 2.5 micrometers in diameter and smaller. $PM_{2.5}$ particles could be directly emitted from sources such as forest fires, or could form when gases emitted from power plants, industries, and automobiles react in the air. They penetrate deeply into the thoracic and alveolar regions of the lungs.
- “Ultrafine particles (UFP),” are very, very small particles (less than 0.1 micrometers in diameter) largely resulting from the combustion of fossil fuels, meat, wood, and other hydrocarbons. While UFP mass is a small portion of $PM_{2.5}$, their high surface area, deep lung penetration, and transfer into the bloodstream could result in disproportionate health impacts relative to their mass. UFP is not currently regulated separately, but is analyzed as part of $PM_{2.5}$.

PM_{10}, $PM_{2.5}$, and UFP include primary pollutants, which are emitted directly to the atmosphere and secondary pollutants, which are formed in the atmosphere by chemical reactions among precursors. Generally speaking, $PM_{2.5}$ and UFP are emitted by combustion sources like vehicles, power generation, industrial processes, and wood burning, while PM_{10} sources include the same sources plus roads and farming activities. Fugitive windblown dust and other area sources also represent a source of airborne dust. Long-term PM pollution, especially fine particles, could result in significant health problems including, but not limited to, the following: increased respiratory symptoms, such as irritation of the airways, coughing or difficulty breathing; decreased lung function; aggravated asthma; development of chronic respiratory disease in children; development of chronic bronchitis or obstructive lung disease; irregular heartbeat; heart attacks; and increased blood pressure.

Lead

Lead is a relatively soft and chemically resistant metal that is a natural constituent of air, water, and the biosphere. Lead is neither created nor destroyed in the environment, and, thus, essentially persists forever. Lead forms compounds with both organic and inorganic substances. As an air pollutant, lead is present in small particles. Sources of lead emissions in California

include a variety of industrial activities. Gasoline-powered automobile engines were a major source of airborne lead through the use of leaded fuels. The use of leaded fuel has been mostly phased out, with the result that ambient concentrations of lead have dropped dramatically. However, because lead was emitted in large amounts from vehicles when leaded gasoline was used, lead is present in many soils (especially urban soils) as a result of airborne dispersion and could become re-suspended into the air.

Because lead is only slowly excreted by the human body, exposures to small amounts of lead from a variety of sources could accumulate to harmful levels. Effects from inhalation of lead above the level of the ambient air quality standard may include impaired blood formation and nerve conduction. Lead can adversely affect the nervous, reproductive, digestive, immune, and blood-forming systems. Symptoms could include fatigue, anxiety, short-term memory loss, depression, weakness in the extremities, and learning disabilities in children. Lead also causes cancer.

Sulfates

Sulfates are the fully oxidized ionic form of sulfur and are colorless gases. Sulfates occur in combination with metal and/or hydrogen ions. In California, emissions of sulfur compounds occur primarily from the combustion of petroleum-derived fuels (e.g., gasoline and diesel fuel) that contain sulfur. The sulfur is oxidized to SO_2 during the combustion process and subsequently converted to sulfate compounds in the atmosphere. The conversion of SO_2 to sulfates takes place comparatively rapidly and completely in urban areas of California due to regional meteorological features.

The sulfates standard established by CARB is designed to prevent aggravation of respiratory symptoms. Effects of sulfate exposure at levels above the standard include a decrease in ventilatory function, aggravation of asthmatic symptoms, and an increased risk of cardio-pulmonary disease. Sulfates are particularly effective in degrading visibility, and, because they are usually acidic, can harm ecosystems and damage materials and property.

Hydrogen Sulfide

Hydrogen Sulfide (H_2S) is associated with geothermal activity, oil and gas production, refining, sewage treatment plants, and confined animal feeding operations. Hydrogen sulfide is extremely hazardous in high concentrations, especially in enclosed spaces (800 ppm can cause death).

Vinyl Chloride

Vinyl Chloride (C_2H_3Cl, also known as VCM) is a colorless gas that does not occur naturally, but is formed when other substances such as trichloroethane, trichloroethylene, and tetrachloro-ethylene are broken down. Vinyl chloride is used to make polyvinyl chloride (PVC) which is used to make a variety of plastic products, including pipes, wire and cable coatings, and packaging materials.

Visibility Reducing Particles

Visibility Reducing Particles are a mixture of suspended particulate matter consisting of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. The standard is intended to limit the frequency and severity of visibility impairment due to regional haze and is equivalent to a 10-mile nominal visual range.

Toxic Air Contaminants

In addition to the criteria pollutants discussed above, Toxic Air Contaminants (TACs) are also a category of environmental concern. TACs are present in many types of emissions with varying degrees of toxicity. Public exposure to TACs can result from emissions from normal operations, as well as accidental releases. Common stationary sources of TACs include gasoline stations, dry cleaners, and diesel backup generators, which are subject to BAAQMD stationary source permit requirements. The other, often more significant, common source type is on-road motor vehicles, such as cars and trucks, on freeways and roads, and off-road sources such as construction equipment, ships, and trains.

Fossil fueled combustion engines, including those used in cars, trucks, and some pieces of off-road/construction equipment, release at least 40 different TACs. In terms of health risks, the most volatile contaminants are diesel particulate matter (DPM), benzene, formaldehyde, 1,3-butadiene, toluene, xylenes, and acetaldehyde. Gasoline vapors contain several TACs, including benzene, toluene, and xylenes. Diesel engines emit a complex mixture of air pollutants, including both gaseous and solid material. The solid material in diesel exhaust, DPM, is composed of carbon particles and numerous organic compounds, including over 40 known cancer-causing organic substances. Examples of such chemicals include polycyclic aromatic hydrocarbons, benzene, formaldehyde, acetaldehyde, acrolein, and 1,3-butadiene. Diesel exhaust also contains gaseous pollutants, including volatile organic compounds and NO_X. Due to the published evidence of a relationship between diesel exhaust exposure and lung cancer and other adverse health effects, the CARB has identified DPM from diesel-fueled engines as a TAC. Although a variety of TACs are emitted by fossil fueled combustion engines, the cancer risk due to DPM exposure represents a more significant risk than the other TACs discussed above.[5]

More than 90 percent of DPM is less than one micrometer in diameter and, thus, DPM is a subset of $PM_{2.5}$. As a California statewide average, DPM comprises about eight percent of $PM_{2.5}$ in outdoor air, although DPM levels vary regionally due to the non-uniform distribution of sources throughout the State. Most major sources of diesel emissions, such as ships, trains, and trucks, operate in and around ports, rail yards, and heavily-traveled roadways. Such areas are often located near highly populated areas. Thus, elevated DPM levels are mainly an urban problem, with large numbers of people exposed to higher DPM concentrations, resulting in greater health consequences compared to rural areas.

Due to the high levels of diesel activity, high volume freeways, stationary diesel engines, rail yards and facilities attracting heavy and constant diesel vehicle traffic are identified as having the highest associated health risks from DPM. Reclamation activities also have the potential to generate concentrations of DPM from the use of haul trucks and off-road equipment exhaust emissions.

The size of diesel particulates that are of the greatest health concern are fine particles (i.e., $PM_{2.5}$) and UFPs. UFPs have a small diameter (on the order of 0.1 micrometers).[6] The small diameter of UFPs imparts the particulates with unique attributes, such as high surface areas and the ability to penetrate deeply into lungs. Once UFPs have been deposited in lungs, the small diameter allows the UFPs to be transferred to the bloodstream. The high surface area of the UFPs also allows for a greater adsorption of other chemicals, which are transported along with the UFPs into

[5] California Air Resources Board. *Reducing Toxic Air Pollutants in California's Communities*. February 6, 2002.
[6] South Coast Air Quality Management District. *Final 2012 Air Quality Management Plan*. December 2012.

the bloodstream of the inhaler, where the chemicals can eventually reach critical organs.[7] The penetration capability of UFPs may contribute to adverse health effects related to heart, lung, and other organ health.[8] UFPs are a subset of DPM and activities that create large amounts of DPM, such as the operations involving heavy diesel-powered engines, also release UFPs. Considering that UFPs are a subset of DPM, and DPM represents a subset of $PM_{2.5}$, estimations of either concentrations or emissions of $PM_{2.5}$ or DPM include UFPs.

Health risks from TACs are a function of both the concentration of emissions and the duration of exposure, which typically are associated with long-term exposure and the associated risk of contracting cancer. Health effects of exposure to TACs other than cancer include birth defects, neurological damage, and death. Because chronic exposure can result in adverse health effects, TACs are regulated at the regional, State, and federal level. The identification, regulation, and monitoring of TACs is relatively new compared to criteria air pollutants that have established AAQS. TACs are regulated or evaluated on the basis of risk to human health rather than comparison to an AAQS or emission-based threshold.

Naturally Occurring Asbestos

Another concern related to air quality is naturally occurring asbestos (NOA). Asbestos is a term used for several types of naturally-occurring fibrous minerals found in many parts of California. The most common type of asbestos is chrysotile, but other types are also found in California. When rock containing asbestos is broken or crushed, asbestos fibers may be released and become airborne. Exposure to asbestos fibers may result in health issues such as lung cancer, mesothelioma (a rare cancer of the thin membranes lining the lungs, chest and abdominal cavity), and asbestosis (a non-cancerous lung disease which causes scarring of the lungs). Because asbestos is a known carcinogen, NOA is considered a TAC. Sources of asbestos emissions include: unpaved roads or driveways surfaced with ultramafic rock; construction activities in ultramafic rock deposits; or rock quarrying activities where ultramafic rock is present.

NOA is typically associated with fault zones, and areas containing serpentinite or contacts between serpentinite and other types of rocks. According to mapping prepared by the California Geological Survey, the project site is not in an area likely to contain serpentinite or other ultramafic rocks.[9] Consequently, NOA is not expected to be present at the project site.

Odors

While offensive odors rarely cause physical harm, they can be unpleasant, leading to considerable annoyance and distress among the public and can generate citizen complaints to local governments and air districts. Due to the subjective nature of odor impacts, the number of variables that can influence the potential for an odor impact, and the variety of odor sources, quantitative or formulaic methodologies to determine the presence of a significant odor impact are difficult. Adverse effects of odors on residential areas and other sensitive receptors warrant the closest scrutiny; but consideration should also be given to other land use types where people congregate, such as recreational facilities, worksites, and commercial areas. The potential for an odor impact is dependent on a number of variables including the nature of the odor source, distance between a receptor and an odor source, and local meteorological conditions.

---

7 Health Effects Institute. *Understanding the Health Effects of Ambient Ultrafine Particles*. January 2013.
8 South Coast Air Quality Management District. *Final 2012 Air Quality Management Plan*. December 2012.
9 California Department of Conservation, Division of Mines and Geology. *A General Location Guide for Ultramafic Rocks in California – Areas More Likely to Contain Naturally Occurring Asbestos*. August 2000.

One of the most important factors influencing the potential for an odor impact to occur is the distance between the odor source and receptors, also referred to as a buffer zone or setback. The greater the distance between an odor source and receptor, the less concentrated the odor emission would be when reaching the receptor.

Meteorological conditions also affect the dispersion of odor emissions, which determines the exposure concentration of odiferous compounds at receptors. The predominant wind direction in an area influences which receptors are exposed to the odiferous compounds generated by a nearby source. Receptors located upwind from a large odor source may not be affected due to the produced odiferous compounds being dispersed away from the receptors. Wind speed also influences the degree to which odor emissions are dispersed away from any area.

Odiferous compounds could be generated from a variety of source types including both construction and operational activities. Examples of common land use types that typically generate significant odor impacts include, but are not limited to, wastewater treatment plants; composting/green waste facilities; recycling facilities; petroleum refineries; chemical manufacturing plants; painting/coating operations; rendering plants; and food packaging plants. The proposed project does not include the construction or operation of any such land uses.

Although less common, diesel fumes associated with substantial diesel-fueled equipment and heavy-duty trucks, such as from construction activities, freeway traffic, or distribution centers, can be found to be objectionable. Existing nearby sensitive receptors could temporarily be subjected to diesel fumes associated with the reclamation activities associated with the project.

Attainment Status and Regional Air Quality Plans

Areas not meeting the NAAQS presented in Table 4.2-2 above are designated by the USEPA as nonattainment. Further classifications of nonattainment areas are based on the severity of the nonattainment problem, with marginal, moderate, serious, severe, and extreme nonattainment classifications for ozone. Nonattainment classifications for PM range from marginal to serious. The Federal Clean Air Act (FCAA) requires areas violating the NAAQS to prepare an air quality control plan referred to as the State Implementation Plan (SIP). The SIP contains the strategies and control measures for states to use to attain the NAAQS. The SIP is periodically modified to reflect the latest emissions inventories, planning documents, rules, and regulations of air basins as reported by the agencies with jurisdiction over them. The USEPA reviews SIPs to determine if they conform to the mandates of the FCAA amendments and would achieve air quality goals when implemented.

The CARB is the agency responsible for coordination and oversight of State and local air pollution control programs in California and for implementing the California Clean Air Act (CCAA) of 1988. The CCAA classifies ozone nonattainment areas as moderate, serious, severe, and extreme based on severity of violations of the CAAQS. For each nonattainment area classification, the CCAA specifies air quality management strategies that must be adopted. For all nonattainment areas, attainment plans are required to demonstrate a five-percent-per-year reduction in nonattainment air pollutants or their precursors, averaged every consecutive three-year period, unless an approved alternative measure of progress is developed. Air districts with air quality that is in violation of CAAQS are required to prepare an air quality attainment plan that lays out a program to attain the CCAA mandates. The air quality plans include emissions inventories to measure the sources of air pollutants, to evaluate how well different control measures have

worked, and show how air pollution would be reduced. In addition, the plans include the estimated future levels of pollution to ensure that the area would meet air quality goals.

Table 4.2-3 presents the current attainment status of the SFBAAB, including the City of Pacifica. As shown in the table, the area is currently designated as a nonattainment area for the State and federal ozone, State and federal $PM_{2.5}$, and State PM_{10} standards. The SFBAAB is designated attainment or unclassified for all other AAQS.

Table 4.2-3
Attainment Status Designations

Pollutant	Averaging Time	California Standards	Federal Standards
Ozone	1 Hour	**Nonattainment**	Revoked in 2005
	8 Hour	**Nonattainment**	**Nonattainment**
Carbon Monoxide	8 Hour	Attainment	Attainment
	1 Hour	Attainment	Attainment
Nitrogen Dioxide	Annual Mean	-	Attainment
	1 Hour	Attainment	Unclassified
Sulfur Dioxide	Annual Mean	-	Attainment
	24 Hour	Attainment	Attainment
	1 Hour	Attainment	Attainment
Particulate Matter (PM_{10})	Annual Mean	**Nonattainment**	-
	24 Hour	**Nonattainment**	Unclassified
Fine Particulate Matter ($PM_{2.5}$)	Annual Mean	**Nonattainment**	Attainment
	24 Hour	-	**Nonattainment**
Lead	30 Day Average	-	Attainment
	Calendar Quarter	-	Attainment
	Rolling 3-Month Average	-	Attainment
Sulfates	24 Hour	Attainment	-
Hydrogen Sulfide	1 Hour	Unclassified	-
Visibility Reducing Particles	8 Hour	Unclassified	-

Source: Bay Area Air Quality Management District. Air Quality Standards and Attainment Status. Available at: http://www.baaqmd.gov/research-and-data/air-quality-standards-and-attainment-status. Accessed February 2021.

Local Air Quality Monitoring

Air quality is monitored by CARB at various locations to determine which air quality standards are being violated, and to direct emission reduction efforts, such as developing attainment plans and rules, incentive programs, etc. The nearest local air quality monitoring station to the project site is the San Francisco-Arkansas station, located at 10 Arkansas Street in San Francisco CA, approximately 11 miles northeast of the project site. Based on the data available for the San Francisco-Arkansas monitoring station, Table 4.2-4 below, presents the number of days that the State and federal AAQS were exceeded for the three-year period from 2016 to 2018. It should be noted that because the nearest monitoring station is over ten miles away from the project site, air quality data can be reasonably inferred but not precisely gauged from such measurements.

Table 4.2-4
Air Quality Data Summary for the San Francisco-Arkansas Station (2016-2018)

Pollutant	Standard	Days Standard Was Exceeded		
		2016	2017	2018
1-Hour Ozone	State	0	0	0
	Federal	0	0	0
8-Hour Ozone	State	0	0	0
	Federal	0	0	0
24-Hour $PM_{2.5}$	Federal	0	7	14
24-Hour PM_{10}	State	0	2	0
	Federal	0	0	0
1-Hour Nitrogen Dioxide	State	0	0	0
	Federal	0	0	0

Source: California Air Resources Board. Aerometric Data Analysis and Management (iADAM) System. Available at http://www.arb.ca.gov/adam/welcome.html. Accessed January 2020.

Sensitive Receptors

Some land uses are considered more sensitive to air pollution than others, due to the types of population groups or activities involved. Children, pregnant women, the elderly, and those with existing health problems are especially vulnerable to the effects of air pollution. Accordingly, land uses that are typically considered to be sensitive receptors include residences, schools, day care centers, playgrounds, and medical facilities. Residential developments exist to the east and south of the project site, across State Route (SR) 1, with the closest being approximately 125 feet from the southern project site boundary. In addition, Vallemar Elementary School is located approximately 1,000 feet east of the project site.

Greenhouse Gas Emissions

GHGs are gases that absorb and emit radiation within the thermal infrared range, trapping heat in the earth's atmosphere. Some GHGs occur naturally and are emitted into the atmosphere through both natural processes and human activities. Other GHGs are created and emitted solely through human activities. The principal GHGs that enter the atmosphere due to human activities are carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), and fluorinated carbons. Other common GHGs include water vapor, ozone, and aerosols. Since the beginning of the Industrial Revolution, global atmospheric concentrations of GHGs have increased due to human activities such as the burning of fossil fuels, clearing of forests and other activities. The increase in atmospheric concentrations of GHG due to human activities has resulted in more heat being held within the atmosphere, which is the accepted explanation for global climate change.[10]

The primary GHG emitted by human activities is CO_2, with the next largest components being CH_4 and N_2O. A wide variety of human activities result in the emission of CO_2. Some of the largest sources of CO_2 include the burning of fossil fuels for transportation and electricity, industrial processes including fertilizer production, agricultural processing, and cement production. The primary sources of CH_4 emissions include domestic livestock sources, decomposition of wastes in landfills, releases from natural gas systems, coal mine seepage, and manure management.

[10] U.S. Environmental Protection Agency. *Climate Change Indicators: Atmospheric Concentrations of Greenhouse Gases*. Available at: https://www.epa.gov/climate-indicators/climate-change-indicators-atmospheric-concentrations-greenhouse-gases. Accessed March 2020.

The main human activities producing N_2O are agricultural soil management, fuel combustion in motor vehicles, nitric acid production, manure management, and stationary fuel combustion. Emissions of GHG by economic sector indicate that energy-related activities account for the majority of U.S. emissions. Electricity generation is the largest single-source of GHG emissions, and transportation is the second largest source, followed by industrial activities. The agricultural, commercial, and residential sectors account for the remainder of GHG emission sources.[11]

Emissions of GHG are partially offset by uptake of carbon and sequestration in trees, agricultural soils, landfilled yard trimmings and food scraps, and absorption of CO_2 by the earth's oceans. Additional emission reduction measures for GHG could include, but are not limited to, compliance with local, State, or federal plans or strategies for GHG reductions, on-site and off-site mitigation, and project design features. Attainment concentration standards for GHGs have not been established by the federal or State government.

Global Warming Potential

Global Warming Potential (GWP) is one type of simplified index (based upon radiative properties) that can be used to estimate the potential future impacts of emissions of various gases. According to the USEPA, the global warming potential of a gas, or aerosol, to trap heat in the atmosphere is the "cumulative radiative forcing effects of a gas over a specified time horizon resulting from the emission of a unit mass of gas relative to a reference gas." The reference gas for comparison is CO_2. GWP is based on a number of factors, including the heat-absorbing ability of each gas relative to that of CO_2, as well as the decay rate of each gas relative to that of CO_2. Each gas's GWP is determined by comparing the radiative forcing associated with emissions of that gas versus the radiative forcing associated with emissions of the same mass of CO_2, for which the GWP is set at one. Methane gas, for example, is estimated by the USEPA to have a comparative global warming potential 25 times greater than that of CO_2, as shown in Table 4.2-5.

As shown in the table, at the extreme end of the scale, sulfur hexafluoride is estimated to have a comparative GWP 22,800 times that of CO_2. The "specified time horizon" is related to the atmospheric lifetimes of such GHGs, which are estimated by the USEPA to vary from 50 to 200 years for CO_2, to 50,000 years for tetrafluoromethane. Longer atmospheric lifetimes allow GHG to buildup in the atmosphere; therefore, longer lifetimes correlate with the global warming potential of a gas. The common indicator for GHG is expressed in terms of metric tons of CO_2 equivalents ($MTCO_2e$).

Greenhouse Gas Sources and Inventories

An annual statewide emissions inventory has been prepared for California since the year 2000. In the most recent year for which inventory data is available, statewide emissions equaled 424.1 million $MTCO_2e$. As shown in Figure 4.2-1, the predominant source of emissions within the State, representing 41 percent of total emissions, is transportation, which includes sources such as passenger vehicles, public transit, air travel, and freight transportation. Industrial activities represent the second largest source of emissions, at 24 percent of total emissions.

[11] U.S. Environmental Protection Agency. *Sources of Greenhouse Gas Emissions*. Available at: https://19january2017snapshot.epa.gov/ghgemissions/sources-greenhouse-gas-emissions_.html. Accessed August 2019.

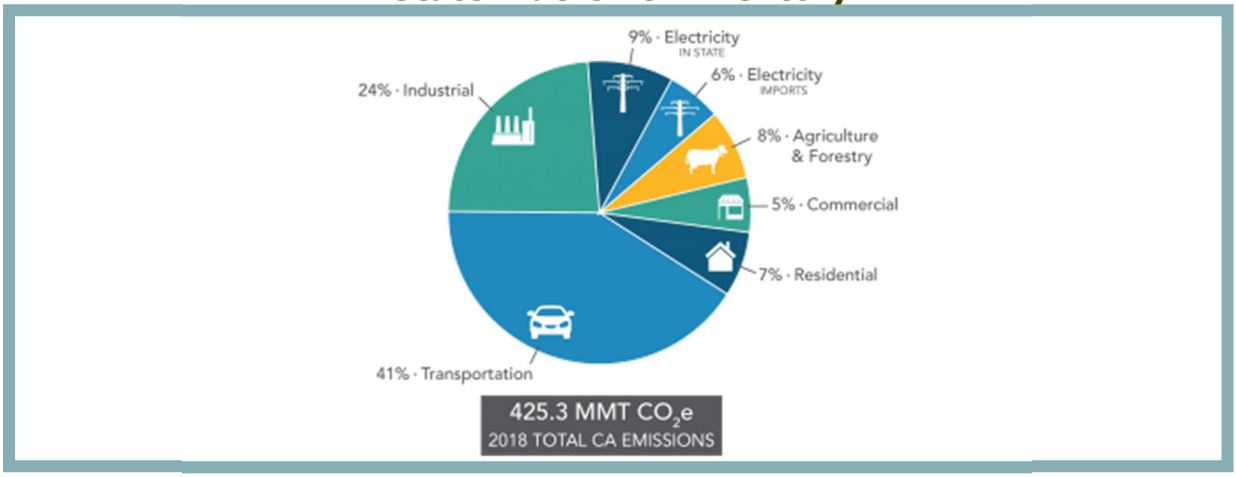
Table 4.2-5
Global Warming Potentials and Atmospheric Lifetimes of Select GHGs

Gas	Atmospheric Lifetime (years)	Global Warming Potential (100 year time horizon)
Carbon Dioxide (CO_2)	50-200[1]	1
Methane (CH_4)	12	25
Nitrous Oxide (N_2O)	114	298
HFC-23	270	14,800
HFC-134a	14	1,430
HFC-152a	1.4	124
PFC: Tetrafluoromethane (CF_4)	50,000	7,390
PFC: Hexafluoroethane (C_2F_6)	10,000	12,200
Sulfur Hexafluoride (SF_6)	3,200	22,800

1. For a given amount of carbon dioxide emitted, some fraction of the atmospheric increase in concentration is quickly absorbed by the oceans and terrestrial vegetation, some fraction of the atmospheric increase will only slowly decrease over a number of years, and a small portion of the increase will remain for many centuries or more.

Source: USEPA. Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2013. April 15, 2017.

Figure 4.2-1
Statewide GHG Inventory



Source: California Air Resources Board. Current California Greenhouse Gas Emissions Inventory Data (2020 Edition). Available at: https://ww3.arb.ca.gov/cc/inventory/data/data.htm. Accessed February 2021.

Per the City of Pacifica's Climate Action Plan, approximately 50.3 percent of the City's overall GHG emissions are associated with transportation. Next, approximately 19.6 percent of the City's overall GHG emissions result from residential consumption of natural gas.

Effects of Global Climate Change

Uncertainties exist as to exactly what the climate changes will be in various local areas of the Earth. According to the Intergovernmental Panel on Climate Change's Working Group II Report,

Climate Change 2007: Impacts, Adaptation and Vulnerability,[12] as well as the California Natural Resources Agency's report *Safeguarding California: Reducing Climate Risk*[13] climate change impacts to California may include:

- Increasing evaporation;
- Rearrangement of ecosystems as species and ecosystems shift northward and to higher elevations;
- Increased frequency, duration, and intensity of conditions conducive to air pollution formation (particularly ozone);
- Reduced precipitation, changes to precipitation and runoff patterns, reduced snowfall (precipitation occurring as rain instead of snow), earlier snowmelt, decreased snowpack, and increased agricultural demand for water;
- Increased experiences of heat waves;
- Increased growing season and increased growth rates of weeds, insect pests and pathogens;
- Inundation by sea level rise, and exacerbated shoreline erosion; and
- Increased incidents and severity of wildfire events and expansion of the range and increased frequency of pest outbreaks.

4.2.3 REGULATORY CONTEXT

Air quality and GHG emissions are monitored and regulated through the efforts of various international, federal, State, and local government agencies. Agencies work jointly and individually to improve air quality through legislation, regulations, planning, policy-making, education, and a variety of programs. The agencies responsible for regulating and improving the air quality within the project area and monitoring or reducing GHG emissions are discussed below.

Federal Regulations

The most prominent federal regulation is the Federal Clean Air Act (FCAA), which is implemented and enforced by the USEPA.

FCAA and USEPA

The FCAA requires the USEPA to set NAAQS and designate areas with air quality not meeting NAAQS as nonattainment. The USEPA is responsible for enforcement of NAAQS for atmospheric pollutants and regulates emission sources that are under the exclusive authority of the federal government including emissions of GHGs. The USEPA's air quality mandates are drawn primarily from the FCAA, which was signed into law in 1970. Congress substantially amended the FCAA in 1977 and again in 1990. The USEPA has adopted policies consistent with FCAA requirements demanding states to prepare SIPs that demonstrate attainment and maintenance of the NAAQS. In order to track GHG emissions, the USEPA develops official U.S. GHG inventories each year, which account for emissions, and removals of GHG by sinks (the uptake of carbon and storage in forests, vegetation, and soils).

On December 7, 2009, USEPA issued findings under Section 202(a) of the FCAA concluding that GHGs are pollutants that could endanger public health. Under the so-called Endangerment Finding, USEPA found that the current and projected concentrations of the six key, well-mixed

[12] Intergovernmental Panel on Climate Change. *Climate Change 2007: Impacts, Adaptation, and Vulnerability.* 2007.
[13] California Natural Resources Agency. *Safeguarding California: Reducing Climate Risk*. July 2014.

GHGs – CO_2, CH_4, N_2O, perfluorochemicals (PFCs), sulfur hexafluoride (SF_6), and hydrofluorocarbons (HFCs) – in the atmosphere threaten the public health and welfare of current and future generations. These findings do not, by themselves, impose any requirements on industry or other entities.

State Regulations

California has adopted a variety of regulations aimed at reducing air pollution and GHG emissions. Only the most prominent and applicable California air quality- and GHG-related legislation is included below; however, an exhaustive list and extensive details of California air quality legislation can be found at the CARB website (http://www.arb.ca.gov/html/lawsregs.htm).

CCAA and CARB

The CARB is the agency responsible for coordination and oversight of State and local air pollution control programs in California and for implementing the CCAA. The CCAA requires that air quality plans be prepared for areas of the State that have not met the CAAQS for ozone, CO, NO_X, and SO_2. Among other requirements of the CCAA, the plans must include a wide range of implementable control measures, which often include transportation control measures and performance standards. In order to implement the transportation-related provisions of the CCAA, local air pollution control districts have been granted explicit authority to adopt and implement transportation controls. The CARB, California's air quality management agency, regulates and oversees the activities of county air pollution control districts and regional air quality management districts. The CARB regulates local air quality indirectly using State standards and vehicle emission standards, by conducting research activities, and through planning and coordinating activities. In addition, the CARB has primary responsibility in California to develop and implement air pollution control plans designed to achieve and maintain the NAAQS established by the USEPA. Furthermore, the CARB is charged with developing rules and regulations to cap and reduce GHG emissions.

State Legislation Related to Air Quality

Although significant overlap exists between regulations related to air quality and GHG emissions, to the extent feasible, the following section provides the regulations related to air quality in California.

Air Quality and Land Use Handbook

CARB's *Air Quality and Land Use Handbook: A Community Health Perspective* (CARB Handbook) addresses the importance of considering health risk issues when siting sensitive land uses, including residential development, in the vicinity of intensive air pollutant emission sources including freeways or high-traffic roads, distribution centers, ports, petroleum refineries, chrome plating operations, dry cleaners, and gasoline dispensing facilities.[14] The CARB Handbook draws upon studies evaluating the health effects of traffic traveling on major interstate highways in metropolitan California centers within Los Angeles (I-405 and I-710), the San Francisco Bay, and San Diego areas. The recommendations identified by CARB, including siting residential uses a minimum distance of 500 feet from freeways or other high-traffic roadways, are consistent with those adopted by the State of California for location of new schools. Specifically, the CARB Handbook recommends, "Avoid siting new sensitive land

[14] California Air Resources Board. *Air Quality and Land Use Handbook: A Community Health Perspective*. April 2005.

uses within 500 feet of a freeway, urban roads with 100,000 vehicles/day, or rural roads with 50,000 vehicles/day".[15]

Importantly, the Introduction chapter of the CARB Handbook clarifies that the guidelines are strictly advisory, recognizing that: "[l]and use decisions are a local government responsibility. The CARB Handbook is advisory and these recommendations do not establish regulatory standards of any kind." CARB recognizes that there may be land use objectives as well as meteorological and other site-specific conditions that need to be considered by a governmental jurisdiction relative to the general recommended setbacks, specifically stating, "[t]hese recommendations are advisory. Land use agencies have to balance other considerations, including housing and transportation needs, economic development priorities, and other quality of life issues".[16]

Assembly Bill 1807

Assembly Bill (AB) 1807, enacted in September 1983, sets forth a procedure for the identification and control of TACs in California. CARB is responsible for the identification and control of TACs, except pesticide use, which is regulated by the California Department of Pesticide Regulation.

AB 2588

The Air Toxics Hot Spots Information and Assessment Act of 1987 (AB 2588), California Health and Safety Code Section 44300 *et seq*., provides for the regulation of over 200 TACs, including DPM, and is the primary air contaminant legislation in California. Under the act, local air districts may request that a facility account for its TAC emissions. Local air districts then prioritize facilities on the basis of emissions, and high priority designated facilities are required to submit a health risk assessment and communicate the results to the affected public.

Asbestos Airborne Toxic Control Measure for Construction, Grading, Quarrying, and Surface Mining Operations

In 2002, the Asbestos Airborne Toxic Control Measure (ATCM) for Construction, Grading, Quarrying, and Surface Mining Operations (Title 17, Section 93105, of the California Code of Regulations) went into effect, which requires each air pollution control and air quality management district to implement and enforce the requirements of Section 93105 and propose their own asbestos ATCM as provided in Health and Safety Code section 39666(d).[17]

Senate Bill 656

In 2003, the Legislature passed Senate Bill (SB) 656 to reduce public exposure to PM_{10} and $PM_{2.5}$ above the State CAAQS. The legislation requires the CARB, in consultation with local air pollution control and air quality management districts, to adopt a list of the most readily available, feasible, and cost-effective control measures that could be implemented by air districts to reduce PM_{10} and $PM_{2.5}$ emissions. The CARB list is based on California rules and regulations existing as of January 1, 2004, and was adopted by CARB in November 2004. Categories addressed by SB 656 include measures for reduction of emissions associated with residential wood combustion and outdoor greenwaste burning, fugitive dust sources such as paved and unpaved roads and construction,

[15] California Air Resources Board. *Air Quality and Land Use Handbook: A Community Health Perspective*. April 2005.
[16] Ibid
[17] California Air Resources Board. *2002-07-29 Asbestos ATCM for Construction, Grading, Quarrying, and Surface Mining Operations*. June 3, 2015. Available at: http://www.arb.ca.gov/toxics/atcm/asb2atcm.htm. Accessed April 2020.

combustion sources such as boilers, heaters, and charbroiling, solvents and coatings, and product manufacturing. Some of the measures include, but are not limited to, the following:

- Reduce or eliminate wood-burning devices allowed;
- Prohibit residential open burning;
- Permit and provide performance standards for controlled burns;
- Require water or chemical stabilizers/dust suppressants during grading activities;
- Limit visible dust emissions beyond the project boundary during construction;
- Require paving/curbing of roadway shoulder areas; and
- Require street sweeping.

Under SB 656, each air district is required to prioritize the measures identified by CARB, based on the cost effectiveness of the measures and their effect on public health, air quality, and emission reductions. Per SB 656 requirements, the BAAQMD amended the existing public awareness project to provide additional outreach and educational resources, enhanced the existing wood-burning ordinance, and amended the existing program aimed at the voluntary curtailment of wood burning by adjusting the "Spare the Air Tonight" thresholds.

Heavy-Duty Vehicle Idling Emission Reduction Program

On October 20, 2005, CARB approved a regulatory measure to reduce emissions of toxics and criteria pollutants by limiting idling of new and in-use sleeper berth equipped diesel trucks.[18] The regulation consists of new engine and in-use truck requirements and emission performance requirements for technologies used as alternatives to idling the truck's main engine. For example, the regulation requires 2008 and newer model year heavy-duty diesel engines to be equipped with a non-programmable engine shutdown system that automatically shuts down the engine after five minutes of idling, or optionally meet a stringent NO_X emission standard. The regulation also requires operators of both in-state and out-of-state registered sleeper berth equipped trucks to manually shut down their engine when idling more than five minutes at any location within California beginning in 2008. Emission producing alternative technologies such as diesel-fueled auxiliary power systems and fuel-fired heaters are also required to meet emission performance requirements that ensure emissions are not exceeding the emissions of a truck engine operating at idle.

In-Use Off-Road Diesel Vehicle Regulation

On July 26, 2007, CARB adopted a regulation to reduce DPM and NO_X emissions from in-use (existing), off-road, heavy-duty diesel vehicles in California.[19] Such vehicles are used in construction, mining, reclamation, and industrial operations. The regulation is designed to reduce harmful emissions from vehicles by subjecting fleet owners to retrofit or accelerated replacement/repower requirements, imposing idling limitations on owners, operators, renters, or lessees of off-road diesel vehicles. The idling limits require operators of applicable off-road vehicles (self-propelled diesel-fueled vehicles 25 horsepower and up that were not designed to be driven on-road) to limit idling to less than five minutes. The idling requirements are specified in Title 13 of the California Code of Regulations.

---

[18] California Air Resources Board. *Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling*. October 24, 2013. Available at: http://www.arb.ca.gov/msprog/truck-idling/truck-idling.htm. Accessed August 2019.

[19] California Air Resources Board. *In-Use Off-Road Diesel Vehicle Regulation*. December 10, 2014. Available at: http://www.arb.ca.gov/msprog/ordiesel/ordiesel.htm. Accessed August 2019.

State Legislation Related to GHG Emissions

Although significant overlap exists between regulations related to air quality and GHG emissions, to the extent feasible, the following section provides the regulations related to GHG emissions in California.

Executive Order S-03-05

On June 1, 2005, then-Governor Schwarzenegger signed Executive Order S-03-05, which established total GHG emission targets. Specifically, emissions are to be reduced to year 2000 levels by 2010, 1990 levels by 2020, and to 80 percent below 1990 levels by 2050. The Executive Order directed the Secretary of the California Environmental Protection Agency (Cal-EPA) to coordinate a multi-agency effort to reduce GHG emissions to the target levels. The Secretary is also directed to submit biannual reports to the governor and state legislature describing: (1) progress made toward reaching the emission targets; (2) impacts of global warming on California's resources; and (3) mitigation and adaptation plans to combat these impacts.

To comply with the Executive Order, the Secretary of the Cal-EPA created a Climate Action Team (CAT) made up of members from various State agencies and commissions. In March 2006, CAT released their first report. In addition, the CAT has released several "white papers" addressing issues pertaining to the potential impacts of climate change on California.

Executive Order S-01-07

On January 18, 2007, then-Governor Schwarzenegger signed Executive Order S-01-07, which mandates that a State-wide goal be established to reduce carbon intensity of California's transportation fuels by at least 10 percent by 2020. The Order also requires that a Low Carbon Fuel Standard (LCFS) for transportation fuels be established for California.

Executive Order S-13-08

Then-Governor Arnold Schwarzenegger issued Executive Order S-13-08 on November 14, 2008. The Executive Order is intended to hasten California's response to the impacts of global climate change, particularly sea level rise, and directs state agencies to take specified actions to assess and plan for such impacts, including requesting the National Academy of Sciences to prepare a Sea Level Rise Assessment Report, directing the Business, Transportation, and Housing Agency to assess the vulnerability of the State's transportation systems to sea level rise, and requiring the Office of Planning and Research and the Natural Resources Agency to provide land use planning guidance related to sea level rise and other climate change impacts.

The order also required State agencies to develop adaptation strategies to respond to the impacts of global climate change that are predicted to occur over the next 50 to 100 years. The adaption strategies report summarizes key climate change impacts to the State for the following areas: public health; ocean and coastal resources; water supply and flood protection; agriculture; forestry; biodiversity and habitat; and transportation and energy infrastructure. The report recommends strategies and specific responsibilities related to water supply, planning and land use, public health, fire protection, and energy conservation.

Executive Order B-55-18

On September 10, 2018, then-Governor Brown established a statewide goal of carbon neutrality as soon as possible, and no later than 2045. Following achievement of carbon neutrality, net negative emissions should be pursued as the new emissions goal. The executive order directed

the CARB to work with relevant state agencies to develop frameworks for implementation and tracking of the new goal, and further directed the CARB to support the carbon neutrality goal through future updates to the State Scoping Plan. The implementation of carbon sequestration targets and projects for natural and working lands is identified as a necessary measure to achieve carbon neutrality and net negative emissions.

AB 1493

California AB 1493 (Stats. 2002, ch. 200) (Health & Safety Code, §42823, 43018.5), known as Pavley I, was enacted on July 22, 2002. AB 1493 requires that the CARB develop and adopt regulations that achieve "the maximum feasible reduction of GHGs emitted by passenger vehicles and light-duty truck and other vehicles determined by the CARB to be vehicles whose primary use is noncommercial personal transportation in the state." On June 30, 2009, the USEPA granted a waiver of CAA preemption to California for the State's GHG emission standards for motor vehicles, beginning with the 2009 model year. Pursuant to the CAA, the waiver allows for the State to have special authority to enact stricter air pollution standards for motor vehicles than the federal government's. On September 24, 2009, the CARB adopted amendments to the Pavley regulations (Pavley I) that reduce GHG emissions in new passenger vehicles from 2009 through 2016. The second phase of the Pavley regulations (Pavley II) is expected to affect model year vehicles from 2016 through 2020. The CARB estimates that the regulation would reduce GHG emissions from the light-duty passenger vehicle fleet by an estimated 18 percent in 2020 and by 27 percent in 2030.

AB 1007

AB 1007, State Alternative Fuels Plan (Pavley, Chapter 371, Statutes of 2005), required development and adoption of a State plan to increase the use of alternative fuels. The final *State Alternative Fuels Plan* was adopted on December 5, 2007 and presented strategies and actions California must take to increase the use of alternative, non-petroleum fuels in a manner that minimizes costs to California and maximizes the economic benefits of in-state production. Examples of such strategies include establishment of government incentive programs for alternative fuels, creation of a LCFS to reduce the carbon intensity of transportation fuels, and the allowance of GHG emissions credits to entities using alternatively fueled vehicles. The plan assessed various alternative fuels and developed fuel portfolios to meet California's goals to reduce petroleum consumption, increase alternative fuels use, reduce GHG emissions, and increase in-state production of biofuels without causing a significant degradation of public health and environmental quality. The Plan recommended goals for alternative fuel use as well as reductions in the carbon intensities of fuels such as gasoline and diesel, and lays a foundation for building a multi-fuel transportation energy future for California by 2050. As of 2017, decreases in the carbon intensity of conventional fuels have met or exceeded the compliance targets, and the use of alternative fuels has increased by approximately 800 million gallons of gas equivalence units.[20]

AB 32

In September 2006, AB 32, the California Climate Solutions Act of 2006, was enacted (Stats. 2006, ch. 488) (Health & Saf. Code, §38500 et seq.). AB 32 delegated the authority for its implementation to the CARB and directs CARB to enforce the State-wide cap. Among other

[20] California Air Resources Board. *Low Carbon Fuel Standard Data Dashboard*. Available at: https://www.arb.ca.gov/fuels/lcfs/dashboard/dashboard.htm. Accessed May 2019.

requirements, AB 32 required CARB to (1) identify the State-wide level of GHG emissions in 1990 to serve as the emissions limit to be achieved by 2020, and (2) develop and implement a Scoping Plan. Accordingly, the CARB has prepared the *Climate Change Scoping Plan* (Scoping Plan) for California, which was approved in 2008 and updated in 2014 and 2017.[21] The following sections present further information regarding plans and programs that have been introduced in order to meet the statutory requirements of AB 32.

California Scoping Plan

The 2008 Scoping Plan identified GHG reduction measures that would be necessary to reduce statewide emissions as required by AB 32. Many of the GHG reduction measures identified in the 2008 Scoping Plan have been adopted, such as the LCFs, Pavley, Advanced Clean Car standards, Renewables Portfolio Standard (RPS), and the State's Cap-and-Trade system.

Building upon the 2008 Scoping Plan, the 2013 and 2017 Scoping Plan Updates introduced new strategies and recommendations to continue GHG emissions reductions. The 2013 Scoping Plan Update created a framework for achievement of 2020 GHG reduction goals and identified actions that may be built upon to continue GHG reductions past 2020, as required by AB 32. Following the 2013 Scoping Plan, the 2017 Scoping Plan sets a path for the achievement of California's year 2030 GHG reduction goals.

California GHG Cap-and-Trade Program

California's GHG Cap-and-Trade Program was originally envisioned in the 2008 Scoping Plan as a key strategy to achieve GHG emissions reductions mandated by AB 32. The Cap-and-Trade Program is intended to put California on the path to meet the GHG emission reduction goal of 1990 levels by the year 2020, and ultimately achieving an 80 percent reduction from 1990 levels by 2050. Under cap-and-trade, an overall limit on GHG emissions from capped sectors has been established and facilities or industries subject to the cap are be able to trade permits (allowances) to emit GHGs. The CARB designed the California Cap-and-Trade Program to be enforceable and to meet the requirements of AB 32.[22] The Program started on January 1, 2012, with an enforceable compliance obligation beginning with the 2013 GHG emissions. On January 1, 2014 California linked the state's cap-and-trade plan with Quebec's, and on January 1, 2015 the program expanded to include transportation and natural gas fuel suppliers.[23] AB 398 was adopted by the State's legislature in July 2017, which reauthorized the Cap-and-Trade Program through December 31, 2030. The reauthorization and continued operation of the Cap-and-Trade Program represents a key strategy within the State's 2017 Scoping Plan Update for the achievement of California's year 2030 GHG reduction goals.

AB 197 and SB 32

On September 8, 2016, AB 197 and SB 32 were enacted with the goal of providing further control over GHG emissions in the State. SB 32 built on previous GHG reduction goals by requiring that the CARB ensure that statewide GHG emissions are reduced to 40 percent below the 1990 level by the year 2030. Additionally, SB 32 emphasized the critical role that reducing GHG emissions would play in protecting disadvantaged communities and the public health from adverse impacts

[21] California Air Resources Board. *AB 32 Scoping Plan*. Available at: https://www.arb.ca.gov/cc/scopingplan/scopingplan.htm. Accessed August 2019.
[22] California Air Resources Board. *Overview of ARB Emissions Trading Program*. Available at: https://www.arb.ca.gov/cc/capandtrade/guidance/cap_trade_overview.pdf. Accessed August 2019.
[23] Ibid

of climate change. Enactment of SB 32 was predicated on the enactment of AB 197, which seeks to make the achievement of SB 32's mandated GHG emission reductions more transparent to the public and responsive to the Legislature. Transparency to the public is achieved by AB 197 through the publication of an online inventory of GHG and TAC emissions from facilities required to report such emissions pursuant to Section 38530 of California's Health and Safety Code. AB 197 further established a six-member Joint Legislative Committee on Climate Change Policies, which is intended to provide oversight and accountability of the CARB, while also adding two new legislatively-appointed, non-voting members to the CARB. Additionally, AB 197 directs the CARB to consider the "social costs" of emission reduction rules and regulations, with particular focus on how such measures may impact disadvantaged communities.

SB 100 and Renewable Portfolio Standards (RPS)

Established in 2002 under SB 1078, accelerated in 2006 under SB 107, and expanded in 2011 under SB 2, California's RPS is one of the most ambitious renewable energy standards in the country. The RPS program requires investor-owned utilities, electric service providers, and community choice aggregators to increase procurement from eligible renewable energy resources to 33 percent of total procurement by 2020.

Since the inception of the RPS program, the program has been extended and enhanced multiple times. In 2015, SB 350 extended the State's RPS program by requiring that publicly owned utilities procure 50 percent of their electricity from renewable energy sources by 2030. The requirements of SB 350 were expanded and intensified in 2018 through the adoption of SB 100, which mandated that all electricity generated within the State by publicly owned utilities be generated through carbon-free sources by 2045. In addition, SB 100 increased the previous renewable energy requirement for the year 2030 by 10 percent; thus requiring that 60 percent of electricity generated by publicly owned utilities originate from renewable sources by 2030.

SB 97

As amended, SB 97, signed in August 2007, acknowledges that climate change is an important environmental issue that requires analysis under CEQA. The bill directed the Governor's Office of Planning and Research (OPR) to prepare, develop, and transmit to the Resources Agency guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions. As directed by SB 97, the OPR amended the CEQA Guidelines to provide guidance to public agencies regarding the analysis and mitigation of GHG emissions and the effects of GHG emissions in CEQA documents. The amendments included revisions to the *Appendix G Initial Study Checklist* that incorporated a new subdivision to address project-generated GHG emissions and contribution to climate change. The new subdivision emphasizes that the effects of GHG emissions are cumulative and should be analyzed in the context of CEQA's requirements for cumulative impacts analysis. Under the revised CEQA Appendix G checklist, an agency should consider whether a project would generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment, and whether a project conflicts with an applicable plan, policy, or regulation adopted for the purpose of reducing emission of GHGs.

Further guidance based on SB 97 suggests that the lead agency make a good-faith effort, based on available information, to describe, calculate, or estimate the amount of GHG emissions resulting from a project. When assessing the significance of impacts from GHG emissions on the environment, lead agencies should consider the extent to which the project may increase or reduce GHG, as compared to the existing environmental setting, whether the project emissions exceed a threshold of significance determined applicable to the project, and/or the extent to which

the project complies with adopted regulations or requirements to implement a state wide, regional, or local plan for the reduction or mitigation of GHG emissions. Feasible mitigation under SB 97 includes on-site and off-site measures, such as GHG emission-reducing design features and GHG sequestration.

SB 375

In September 2008, SB 375, known as the Sustainable Communities and Climate Protection Act of 2008, was enacted, which is intended to build on AB 32 by attempting to control GHG emissions by curbing sprawl. SB 375 enhances CARB's ability to reach goals set by AB 32 by directing CARB to develop regional GHG emission reduction targets to be achieved by the State's 18 metropolitan planning organizations (MPOs), including the Association of Bay Area Governments (ABAG). Under SB 375, MPOs must align regional transportation, housing, and land-use plans and prepare a "Sustainable Communities Strategy" (SCS) to reduce the amount of vehicle miles traveled in their respective regions and demonstrate the region's ability to attain its greenhouse gas reduction targets. SB 375 provides incentives for creating walkable and sustainable communities and revitalizing existing communities, and allows home builders to get relief from certain environmental reviews under CEQA if they build projects consistent with the new sustainable community strategies. Furthermore, SB 375 encourages the development of alternative transportation options, which will reduce traffic congestion.

Local Regulations

The following are the regulatory agencies and regulations pertinent to the proposed project on a local level.

Plan Bay Area 2040

Plan Bay Area 2040 is a long-range integrated transportation and land use/housing strategy through 2040 for the San Francisco Bay Area, designed to reduce GHG emissions from cars and light-duty trucks. On July 18, 2013, the Plan was jointly approved by the Metropolitan Transportation Commission (MTC) and the ABAG. Pursuant to SB 375, the Plan includes the region's Sustainable Communities Strategy (SCS) and 2040 Regional Transportation Plan. Plan Bay Area 2040 provides a strategy for meeting 80 percent of the region's future housing needs in Priority Development Areas (PDAs). While intended to accommodate the region's housing needs, as a SCS, the Plan Bay Area 2040 is required to comply with regional targets for reducing GHG emissions through the integration of transportation and land use planning.[24] The plan assists jurisdictions seeking to implement the plan at the local level by providing funding for PDA planning and transportation projects. Plan Bay Area also provides jurisdictions with the option of increasing the efficiency of the development process for projects consistent with the plan and other criteria included in SB 375.

Plan Bay Area 2040 anticipates that from 2010 to 2040, San Mateo County is projected to experience seven percent of the total regional housing growth, or an estimated 60,000 additional households. In addition, the County is anticipated to take ten percent of the region's job growth, or 129,000 new jobs, the majority of which will be in PDAs. The project site is not located within a PDA.

[24] Association of Bay Area Governments and Metropolitan Transportation Commission. *Plan Bay Area 2040: Final.* Available at: http://2040.planbayarea.org/reports. Accessed December 2019.

Bay Area Air Quality Management District

The BAAQMD is the public agency entrusted with regulating stationary sources of air pollution in the nine counties that surround San Francisco Bay: Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, southwestern Solano, and southern Sonoma counties. The BAAQMD has prepared their own *CEQA Air Quality Guidelines* (May 2017), which is intended to be used for assistance with CEQA review. The BAAQMD CEQA Air Quality Guidelines include thresholds of significance and project screening levels for criteria air pollutants (ROG, NO_X, PM_{10}, and $PM_{2.5}$), GHGs, TACs, CO, and odors, as well as methods to assess and mitigate project-level and plan-level impacts.

Regional Air Quality Plans

As discussed above, the 2001 Ozone Attainment Plan was prepared as a revision to the Bay Area part of the SIP to achieve the federal ozone standard. The plan was adopted on October 24, 2001, approved by the CARB on November 1, 2001, and was submitted to the USEPA on November 30, 2001 for review and approval as a revision to the SIP. In addition, in order to fulfill federal air quality planning requirements, the BAAQMD adopted a $PM_{2.5}$ emissions inventory for the year 2010, which was submitted to the USEPA on January 14, 2013 for inclusion in the SIP.

The most recent State ozone plan is the 2017 CAP, adopted on April 19, 2017. The 2017 CAP was developed as a multi-pollutant plan that provides an integrated control strategy to reduce ozone, PM, TACs, and GHGs. Although the CCAA does not require the region to submit a plan for achieving the State PM_{10} standard, the BAAQMD has prioritized measures to reduce PM in developing the control strategy for the 2017 CAP. It should be noted that on January 9, 2013, the USEPA issued a final rule to determine that the San Francisco Bay Area has attained the 24-hour $PM_{2.5}$ federal standard, which suspends federal SIP planning requirements for the Bay Area.

The aforementioned applicable air quality plans contain mobile source controls, stationary source controls, and transportation control measures to be implemented in the region to attain the State and federal standards within the SFBAAB. The plans are based on population and employment projections provided by local governments, usually developed as part of the General Plan update process.

Rules and Regulations

All projects under the jurisdiction of the BAAQMD are required to comply with all applicable BAAQMD rules and regulations. Applicable BAAQMD's regulations and rules include, but are not limited to, the following:

- Regulation 2: Permits
  - Rule 5: New Source Review of Toxic Air Contaminants
- Regulation 6: Particulate Matter and Visible Emissions
  - Rule 2: Commercial Cooking Equipment
  - Rule 3: Wood-burning Devices
- Regulation 7: Odorous Substances
- Regulation 8: Organic Compounds
  - Rule 3: Architectural Coatings
- Regulation 11: Hazardous Pollutants
  - Rule 2: Asbestos Demolition, Renovation and Manufacturing

City of Pacifica General Plan (1980)

The current City of Pacifica General Plan includes the following action items and policies.

Conservation Element

Action Item 4. Request the Regional Air Quality Control Office to establish a simple method of regularly monitoring air quality in Pacifica.

Coastal Zone Land Use Plan Policies

Policy 26: New development shall:

(c) Be consistent with requirements imposed by an air pollution control district or the State Air Resources Control Board as to each particular development.

Policy 33: In addition to meeting all applicable air quality standards, new or expanded refineries or petrochemical facilities shall be permitted in areas designated as air quality maintenance areas by the State Air Resources Board and in areas where coastal resources would be adversely affected only if the negative impacts of the project upon air quality are offset by reductions in gaseous emissions in the area by the users of fuels, or in the case of an expansion of an existing site, total site emission levels, and site levels for each emission type for which national or State ambient air quality standards have been established, do not increase.

City of Pacifica Climate Action Plan

In July of 2014, the City of Pacifica adopted a Climate Action Plan (CAP) that is intended to guide reduction of GHG emissions associated with existing operations and future development in the City.[25] The GHG inventory contained in the City's CAP was derived based on the land use designations and associated densities defined in the City's General Plan. Additionally, the CAP establishes a number of reduction measures, including the use of renewable energy, safe routes to school, and water conservation incentives.

Although the CAP does not include quantitative thresholds to assess a project's compliance with the CAP, projects that are in compliance with AB 32 would be considered compliant with the CAP. For instance, project's showing emissions reductions as required by AB 32, or projects incorporating reduction strategies from the CAP are understood to be in compliance with the CAP's GHG emissions reductions goals.

4.2.4 IMPACTS AND MITIGATION MEASURES

The standards of significance and methodology used to analyze and determine the proposed project's potential project-specific impacts related to air quality and GHG emissions are described below. In addition, a discussion of the project's impacts, as well as mitigation measures where necessary, is also presented.

[25] City of Pacifica. *Climate Action Plan*. July 14, 2014.

Standards of Significance

Based on the recommendations of BAAQMD and in coordination with the City, consistent with Appendix G of the CEQA Guidelines, the effects of a project are evaluated to determine if they would result in a significant adverse impact on the environment. For the purposes of this EIR, an impact is considered significant if the proposed project would:

- Conflict with or obstruct implementation of the applicable air quality plan;
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors);
- Expose sensitive receptors to substantial pollutant concentrations (including localized CO concentrations and TAC emissions);
- Result in other emissions (such as those leading to odors) affecting a substantial number of people;
- Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment; or
- Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of GHGs.

Criteria Pollutant Emissions

The air quality and GHG emissions analysis in this EIR uses the thresholds for criteria pollutants, localized CO, TAC emissions, and GHG emissions as discussed below.

The BAAQMD thresholds of significance for ozone precursor and PM emissions are presented in Table 4.2-6 and are expressed in pounds per day (lbs/day) for construction and operational average daily emissions and tons per year (tons/year) for maximum annual operational emissions. In addition to the thresholds of significance presented below for criteria air pollutants of particular concern for the Bay Area, BAAQMD has developed thresholds for GHG emissions, localized CO emissions, and TACs. Pursuant to CEQA Guidelines Section 15064.4(b)(2), the lead agency is charged with determining a threshold of significance that is applicable to the project. For the analysis within this EIR, the City has elected to use the BAAQMD's thresholds of significance.

Table 4.2-6
BAAQMD Thresholds of Significance

Pollutant	Construction	Operational	
	Average Daily Emissions (lbs/day)	Average Daily Emissions (lbs/day)	Maximum Annual Emissions (tons/year)
ROG	54	54	10
NO_X	54	54	10
PM_{10}	82 (exhaust)	82	15
$PM_{2.5}$	54 (exhaust)	54	10

Source: BAAQMD, CEQA Guidelines, May 2017.

Localized CO Emissions

If a project would cause localized CO emissions to exceed the 1-hour and 8-hour CAAQS of 20.0 parts per million (ppm) and 9.0 ppm, respectively, BAAQMD would consider the project to result

in a significant impact to air quality. In order to provide a conservative indication of whether a project would result in localized CO emissions that would exceed the applicable threshold of significance, the BAAQMD has established screening criteria for localized CO emissions. According to BAAQMD, a project would result in a less-than-significant impact related to localized CO emission concentrations if the following screening criteria are met:

- The project is consistent with an applicable congestion management program established by the county congestion management agency for designated roads or highways, regional transportation plan, and local congestion management agency plans;
- The project traffic would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour; and
- The project traffic would not increase traffic volumes at affected intersections to more than 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited (e.g., tunnel, parking garage, underpass, etc.).

TAC Emissions

According to BAAQMD, a significant impact related to TACs would occur if a new source would cause any of the following:

- An increase in cancer risk levels of more than 10 persons in one million;
- A non-cancer (chronic or acute) hazard index greater than 1.0; or
- An annual average $PM_{2.5}$ concentration of 0.3 micrograms per cubic meter ($\mu g/m^3$) or greater.

An impact associated with TACs would also occur if the aggregate total of all past, present, and foreseeable future sources within a 1,000-foot radius from the fence line of a source, or from the location of a receptor, plus the contribution from the project, would exceed the following:

- An increase in cancer risk levels (from all local sources) of more than 100 persons in one million;
- A chronic non-cancer hazard index (from all local sources) greater than 10.0; or
- An annual average $PM_{2.5}$ concentration (from all local sources) of 0.8 $\mu g/m^3$ or greater.

The foregoing risk thresholds are intended for use in analyzing potential impacts related to the siting of a new source of emissions. In order to address potential public health impacts associated with truck hauling and heavy equipment use, this analysis includes a full health risk assessment. Detailed analysis and modeling results related to emissions from nearby sources of TACs are included as Appendix E to this EIR.

GHG Emissions

The BAAQMD developed a threshold of significance for project-level GHG emissions in 2009. The District's approach to developing the threshold was to identify a threshold level of GHG emissions for which a project would not be expected to substantially conflict with existing California legislation. At the time that the thresholds were developed, the foremost legislation regarding GHG emissions was AB 32, which established an emissions reductions goal of reducing

statewide emissions to 1990 levels by 2020.[26] If a project would generate GHG emissions above the threshold level, the project would be considered to generate significant GHG emissions and conflict with AB 32. The GHG emissions thresholds of significance recommended by BAAQMD to determine compliance with AB 32 are as follows:

- 1,100 $MTCO_2e$/yr; or
- 4.6 $MTCO_2e$/SP/yr, where "SP" equates to service population, which is the total residents plus employees.

Because BAAQMD emissions thresholds include both a mass emissions threshold (i.e., 1,100 $MTCO_2e$/yr), and an emissions efficiency threshold (i.e., 4.6 $MTCO_2e$/SP/yr), a project may result in operational emissions in excess of 1,100 $MTCO_2e$/yr, but still avoid a significant impact by resulting in emissions below the 4.6 $MTCO_2e$/SP/yr efficiency threshold, or vice versa. It should be noted that the foregoing thresholds are intended for use in assessing operational GHG emissions only. It should be noted that implementation of the proposed project would result in reclamation-related GHG emissions only, and would not generate any additional GHG emissions during operations as compared to baseline conditions.

Since the adoption of BAAQMD's GHG thresholds of significance, the State legislature has passed AB 197 and SB 32, which builds off of AB 32 and establishes a statewide GHG reduction target of 40 percent below 1990 levels by 2030. Considering the legislative progress that has occurred regarding statewide reduction goals since the adoption of BAAQMD's standards, the emissions thresholds presented above would determine whether a proposed project would be in compliance with the 2020 emissions reductions goals of AB 32, but would not demonstrate whether a project would be in compliance with SB 32. In accordance with the changing legislative environment, the BAAQMD has begun the process of updating the District's CEQA Guidelines; however, updated thresholds of significance have not yet been adopted. In the absence of BAAQMD-adopted thresholds to assess a project's compliance with SB 32, the City has chosen to consider additional GHG emissions thresholds.

The BAAQMD has determined that projects with operational emissions equal to or less than 1,100 $MTCO_2e$/yr or 4.6 $MTCO_2e$/SP/yr would comply with the emission reductions target of 1990 levels by 2020 set forth by AB 32. SB 32 requires that by 2030 statewide emissions be reduced by 40 percent beyond the 2020 reduction target set by AB 32; therefore, in the absence of specific guidance from BAAQMD or the CARB, the City assumes that in order to meet the reduction targets of SB 32, a proposed project would be required to reduce emissions by an additional 40 percent beyond the emissions reductions currently required by BAAQMD for compliance with AB 32 by the year 2030. Assuming a 40 percent reduction from current BAAQMD targets, adjusted for the projected population, a proposed project would be in compliance with SB 32 if the project's modeled emissions did not exceed the following thresholds in the year 2030:

- 660 $MTCO_2e$/yr; or
- 2.6 $MTCO_2e$/SP/yr.

[26] Bay Area Air Quality Management District. *California Environmental Quality Act Guidelines Update: Proposed Thresholds of Significance*. December 7, 2009.

The BAAQMD has not adopted thresholds of significance for construction-related activities. As such, the aforementioned operations thresholds are applied to reclamation emissions for the purposes of this analysis.

Method of Analysis

A comparison of project-related emissions to the thresholds discussed above shall determine the significance of the potential impacts to air quality and climate change resulting from the proposed project. Emissions attributable to the proposed project which exceed the significance thresholds could have a significant effect on regional air quality and the attainment of the federal and State AAQS. Where potentially significant air quality impacts are identified, mitigation measures are described that would reduce or eliminate the impact. Details regarding the methodology and assumptions used for the proposed project's air quality impact analysis are provided below.

Criteria Pollutant Emissions from Off-Road Equipment and Haul Trucks

The proposed project's short-term criteria pollutant emissions associated with off-road equipment and haul trucks were estimated using the California Emissions Estimator Model (CalEEMod) version 2020.4.0 software, which is a statewide model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify air quality emissions from land use projects. The model applies inherent default values for various land uses, including trip generation rates based on the ITE Manual, vehicle mix, trip length, average speed, etc. However, where project-specific data was available, such data was input into the model, including the following:

- The proposed reclamation activities are anticipated to occur over approximately four years, beginning in the year 2022;
- Per applicant-provided information, 11 pieces of off-road equipment would be used throughout the reclamation period; and
- A total of 970,000 CY of material would be imported throughout the reclamation period.

The results of reclamation emissions estimations were compared to the standards of significance discussed above in order to determine the associated level of impact. All CalEEMod results are included in Appendix F to this EIR.

Health Risks

As discussed below, the proposed project would have the potential to result in the emissions of TACs. In particular, potential health risks could occur due to emissions of DPM from haul truck traffic and off-road equipment use. As a result, potential health risks posed to nearby existing receptors, including Vallemar Elementary School, were analyzed.

DPM is considered a subset of $PM_{2.5}$ emissions. Thus, the estimated concentration of $PM_{2.5}$ was used as a proxy to represent emissions of DPM. Project development activities anticipated to result in the emission of DPM include the operation of off-road equipment during earth-moving activities, and the operation of haul trucks to transport fill, and the idling of haul trucks at the project site and the intersection of SR 1 and Reina Del Mar Avenue.

Once the emissions of DPM from each source were determined, the concentration of DPM at nearby receptors was then estimated using the American Meteorological Society/Environmental

Protection Agency (AMS/EPA) Regulatory Model (AERMOD). Finally, the associated cancer risk and non-cancer hazard index were calculated using the CARB's Hotspot Analysis Reporting Program Version 2 (HARP 2) Risk Assessment Standalone Tool (RAST), which calculates the cancer and non-cancer health impacts using the risk assessment guidelines of the 2015 Office of Environmental Health Hazard Assessment (OEHHA) Guidance Manual for Preparation of Health Risk Assessments.[27] The modeling was performed in accordance with the USEPA's User's Guide for the AMS/EPA Regulatory Model – AERMOD[28] and the 2015 OEHHA Guidance Manual. The maximum annual average and maximum one-hour average concentrations from each of the aforementioned AERMOD runs were applied to HARP 2 RAST to calculate the cancer risk and non-cancer hazard index, respectively, to the maximally exposed individuals in each scenario. The exposure period in HARP 2 RAST was set to the anticipated four-year reclamation period.

In order to determine the location of existing residences, aerial images of the surrounding area were used to identify individual residences. Receptor locations were then input into AERMOD using either a single receptor point to represent a single residence, or a grid of receptor points to represent more dense or clustered housing areas. A grid of receptor points was applied to represent the entire Vallemar Elementary School campus.

GHG Emissions from Haul Trucks

A Greenhouse Gas Emissions Analysis Study was prepared for the proposed project by Rincon Consultants to analyze the proposed project's GHG impacts related to the change in vehicle miles traveled (VMT) associated with truck trips hauling soil to the project site.[29] GHG emissions associated with the net change in VMT under the proposed project was conducted using emissions factors for the San Mateo County region for year 2020 as reported by the CARB's EMFAC2017 Web Database v1.0.2 tool for EMFAC2011 vehicle categories. Additional model inputs include aggregated model years, aggregated speeds, and all fuel types.

Emission factors for Heavy-Heavy Duty Diesel Single Unit Construction Trucks, or T7 single construction trucks, were used as a conservative estimate to represent the type of haul trucks that would travel to and from the project site during the reclamation period. The proposed project would not change the number of haul truck trips occurring in the Bay Area region, but rather would redirect haul truck trips to the project site. As such, implementation of the proposed project would only change the length of haul truck trips.

GHG Emissions from Off-Road Equipment

The proposed project's GHG emissions associated with the use of off-road equipment were estimated using the California Emissions Estimator Model (CalEEMod) version 2020.4.0 software. The project-specific information presented in Table 4.2-7 was applied in the model. All CalEEMod results are included in Appendix F to this EIR.

---

27 Office of Environmental Health Hazard Assessment. *Air Toxics Hot Spots Program Risk Assessment Guidelines, Guidance Manual for Preparation of Health Risk Assessments* [pg. 8-18]. February 2015.

28 U.S. Environmental Protection Agency. *User's Guide for the AMS/EPA Regulatory Model (AERMOD)*. December 2016.

29 Rincon Consultants, Inc. *Rockaway Quarry Reclamation Project Greenhouse Gas Emissions Analysis Study*. July 2020.

Table 4.2-7
Anticipated Off-Road Equipment

Equipment	Units	Average Hours of Use Per Day	Horsepower
Excavators	1	0.32	444
Excavators	1	0.64	345
Excavators	1	4.8	264
Graders	1	0.64	183
Off-Highway Trucks	1	3.2	380
Plate Compactors	1	1.6	284
Rollers	1	0.64	33
Rubber Tired Dozers	1	3.2	215
Rubber Tired Dozers	1	4.8	307
Tractors/Loaders/Backhoes	1	6.4	315
Tractors/Loaders/Backhoes	1	0.96	197

Source: Baylands Soil Pacifica, LLC. Response to Engeo Peer Review of Geotechnical Investigation; Traffic Analysis; and On-Site Equipment Information. October 30, 2020.

Project-Specific Impacts and Mitigation Measures

Global climate change is, by nature, a cumulative impact. Emissions of GHG contribute, on a cumulative basis, to the significant adverse environmental impacts of global climate change (e.g., sea level rise, impacts to water supply and water quality, public health impacts, impacts to ecosystems, impacts to agriculture, and other environmental impacts). While GHG emissions from a project in combination with other past, present, and future projects contribute to the world-wide phenomenon of global climate change and the associated environmental impacts, a single project could not generate enough GHG emissions to contribute noticeably to a change in the global average temperature. Because the effects of GHG emissions are cumulative by nature, separate discussions for project-level and cumulative-level impacts for the proposed project are not necessary for this section of the EIR.

However, potential impacts related to air quality may occur on both a project-level and a cumulative basis. Accordingly, both a project-level and a cumulative analysis of potential air quality-related impacts are presented below.

4.2-1 Conflict with or obstruct implementation of the applicable air quality plan during reclamation. Based on the analysis below, the impact is *less than significant*.

During the reclamation period of the project, various types of equipment and vehicles would temporarily operate on the project site. The reclamation period would also consist of dust control activities, which would include use of an off-site water truck that would fill up from an appropriate water source located in the project vicinity. Reclamation-related emissions would be generated from off-road equipment, vegetation clearing and earth movement activities, workers' commute, water transport, and material hauling for the entire reclamation period. The aforementioned activities would involve the use of diesel- and gasoline-powered equipment that would generate emissions of criteria pollutants. Project reclamation activities also represent sources of fugitive dust, which includes $PM_{2.5}$ emissions. As reclamation of the proposed project would generate emissions of criteria air pollutants, including ROG, NO_X, PM_{10},

and $PM_{2.5}$ intermittently within the site and in the vicinity of the site, until all construction has been completed, construction is a potential concern, as the proposed project is located in a nonattainment area for ozone and PM.

All projects under the jurisdiction of the BAAQMD are required to implement all of the Basic Construction Mitigation Measures provided in the BAAQMD CEQA Guidelines, which include the following:

1. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
2. All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
3. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
4. All vehicle speeds on unpaved roads shall be limited to 15 mph.
5. All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
6. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.
7. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified visible emissions evaluator.
8. Post a publicly visible sign with the telephone number and person to contact at the lead agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

Using CalEEMod, the maximum construction-related emissions were estimated for development of the proposed project and are presented in Table 4.2-8. Modeling assumptions are discussed in the Method of Analysis section above.

Table 4.2-8
Maximum Unmitigated Reclamation Emissions (lbs/day)

Pollutant	Proposed Project Emissions	Threshold of Significance	Exceeds Threshold?
ROG	2.41	54	**NO**
NO_x	43.74	54	**NO**
PM_{10}*	0.90	82	**NO**
$PM_{2.5}$*	0.84	54	**NO**

Note:
* Denotes emissions from exhaust only. BAAQMD has not yet adopted PM thresholds for fugitive emissions.

Source: CalEEMod, November 2021 (see Appendix F).

As presented in Table 4.2-8, implementation of the proposed project would result in construction-related emissions of ROG, NO_X, PM_{10}, and $PM_{2.5}$ below the applicable thresholds of significance. Although BAAQMD requires that all construction activity within the SFBAAB implement the above listed Basic Construction Mitigation Measures, the proposed project was modeled without the inclusion of such measures to provide a conservative, worst-case emissions scenario. Even under the conservative assumptions used for this analysis, and should exhaust and fugitive emissions be considered together, emissions of $PM_{2.5}$ and PM_{10} would remain below the BAAQMD's thresholds of significance. Therefore, construction of the proposed project would not contribute to the region's nonattainment status for ozone or PM or could obstruct implementation of an applicable air quality plan, and a ***less-than-significant*** impact associated with construction-related emissions would occur.

Mitigation Measure(s)
None required.

4.2-2 Conflict with or obstruct implementation of the applicable air quality plan during project operation. Based on the analysis below, the impact is *less than significant*.

As noted above, the only existing source of criteria pollutant emissions would be mobile-source emissions from visitors driving to the site for recreational use. Therefore, it is not anticipated that substantially different air quality emissions would occur with the project as opposed to without the project. As such, operation of the proposed project, would not conflict with or obstruct implementation of the applicable air quality plan, and a ***less-than-significant*** impact would result.

Mitigation Measure(s)
None required.

4.2-3 Expose sensitive receptors to substantial pollutant concentrations. Based on the analysis below, the impact is *less than significant*.

The major pollutants of concern are localized CO emissions and TAC emissions, which are addressed below.

Localized CO Emissions
Localized concentrations of CO are related to the levels of traffic and congestion along streets and at intersections. Implementation of the proposed project would increase traffic volumes on streets near the project site during reclamation activities; therefore, the project would be expected to temporarily increase local CO concentrations. High levels of localized CO concentrations are only expected where background levels are high, and traffic volumes and congestion levels are high. The statewide CO Protocol document identifies signalized intersections operating at Level of Service (LOS) E or F, or projects that would result in the worsening of signalized intersections to LOS E

or F, as having the potential to result in localized CO concentrations in excess of the State or federal AAQS, as a result of large numbers of cars idling at stop lights.

In accordance with the State CO Protocol, the BAAQMD established preliminary screening criteria for determining whether the effect that a project would have on any given intersection would cause a potential CO hotspot. If the following criteria are met by the proposed project at all affected intersections, the proposed project would not be expected to result in a CO hotspot:

- The project is consistent with an applicable congestion management program established by the county congestion management agency for designated roads or highways, regional transportation plan, and local congestion management agency plans;
- The project traffic would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour; and
- The project traffic would not increase traffic volumes at affected intersections to more than 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited (e.g., tunnel, parking garage, underpass, etc.).

While BAAQMD has established the foregoing screening criteria for potential impacts, it should be noted that the SFBAAB has been in attainment of CAAQS and NAAQS for CO for more than 20 years.[30] Due to the continued attainment of CAAQS and NAAQS, and advances in vehicle emissions technologies, the likelihood that any single project would create a CO hotspot is minimal. With regard to the proposed project, based on data provided in the Traffic Analysis prepared for the proposed project,[31] the average annual daily traffic for SR 1 near the project site is 54,000 vehicles. Based on the industry standard assumption that the number of daily vehicle trips generally equals ten times the peak hour volume, it is assumed that the peak hour traffic volumes along SR 1 are approximately 5,400 trips per hour. As such, the addition of 161 haul truck trips per day would not increase volumes at surrounding intersections to 44,000 vehicles per hour. In addition, development of the proposed project would not result in the increase of traffic volumes beyond 24,000 vehicles per hour at any intersections where vertical and/or horizontal mixing is substantially limited. During project operations, traffic along local roadways is not anticipated to change, and an associated impact related to localized CO would not occur. Therefore, the project would not be expected to result in substantial levels of localized CO at surrounding intersections or generate localized concentrations of CO that would exceed standards.

TAC Emissions

As stated above, if a project would introduce a new source of TACs, a detailed health risk assessment may be required. The BAAQMD considers an increase in cancer risk levels of more than 10 in one million persons or a non-cancer hazard index greater than 1.0 to be a significant impact related to TACs. Table 4.2-9 presents the results of the health risk assessment prepared for the proposed project.

[30] Bay Area Air Quality Management District. *Air Quality Summary Reports*. Available at: http://www.baaqmd.gov/about-air-quality/air-quality-summaries. Accessed March 2020.
[31] W-Trans. *Traffic Analysis for Rockaway Quarry Reclamation Project*. July 13, 2020.

As shown in Table 4.2-9, the proposed project would not result in an increased health risk in excess of the BAAQMD's thresholds of significance, and the impact would be less than significant.

Table 4.2-9
Maximum Cancer Risk and Hazard Index Associated with DPM from Haul Trucks and Off-Road Equipment

Project Condition	Cancer Risk (per million persons)	Chronic Hazard Index	Acute Hazard Index
Proposed Project	1.13	0.00	0.00
Thresholds of Significance	*10*	*1.0*	*1.0*
Exceeds Thresholds?	**NO**	**NO**	**NO**

Sources: EMFAC 2017, AERMOD, and HARP 2 RAST, November 2021 (see Appendix E).

For informational purposes, the AERMOD results have been included as Figure 4.2-2. As depicted therein, the maximally exposed receptor, depicted by the white "X", is expected to be located southwest of the project site. The maximally exposed receptor would be subjected to those health risks presented in Table 4.2-9. The health risk at all other receptors in the project area would be less.

Criteria Pollutants

As discussed in the Existing Environmental Setting section and summarized in Table 4.2-1, criteria pollutant emissions can cause negative health effects. With regard to the proposed project, the principal criteria pollutants of concern are localized CO, ozone and PM. As discussed above, the proposed project is not anticipated to result in impacts related to localized exposure of sensitive receptors to substantial concentrations of CO. Unlike CO and many TACs, due to atmospheric chemistry and dynamics ozone and atmospheric PM typically act to impact public health on a cumulative and regional level, rather than a localized level. Due to the cumulative and regional nature of effects from criteria pollutants, the analysis of potential health effects of criteria pollutants is further discussed in Impact 4.2-5.

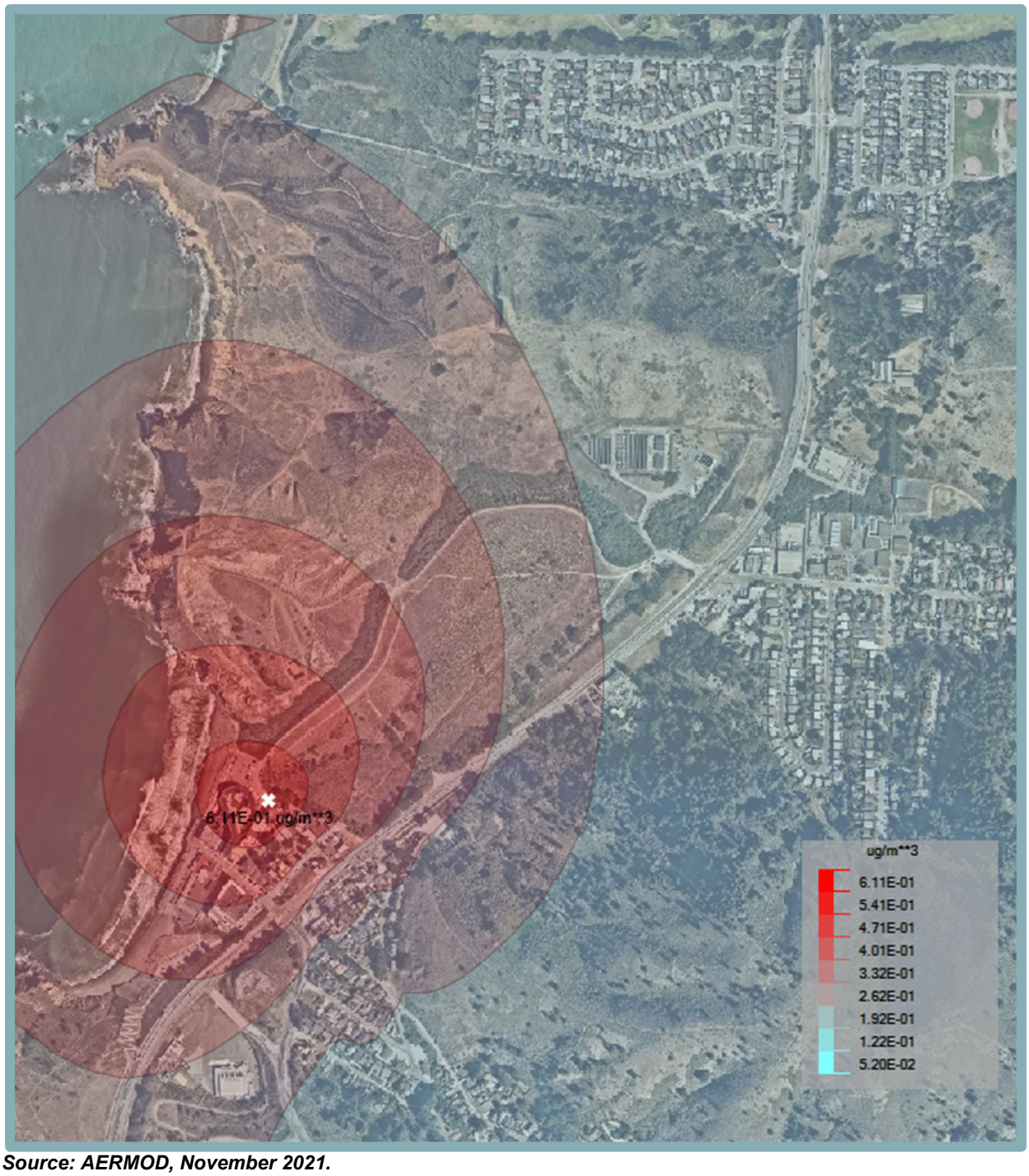
Conclusion

Based on the above analysis, the proposed reclamation project would not result in the production of substantial concentrations of localized CO, TACs, including DPM, or criteria pollutants. Therefore, the proposed project would not result in the exposure of sensitive receptors to substantial pollutant concentrations, and a ***less-than-significant*** impact would result.

Mitigation Measure(s)

None required.

Figure 4.2-2
AERMOD Results



Source: AERMOD, November 2021.

4.2-4 Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people. Based on the analysis below, the impact is *less than significant*.

Emissions of pollutants have the potential to adversely affect sensitive receptors within the project area. Pollutants of principal concern include emissions leading to odors, visible emission (including dust), or emissions considered to constitute air pollutants. Air pollutants have been discussed in Impacts 4.2-1 through 4.2-3 above. Therefore, the following discussion focuses on emissions of odors and visible emissions/dust.

Odors

Per the BAAQMD CEQA Guidelines, odors are generally regarded as an annoyance rather than a health hazard.[32] Manifestations of a person's reaction to odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache). The presence of an odor impact is dependent on a number of variables including: the nature of the odor source; the frequency of odor generation; the intensity of odor; the distance of odor source to sensitive receptors; wind direction; and sensitivity of the receptor.

Due to the subjective nature of odor impacts, the number of variables that can influence the potential for an odor impact, and the variety of odor sources, quantitative analysis to determine the presence of a significant odor impact is difficult. Typical odor-generating land uses include, but are not limited to, wastewater treatment plants, landfills, and composting facilities. The proposed project would not introduce any such land uses.

Reclamation activities would include diesel fueled equipment and heavy-duty trucks, which could create odors associated with diesel fumes that may be considered objectionable. However, reclamation activities would be temporary, requiring approximately four years in total, and operation of construction equipment would be restricted to between the hours of 7:00 AM to 6:00 PM, Monday through Friday, per Section 8-1.18(b) of the City's Municipal Code. Considering the large development area, the distances from the nearest sensitive receptors would allow for dispersal of diesel odors. Project construction would also be required to comply with all applicable BAAQMD rules and regulations, particularly associated with permitting of air pollutant sources. The aforementioned regulations would help to minimize air pollutant emissions as well as any associated odors. Accordingly, substantial objectionable odors would not be expected to occur during construction activities.

It should be noted that BAAQMD regulates objectionable odors through Regulation 7, Odorous Substances, which does not become applicable until the Air Pollution Control Officer (APCO) receives odor complaints from ten or more complainants within a 90-day period. Once effective, Regulation 7 places general limitation on odorous substances and specific emission limitations on certain odorous compounds, which remain effective until such time that citizen complaints have been

[32] Bay Area Air Quality Management District. *California Environmental Quality Act Air Quality Guidelines* [pg. 7-1]. May 2017.

received by the APCO for one year. The limits of Regulation 7 become applicable again when the APCO receives odor complaints from five or more complainants within a 90-day period. Thus, although not anticipated, if odor complaints are made after the reclamation project is complete, the BAAQMD would ensure that such odors are addressed and any potential odor effects reduced to less than significant.

Dust

As noted previously, all projects under the jurisdiction of BAAQMD are required to implement the BAAQMD's Basic Construction Mitigation Measures, including the following measures that specifically relate to dust suppression:

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
- All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
- All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- All vehicle speeds on unpaved roads shall be limited to 15 mph.
- All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.

The aforementioned measures would ensure that construction of the proposed project does not result in substantial emissions of dust.

Following project construction, the project area would be revegetated to prevent potential dust emissions and/or aerial erosion associated with exposed topsoil. The project site would be revegetated using distinct plant palettes based on site conditions. In order to ensure that revegetation is successful, a qualified biologist, restoration ecologist, or landscape architect would monitor general site conditions following completion of the Reclamation Plan in order to ensure that performance standards have been met. The performance standards shall be measured through comparisons of species richness, shrub density, plant cover, species composition, and the presence of noxious weeds. All revegetation sites would be identified on a map and monitored to assure that standards are adequately achieved within a minimum of 80 percent success rate, as required by Reclamation Standards.

Acceptable practices and performance standards have been developed as part of the Surface Mining and Reclamation Act (SMARA) while providing protection to wildlife and the successful revegetation of mined lands. Per Section 2712 (b), "The production and conservation of minerals are encouraged, while giving consideration to values relating to recreation, watershed, wildlife, range and forage, and aesthetic enjoyment." An additional 12 standards in SMARA provide principles for the protection and restoration of wildlife habitats. The aforementioned revegetation would be ensured through mandatory compliance with the provisions set forth in SMARA.

Considering successful revegetation of the site would be ensured by the Reclamation Plan monitoring and compliance with SMARA, project operations would not include any substantial sources of dust.

Conclusion

Based on the above, project construction and operations would not result in substantial emissions of visible pollutants, and project operations would not result in other emissions (such as those leading to odors). Accordingly, implementation of the proposed project would not result in emissions leading to odors, which could adversely affect a substantial number of people, and a ***less-than-significant*** impact would occur.

Mitigation Measure(s)

None required.

Cumulative Impacts and Mitigation Measures

As defined in Section 15355 of the CEQA Guidelines, "cumulative impacts" refers to two or more individual effects which, when considered together, are considerable, compound, or increase other environmental impacts. The individual effects may be changes resulting from a single project or a number of separate projects. The cumulative impact from several projects is the change in the environment that results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects.

A project's emissions may be individually limited, but cumulatively considerable when taken in combination with past, present, and future development projects. The geographic context for the cumulative air quality analysis includes San Mateo County and surrounding areas within the portion of the SFBAAB that is designated nonattainment for ozone and PM.

As mentioned above, global climate change is, by nature, a cumulative impact. Emissions of GHG contribute, on a cumulative basis, to the significant adverse environmental impacts of global climate change (e.g., sea level rise, impacts to water supply and water quality, public health impacts, impacts to ecosystems, impacts to agriculture, and other environmental impacts). A single project could not generate enough GHG emissions to contribute noticeably to a change in the global average temperature. However, the combination of GHG emissions from a project in combination with other past, present, and future projects could contribute substantially to the world-wide phenomenon of global climate change and the associated environmental impacts. Although the geographical context for global climate change is the Earth, for analysis purposes under CEQA, and due to the regulatory context pertaining to GHG emissions and global climate change applicable to the proposed project, the geographical context for global climate change in this EIR is limited to the State of California.

4.2-5 Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors). Based on the analysis below, the project's incremental contribution to this

significant cumulative impact is *less than cumulatively considerable*.

By nature, air pollution is largely a cumulative impact. The criteria pollutant emissions associated with the proposed project, in combination with other past, present, and reasonably foreseeable projects within the City of Pacifica and surrounding areas, contributes to the region's adverse air quality impacts on a cumulative basis, and could either delay attainment of AAQS or require the adoption of additional controls on existing and future air pollution sources to offset emission increases. Thus, the project's emissions of criteria air pollutants during construction would contribute to cumulative regional air quality effects.

Cumulative Health Effects of Criteria Pollutants

As noted in Table 4.2-1, exposure to criteria air pollutants can result in adverse health effects. The AAQS presented in Table 4.2-2 are health-based standards designed to ensure safe levels of criteria pollutants that avoid specific adverse health effects. Because the SFBAAB is designated as nonattainment for State and federal eight-hour ozone and State PM_{10} standards, the BAAQMD, along with other air districts in the SFBAAB region, has adopted federal and state attainment plans to demonstrate progress towards attainment of the AAQS. Full implementation of the attainment plans would ensure that the AAQS are attained and sensitive receptors within the SFBAAB are not exposed to excess concentrations of criteria pollutants. The BAAQMD's thresholds of significance were established with consideration given to the health-based air quality standards established by the AAQS, and are designed to aid the district in implementing the applicable attainment plans to achieve attainment of the AAQS.[33] Thus, if a project's criteria pollutant emissions exceed the BAAQMD's emission thresholds of significance, a project would be considered to conflict with or obstruct implementation of the BAAQMD's air quality planning efforts, thereby delaying attainment of the AAQS. Because the AAQSs are representative of safe levels that avoid specific adverse health effects, a project's hinderance of attainment of the AAQS could be considered to contribute towards regional health effects associated with the existing nonattainment status of ozone and PM standards.

However, as discussed in Impact 4.2-1 and 4.2-2, the proposed project would not result in exceedance of the BAAQMD's thresholds of significance. Consequently, implementation of the proposed project would not conflict with the BAAQMD's adopted attainment plans nor would the proposed project inhibit attainment of regional AAQS. Therefore, implementation of the proposed project would not contribute towards regional health effects associated with the existing nonattainment status of ozone and PM standards.

Conclusion

The proposed project is expected to result in emissions of ROG, NO_X, PM_{10}, and $PM_{2.5}$ that would fall below BAAQMD's thresholds of significance. Therefore, emissions resulting from project operations would not result in a cumulatively considerable net increase in criteria pollutant emissions, for which the region is in nonattainment for

[33] Bay Area Air Quality Management District. *Air Quality Guidelines* [pg. 2-1]. May 2017.

federal and state ozone standards. As such, the proposed project's incremental contribution to regional air quality impacts would be ***less than cumulatively considerable***.

Mitigation Measure(s)

None required.

4.2-6 Generation of GHG emissions that may have a significant impact on the environment or conflict with an applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of GHGs. Based on the analysis below, the project's contribution is *less than significant*.

Reclamation activities associated with the proposed project would contribute to increases of GHG emissions that are associated with global climate change during soil hauling and from the use of heavy off-road equipment. Following reclamation, GHG emissions during project operations would not exceed the baseline existing GHG emissions.

Haul Truck GHG Emissions

Haul trucks traveling to and from the project site to import soil would generate GHG emissions. According to the Traffic Analysis prepared for the proposed project, during construction, and as discussed in more detail in Chapter 4.10, Transportation, the project would generate approximately 161 haul truck trips per day and approximately 10 employee trips per day. The 10 daily employee trips would occur, as implementation of the Reclamation Plan is anticipated to require five employees on-site. Therefore, each employee would result in two daily trips as part of arriving and departing from the project site. Of the 10 daily employee trips, four trips would be net new trips because two of the five employees would be net new employees as compared to existing conditions. The 161 daily haul truck trips would not be net new trips but, rather, would be same number of existing haul truck trips that already occur throughout the Bay Area that are redirected to the project site.

Based on the Greenhouse Gas Emissions Analysis Study, VMT was calculated based on the number of daily truck trips with the assumption that trips would be split between the three origin points and six destination sites for a total of 8.9 truck trips per day between each origin and destination site. The three possible sources of soil analyzed were from sites in San Francisco, San Mateo, and Santa Clara Counties. The most distant source location in each County from the project site was also assumed, to be conservative.

As noted above and discussed in more detail in Chapter 4.10, the proposed project would re-direct the 161 daily haul truck trips from their existing destinations to the project site. As shown in Table 4.2-10, total daily VMT under existing conditions is approximately 8,721, and total daily VMT under proposed project conditions would be approximately 6,046. As compared to existing conditions, the net change in VMT associated with the proposed project was estimated to be 2,675 fewer miles. The four net new one-way employee trips would generate approximately 43.2 daily VMT.

Table 4.2-10
Change in Daily Haul Truck VMT

Scenario	Existing	With Project	Net Change
Daily VMT	8,721	6,046	(2,675)

( ) denotes a negative number.

Source: Rincon Consultants, Inc. Rockaway Quarry Reclamation Project Greenhouse Gas Emissions Analysis Study. July 2020. **(Appendix G of this EIR).**

The decrease in VMT associated with the haul trucks and the small increase in VMT associated with employee commutes directly relate to GHG emissions. Table 4.2-11 presents the change in GHG emissions that results from the change in VMT. As shown in the table, the proposed project would result in a net decrease of approximately 5.3 $MTCO_2e$ per day, or 1,388 $MTCO_2e$ per year, due to lower VMT associated with the project. Therefore, a less-than-significant impact related to haul truck and employee vehicle GHG emissions would occur.

Table 4.2-11
VMT GHG Emissions Analysis Summary

Vehicle Type	Change in VMT/Trips	Total Daily Change in GHG Emissions (gCO_2e)	Total Daily Change in GHG Emissions ($MTCO_2e$)	Total Annual Change in GHG Emissions ($MTCO_2e$)[1]
Haul Truck	(2,675 VMT)	(5,353,433.1)	(5.4)	(1,391.9)
Employee Vehicle - LDA	21.6 VMT[2]	5,836.0	0.006	1.6
Employee Vehicle – LDA	2 trips[3]	133.4	0.0001	0.03
Employee Vehicle – LDT1	21.6 VMT[2]	6,647.8	0.007	1.8
Employee Vehicle – LDT1	2 trips[3]	150.2	0.0002	0.05
Total			**(5.3)**	**(1,388.4)**

Notes:
( ) denotes a negative number.
[1] Assumes a total of 260 working days per year.
[2] Total daily employee VMT was divided equally among LDA and LDT1 trips.
[3] Total daily one-way trips were divided equally among LDA and LDT1 trips.

Source: Rincon Consultants, Inc. Rockaway Quarry Reclamation Project Greenhouse Gas Emissions Analysis Study [Table 10]. July 2020. **(Appendix G of this EIR)**

Reclamation/Off-Road Equipment GHG Emissions

GHG emissions generated from reclamation activities are a short-term release and are, therefore, not typically expected to generate a significant contribution to global climate change. Neither the City nor BAAQMD has an adopted threshold of significance for construction-related GHG emissions. Nonetheless, GHG emissions related to construction of the proposed project have been estimated. The estimated

unmitigated maximum construction-related emissions from the proposed project are presented in Table 4.2-12.

Table 4.2-12
Unmitigated On-site Reclamation GHG Emissions

Year	GHG Emissions ($MTCO_2e$/yr)	Operational Threshold of Significance ($MTCO_2e$/yr)
2022	204.98	1,100
2023	348.46	1,100
2024	351.24	1,100
2025	350.09	1,100
2026	85.84	1,100

Source: CalEEMod, November 2021 (see Appendix F).

The emissions estimates prepared for the proposed project determined that unmitigated reclamation would result in maximum annual emissions of 351.24 $MTCO_2e$/yr. As shown in the table, the reclamation-related GHG emissions would be below the 1,100 $MTCO_2e$/yr threshold for every year. As such, the proposed project would comply with AB 32.

As noted previously, the BAAQMD's current threshold of 1,100 $MTCO_2e$/yr demonstrates consistency with AB 32 and, thus, applies up to the year 2020. To demonstrate consistency with SB 32, the BAAQMD has approved use of an adjusted threshold of 660 $MTCO_2e$/yr for the year 2030. As shown in in Table 4.2-12, the reclamation GHG emissions associated with the proposed project would fall below the 660 $MTCO_2e$/yr interim threshold for every year of reclamation. Furthermore, SB 32 specifically sets an emission goal for the year 2030. Considering reclamation is anticipated to be complete in 2026, reclamation activities would not contribute to statewide GHG emissions in the year 2030. Therefore, the project would be consistent with SB 32.

Operational GHG Emissions

As noted above, implementation of the proposed project would not result in new operational emissions. In addition, the revegetation and wetland improvements proposed as part of the project would provide additional biological carbon sequestration and, thus, could result in a net decrease in GHGs. Overall, the proposed project would not result in additional GHG emissions during operations, and the impact would be less than significant.

Conclusion

Based on the discussion above, the project would not result in the generation of substantial GHG emissions from haul trucks, employee commutes, off-road equipment, or operations. Therefore, the proposed project would not be considered to generate GHG emissions, either directly or indirectly, that would have a significant impact on the environment, or conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs. Consequently, the project would not result in a cumulatively considerable incremental contribution to impacts

related to GHG emissions or climate change and the project's impact would be ***less than significant***.

Mitigation Measure(s)

None required.

4.3 Biological Resources

4.3 BIOLOGICAL RESOURCES

4.3.1 INTRODUCTION

The Biological Resources chapter of the EIR evaluates the biological resources known to occur or potentially occur within the proposed project site. The chapter describes the proposed project's potential impacts to biological resources and identifies measures to eliminate or substantially reduce impacts to a less-than-significant level. Existing plant communities, wetlands, wildlife habitats, and potential for special-status species and communities are discussed for the project region. The information contained in the analysis is primarily based on a Biological Resources Assessment[1] (BRA) and Section 7 Biological Assessment,[2] both prepared for the proposed project by WRA, Inc. In addition, WRA prepared a Memorandum to address the potential risks to water, wetlands, or wildlife in the project vicinity associated with the project Dust Control Plan's anticipated use of Gorilla-Snot.[3] Further information was sourced from the City of Pacifica General Plan.[4]

4.3.2 EXISTING ENVIRONMENTAL SETTING

The following sections describe the existing environmental setting and biological resources occurring in the proposed project region and include discussions on the regional setting in which the project site is located, the setting of the project site, the project site's vegetation communities, and special-status species potentially occurring on-site.

Regional Setting

The project site is located at the Rockaway Quarry (Quarry) on the San Mateo County Coast in the City of Pacifica, California (see Figure 3-1 and Figure 3-2 in the Project Description chapter of this EIR). The City lies in the northwestern portion of the Bay Area's peninsula climatological sub-region, in a location where generally strong winds emanate from the ocean, and within the San Francisco-Oakland-San Jose metropolitan area – the northern end of the City is only 10 miles from downtown San Francisco. The City experiences a Mediterranean climate, similar to many coastal areas within the State. Summers are typically comfortable and arid, with mostly clear skies, and winters are generally short, cold, wet, windy, and partly cloudy. Over the course of a year, temperatures vary from 44 degrees Fahrenheit to 67 degrees Fahrenheit, rarely dropping below 37 degrees Fahrenheit or exceeding 76 degrees Fahrenheit.[5]

Much of the land to the south and southeast of the City is preserved as units of the Golden Gate National Recreation Area, State and County parks, and the San Francisco watershed. Rural and agricultural land is prevalent to the south. The Pacific Ocean borders the City to the west. Access to the City is primarily via State Route (SR) 1, and SR 35. Land west of SR 1 in the City is part of the State-designated Coastal Zone, which also includes a small amount of land to the east in the

1 WRA, Inc. *Biological Resources Assessment, Rockaway Quarry Project*. March 2020.
2 WRA, Inc. *Section 7 Biological Assessment, Rockaway Quarry Reclamation Project*. March 2020.
3 WRA, Inc. *Memorandum: Risk of the Application of Gorilla-Snot Dust Control Compound Near Potential Sensitive Biological Resources*. November 19, 2021.
4 City of Pacifica. *City of Pacifica General Plan.* Adopted 1980.
5 Weather Spark. *Average Weather in Pacifica, California*. Available at: https://weatherspark.com/y/544/Average-Weather-in-Pacifica-California-United-States-Year-Round. Accessed December 2020.

vicinity of Shelldance Nursery. The City's varied topography creates a wide range of habitats, including intertidal areas, beaches, ridges, coastal headlands, woodlands, grasslands, coastal scrub, creeks, and wetlands. Most natural vegetation in the valley and canyon bottoms has been converted by urban development. However, intact native habitats persist along the riparian corridors of San Pedro Creek, Calera Creek, Rockaway Creek, and Milagra Creek, as well as on steep slopes.

Project Setting

The project site consists of slightly more than 86 acres across two separate parcels along the City's coast. The site is bounded by Rockaway Beach to the south, Mori Point Ridge to the north, the Pacific Ocean to the west, and SR 1 to the east. The project site includes two parcels: the 47.13-acre Quarry Parcel and the 39.09-acre Eastern Parcel. It should be noted that in WRA's analysis, the Quarry Parcel and Eastern Parcel are identified as "Western Section" and "Eastern Section," respectively, but for the purposes of this EIR, the parcels are identified by the former terms and not the latter. The Quarry Parcel and the Eastern Parcel are divided by Calera Creek and the City-owned Calera Creek Multi-Purpose (CCMP) Trail.

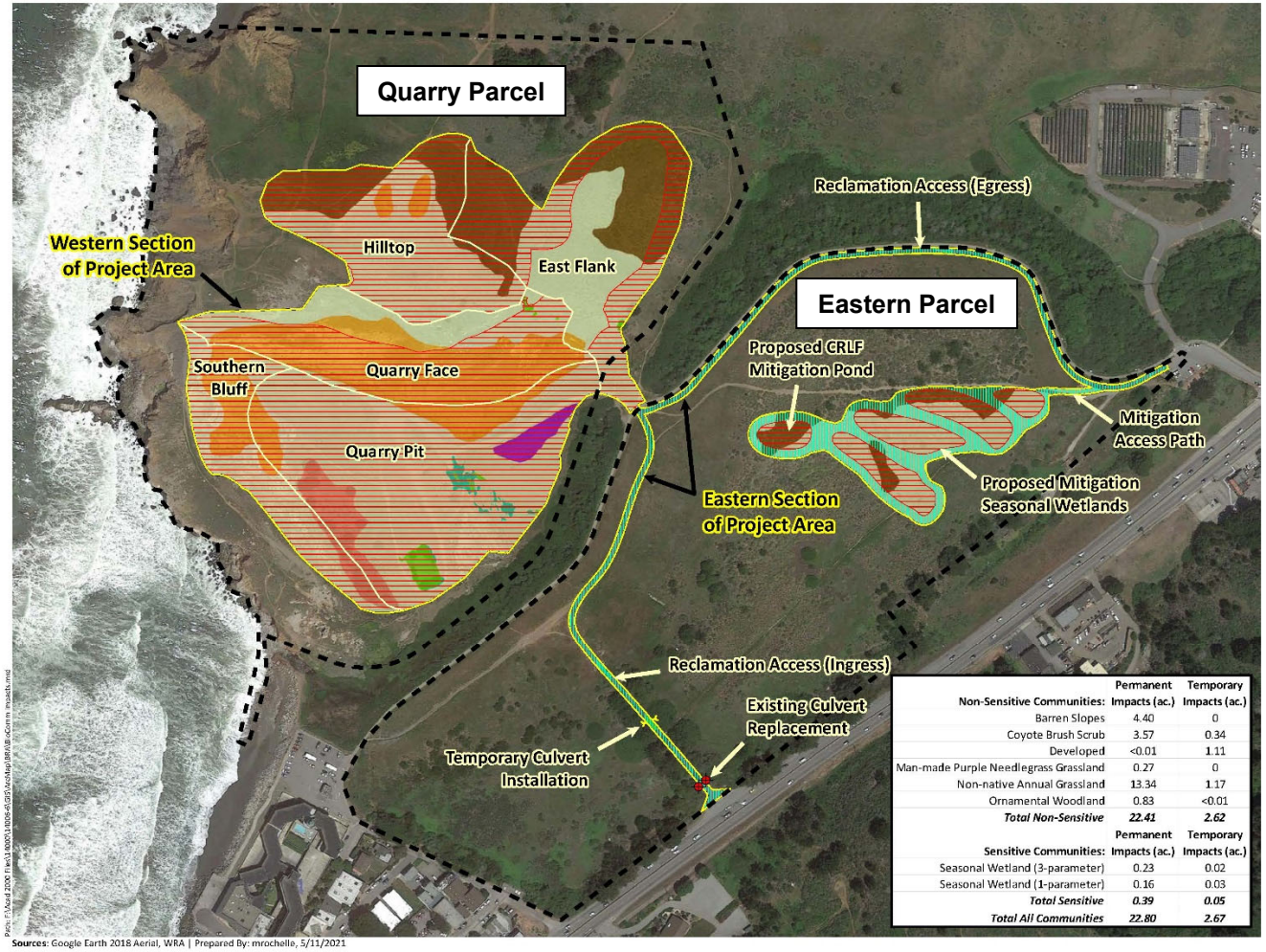
The Quarry Parcel consists of the former Rockaway Quarry and is dominated by predominantly steep slopes (elevations range from seven feet to 274 feet above mean sea level), non-native plant species and informal trails. The Quarry Parcel can be separated into five sections: the Hilltop (the high ground on the north edge of the parcel); the East Flank (the hillside comprised mostly of old quarry debris on the east slope of the Quarry Parcel); the Quarry Face (the scarp left by mining in the parcel center, consisting of limestone beds); the Quarry Pit (the bowl remaining in the bottom of the old Quarry); and the Southern Bluff (the old edge of the Quarry on the south adjacent to the ocean). The Eastern Parcel is located adjacent to and directly west of SR 1 and south of Calera Creek. The topography of the Eastern Parcel is relatively flat, with elevations ranging from approximately 20 feet to 67 feet above mean sea level. The parcel contains natural features such as wetlands and a small ephemeral ditch running through the southern portion of the site. The parcel also includes two existing access roads that connect to the Quarry Parcel. Although the Eastern Parcel was used in support of the Quarry operations and has been significantly disturbed, the parcel has been partially reclaimed by the City as part of construction of the Calera Creek Water Recycling Plant (CCWRP) to the north. Areas east of Calera Creek outside of the project site include large swaths of undeveloped land, access routes, pedestrian trails, and ornamental plantings. The Eastern Parcel originally contained Calera Creek, but was graded when Calera Creek was relocated further west.

Existing land uses surrounding the Quarry Parcel and Eastern Parcel include Mori Point Ridge (part of the Golden Gate National Recreation Area) and the CCWRP to the north, commercial businesses and single-family residential homes to the east across SR 1, commercial businesses and single-family residential homes in Rockaway Beach to the south, the Pacific Ocean to the west, and the City-owned CCMP Trail located between the Quarry Parcel and the Eastern Parcel.

Vegetation Communities Within the Project Site

While the overall project site contains more than 86 acres, the BRA limited the analysis of on-site vegetation communities to only the locations within the Quarry Parcel and Eastern Parcel that would be disturbed as part of the proposed project. As shown in Figure 4.3-1, the area analyzed totals 29.25 acres.

Figure 4.3-1
Vegetation Communities Map



Non-Sensitive Communities:	Permanent Impacts (ac.)	Temporary Impacts (ac.)
Barren Slopes	4.40	0
Coyote Brush Scrub	3.57	0.34
Developed	<0.01	1.11
Man-made Purple Needlegrass Grassland	0.27	0
Non-native Annual Grassland	13.34	1.17
Ornamental Woodland	0.83	<0.01
Total Non-Sensitive	***22.41***	***2.62***
Sensitive Communities:	**Permanent Impacts (ac.)**	**Temporary Impacts (ac.)**
Seasonal Wetland (3-parameter)	0.23	0.02
Seasonal Wetland (1-parameter)	0.16	0.03
Total Sensitive	***0.39***	***0.05***
Total All Communities	***22.80***	***2.67***

Vegetation Communities Impacts

Biological Resource Assessment
Rockaway Quarry Reclamation Project
Pacifica, San Mateo County, California

- Property Boundary - 86.20 ac.
- Project Area - 29.25 ac.
- Reclamation Areas
- Culverts
- Permanent Impacts - 22.80 ac.
- Temporary Impacts - 2.67 ac.

Non-Sensitive Communities

- Barren Slopes - 4.78 ac.
- Coyote Brush Scrub - 4.87 ac.
- Developed - 1.11 ac.
- Man-made Purple Needlegrass Grassland - 0.27 ac.
- Non-native Annual Grassland - 16.95 ac.
- Ornamental Woodland - 0.83 ac.

Potential Waters of the U.S./State/CCC Jurisdictional Wetlands

- Seasonal Wetland (3-parameter) - 0.25 ac.

Additional Potentially CCC Jurisdictional 1-parameter Wetlands

- Seasonal Wetland (1-parameter) - 0.19 ac.

N
0 200 400
Feet

wra
ENVIRONMENTAL CONSULTANTS

The area of disturbance within the Quarry Parcel, where quarry reclamation activities would occur, consists of the Hilltop, the East Flank, the Quarry Face, the Quarry Pit, and the Southern Bluff. The area of disturbance within the Eastern Parcel consists of the two existing access roads/trails that connect to the Quarry Parcel and two areas where approximately 1.75 acres of seasonal wetlands are proposed. The proposed wetlands are discussed in further detail under Impact 4.3-5.

The on-site vegetation communities include an assortment of grasslands, woodlands, scrub, barren slopes, hardscape land cover, and aquatic communities (see Table 4.3-1). The on-site wetlands are seasonal wetlands, including emergent wetlands, scrub-shrub wetlands, and a man-made seasonal wetland pond. All seasonal wetlands in the Quarry Parcel are degraded and were formed due to human activity. The man-made seasonal wetland pond in the Quarry Parcel was formerly a sediment basin that was constructed between 1987 and 1993. The grassland communities include non-native annual grassland and man-made purple needlegrass grassland. On-site woodland is ornamental. Scrub within the areas of disturbance is best characterized as coyote brush scrub.

Table 4.3-1
On-Site Vegetation Communities

Vegetation Community	Vegetation Community or Association	Sensitivity Type	Acreage
Sensitive Communities			
Wetlands	3-parameter seasonal wetlands	Clean Water Act, Porter-Cologne Water Quality Control Act, and California Coastal Act jurisdiction	0.25
Wetlands	1-parameter	California Coastal Act jurisdiction	0.19
Non-Sensitive Communities			
Woodland	Ornamental woodland	N/A	0.83
Grassland	Non-native annual grassland	N/A	16.95
Scrub	Coyote brush scrub	N/A	4.87
Barren	Barren slopes	N/A	4.78
Developed Areas (e.g., hardscape, roads, trails)	Developed	N/A	1.11
Grassland	Man-made purple needlegrass grassland	N/A	0.27
		Total	29.25

Source: WRA, Inc. Rockaway Quarry Reclamation Project Wetland Mitigation Plan Update. June 3, 2021.

Sensitive and Non-Sensitive Vegetation Communities

The vegetation communities are delineated based on sensitivity type. Non-sensitive vegetation communities are not afforded special protection under federal, State, and local laws, regulations, and ordinances. Impacts to such communities would not be significant under CEQA. Non-sensitive vegetation communities may, however, provide suitable habitat for some special-status plant or wildlife species.

Meanwhile, sensitive vegetation communities are given special protection under applicable federal, State, and local laws, regulations and ordinances. Natural communities considered

sensitive are those identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife (CDFW). CDFW ranks sensitive communities (alliances) as "threatened" or "very threatened" and keeps records of their occurrences in its California Natural Diversity Database (CNDDB). CNDDB vegetation alliances are ranked 1 through 5 based on methodology established by NatureServe, a non-profit organization that provides proprietary wildlife conservation-related data, tools, and services. Alliances ranked globally (G) or statewide (S) as 1 through 3 are considered sensitive. Impacts to sensitive natural communities identified in local or regional plans, policies, or regulations or those identified by the CDFW or the United States Fish and Wildlife Service (USFWS) must be considered and evaluated under CEQA (CCR Title 14, Div. 6, Chap. 3, Appendix G). Specific habitats may also be identified as sensitive in local policies or ordinances.

Terrestrial Plant Vegetation Communities

WRA's analysis of the project site's areas of disturbance identified six on-site vegetation habitats, all of which were deemed to be non-sensitive communities: ornamental woodland, non-native grassland, coyote brush scrub, barren slopes, developed areas, and man-made purple needlegrass grassland. The vegetation habitats are shown in Figure 4.3-1. The following is a more-detailed discussion of each.

Ornamental Woodland

Ornamental woodlands are located along the southern border of the Quarry Pit in the Quarry Parcel, as well as along the access road in the Eastern Parcel. Ornamental woodlands are dominated by evenly-spaced trees, including Monterey cypress (*Hesperocyparis macrocarpa*) and Sydney gold wattle (*Acacia longifolia*).

Non-Native Annual Grassland

Non-native annual grassland occurs in large swaths in the Quarry Parcel and in areas proposed for mitigation wetland construction, which will be discussed later in this chapter. This community is dominated by perennial rye grass, ripgut brome, and soft brome (*Bromus hordeaceus*). Other non-native species present in this community include jubata grass (*Cortaderia jubata*), Italian thistle, Harding's grass, Mediterranean barley, and Fuller's teasel. Dense patches of jubata grass occur in the central portion of the Eastern Parcel.

Coyote Brush Scrub

Coyote brush scrub is located on the Hilltop and East Flank in the Quarry Parcel and where mitigation wetland construction would occur in the Eastern Parcel. At higher elevations in the Quarry Parcel, coyote brush (*Baccharis pilularis*) is co-dominant with California sage brush (*Artemisia californica*). At lower elevations in the Eastern Parcel, coyote brush is heavily dominant, though non-native species are present, including bristly oxtongue (*Helminthotheca echioides*), short-podded mustard, scarlet pimpernel (*Anagallis arvensis*), bull thistle, and Italian thistle.

Barren Slopes

Two dirt mounds on the Hilltop and on the Quarry Face in the Quarry Parcel contain steep, unstable slopes largely devoid of vegetation. Barren slopes on the Hilltop consist of dumped, unvegetated fill soil. Barren slopes on the Quarry Face are covered with loose rock scree and sparse patches of jubata grass.

Developed Areas

Developed land cover within the areas of disturbance includes the two access roads in the Eastern Parcel. The access road that borders Calera Creek connects the CCWRP parking lot to the Quarry Parcel (and continues to a parking lot adjacent to Maitland Road south of the project site). A second access road connects SR 1 to the Quarry Parcel. This road extends through ornamental woodland in the south and crosses the scrub-shrub wetland, discussed above. This road contains gravels and bare, compacted soil, and is largely devoid of vegetation due to heavy foot traffic.

Man-Made Purple Needlegrass Grassland

Purple needlegrass grassland was mapped in a portion of the Quarry Pit in the Quarry Parcel, near an existing trail. Purple needlegrass (*Stipa pulchra* [*Nassella pulchra*]) is restricted to areas of shallow soils and flat topography within the areas of disturbance. Associated species intermixed with this community include bristly ox-tongue, sweet fennel (*Foeniculum vulgare*), vetch (*Vicia* sp.), and a suite of non-native annual grasses. The areas were heavily disturbed by quarrying activities in the past. Purple needlegrass grassland is derived from hydroseeding that was conducted in 2000 as part of the City's efforts after grading. As part of WRA's analysis, a local ecologist was consulted and stated that purple needlegrass was included in the hydroseeding mix for this area. Because this community is not naturally occurring within the project site and is the result of past reseeding efforts, purple needlegrass grassland is not considered a California Coastal Commission (CCC) Environmentally Sensitive Habitat Area (ESHA).

Aquatic Vegetation Communities

WRA's analysis identified three on-site seasonal wetland habitats, all of which were deemed to be sensitive vegetation communities: emergent wetlands, scrub-shrub wetlands, and man-made seasonal wetland pond. The wetlands are shown in Figure 4.3-1 above. The following is a more-detailed discussion of each:

Emergent Wetlands

Features in the emergent wetlands category were mapped in the southern portion of the Quarry Parcel and along the northern and southern access roads/trails in the Eastern Parcel. In the Quarry Parcel, emergent wetlands occur in shallow depressions in hummocky terrain in a matrix of depressions and uplands. In total, the Quarry Parcel contains 13 emergent wetlands. The topography of this area is a result of past ground disturbance, as these features formed on graded and compacted soils. The wetlands were likely formed as a result of human disturbance and continue to be subject to regular disturbance by pedestrians and pets. The wetlands are situated in the Quarry Pit and were permitted to be filled through a Coastal Development Permit amendment (1-95-040-A1), issued in 1997 as part of a City agreement in the relocation of Calera Creek.

In total, the Eastern Parcel contains four degraded emergent wetlands. In the northern portion of the Eastern Parcel, a single emergent wetland was mapped along an existing access trail that was largely devoid of vegetation, highly disturbed, and heavily trafficked. The wetland appears to be an isolated depression caused by differential settlement or compaction as a result of traffic on the trail. In the southern portion of the Eastern Parcel, portions of emergent wetlands occur within and adjacent to the access road in shallow depressions. Two wetlands are located where Calera Creek formerly flowed as a drainage ditch prior to being relocated, but do not extend beyond their current confines for any appreciable distance. One wetland is located where a former road extended between the access road that connects to SR 1 and the parking lot directly south of the CCWRP but, again, does not extend appreciably beyond the shown boundaries. Vegetation within

the emergent wetlands was typically dominated by Italian ryegrass, Mediterranean barley, and annual beard grass (*Polypogon monspeliensis*).

Emergent wetlands in the Quarry Parcel were verified by the U.S. Army Corps of Engineers (USACE) through an approved jurisdictional determination on January 19, 2018. These wetlands also qualify as Waters of the State. Emergent wetlands adjacent to the Eastern Parcel may potentially be regulated by USACE and the San Francisco Bay Regional Water Quality Control Board (RWQCB) under the Clean Water Act (CWA) and the Porter-Cologne Water Quality Control Act (PCWQCA). Additionally, 1-parameter seasonal wetlands, delineated by WRA in August of 2019, would be subject to California Coastal Act jurisdiction (regulated by the CCC).

Scrub-Shrub Wetlands

In the southern portion of the Eastern Parcel, one scrub-shrub wetland is present adjacent to the existing access road. The wetland is a portion of an isolated arroyo willow stand that continues slightly outside of the area of disturbance to the east. Vegetation within scrub-shrub wetlands was characterized by a dense arroyo willow canopy, with a sparse-to-absent understory. One additional small, isolated scrub-shrub wetland is located in the northeastern portion of the Quarry Parcel. Scrub-shrub wetlands within the area of disturbance are considered sensitive as they would potentially be subject to regulation under the CWA and the PCWQCA.

Man-Made Seasonal Wetland Pond

A 10-foot-deep man-made seasonal wetland pond (quarry pond) was mapped in the southern portion of the Quarry Parcel (in the Quarry Pit). The quarry pond is a historic, man-made depression that ponds seasonally. The quarry pond appears to receive only direct precipitation and surface runoff. The quarry pond is surrounded by ruderal rocky habitat with a few scattered bushes growing adjacent to the water's edge and does not have a defined inlet or outlet. The quarry pond has a surface cut that drains south to Calera Creek (approximately 100 feet from the pond). The quarry pond was formerly a sediment basin that was constructed between 1987 and 1993 (Nationwide Environmental Title Research [NETR] 2019; Google Earth 2019) and was likely created by Caltrans in 1991 for a project that placed 40 feet of engineered fill into the Quarry Pit, where a keyway and a sediment basin were installed. During this period, quarry activities had halted and the Quarry Pit was filled, and was subject to various uses. Uncertainty remains on exactly why this basin was constructed, but given that approximately 40 percent of the quarry floor and interior edge of the quarry's southern bluff drain into this feature, the quarry pond likely provides beneficial water quality functions by allowing any erosional sediment to drop out prior to entering receiving waters (Calera Creek). A non-contiguous fringe of arroyo willow is present along the edges of the quarry pond, but this feature is otherwise vegetated with a moderate cover of annual herbs, consisting almost entirely of swamp grass (*Crypsis schoenoides*).

The quarry pond is considered sensitive as it would potentially qualify as Waters of the U.S. and Waters of the State. The pond is known to contain California red-legged frog (CRLF) and provides habitat for San Francisco garter snake (SFGS), both listed as endangered on State and/or federal lists and fully protected species under the State. CRLF and SFGS are described in further detail later in this chapter under Special-Status Wildlife Species.

On-Site Special-Status Species

Special-status species are species that have been listed as "threatened" or "endangered" under the federal Endangered Species Act (FESA), California Endangered Species Act (CESA), or are of special concern to federal resource agencies, the State, or private conservation organizations.

A species may be considered special-status due to declining populations, vulnerability to habitat change, or restricted distributions. A description of the criteria and laws pertaining to special-status classifications is described below.

Special-status plant species may meet one or more of the following criteria:

- Plants listed or proposed for listing as threatened or endangered under the FESA (50 CFR 17.12 for listed plants and various notices in the Federal Register for proposed species);
- Plants that are candidates for possible future listing as threatened or endangered under the FESA (64 FR 205, October 25, 1999; 57533-57547);
- Plants listed or proposed for listing by the State of California as threatened or endangered under the CESA (14 California Code of Regulations [CCR] 670.5);
- Plants that meet the definitions of rare or endangered species under the California Environmental Quality Act (CEQA) (CEQA Guidelines, Section 15380); or
- Plants considered by the California Native Plant Society (CNPS) to be "rare, threatened, or endangered" in California (Lists 1A, 1B, 2A, 2B, and 3 species in CNPS [2001]).

Special-status wildlife species may meet one or more of the following criteria:

- Wildlife listed as threatened or endangered, or proposed as candidates for listing by the USFWS or National Marine Fisheries Service (NMFS) under the FESA (50 CFR 17.11 for listed wildlife and various notices in the Federal Register for proposed species);
- Wildlife listed or proposed for listing by the State of California as threatened or endangered under the CESA (14 CCR 670.5);
- Wildlife that meet the definitions of rare or endangered species under the California Environmental Quality Act (CEQA Guidelines, Section 15380);
- Wildlife identified as Medium or High priority species by the Western Bat Working Group (WBWG);
- Wildlife species of special concern (SSC) to the CDFW (Remsen [1978] for birds; Williams [1986] for mammals); and/or
- Wildlife species that are fully protected in California (California Fish and Game Code, Section 3511 [birds], 4700 [mammals], and 5050 [reptiles and amphibians]).

As part of WRA's analysis, prior to conducting a site assessment, potential occurrence of special-status species within the project site was evaluated by first determining which special-status species occur in the project site's vicinity through a literature and database search. Database searches for known occurrences of special-status species focused on the Montara Mountain and five surrounding 7.5-minute U.S. Geological Survey (USGS) quadrangles, including San Francisco South, Hunters Point, San Mateo, Half Moon Bay, and Woodside. The following sources were reviewed to determine which special-status plant and wildlife species have been documented to occur in the vicinity of the project site:

- California Natural Diversity Database records (CNDDB) (CDFW 2019);
- USFWS Information for Planning and Conservation Species Lists (USFWS 2019);
- CNPS Inventory records (CNPS 2019);
- California Department of Fish and Game (CDFG) publication *California's Wildlife, Volumes I-III* (Zeiner et al. 1990);
- CDFG publication *California Bird Species of Special Concern* (Shuford and Gardali 2008);

- CDFW and University of California Press publication *California Amphibian and Reptile Species of Special Concern* (Thomson et al. 2016);
- *A Field Guide to Western Reptiles and Amphibians* (Stebbins 2003);
- Habitat Assessment for Special-status Invertebrates at the Pacifica Quarry in Pacifica (Entomological Consulting Services 2006); and
- Biological Assessment for Federally Listed Species (Zentner and Zentner 2017a).

For the site assessment for special-status species, observed habitat conditions were used to evaluate the potential for presence of special-status species based on the aforementioned literature and database searches and the professional expertise of the investigating biologist. The potential for each special-status species to occur on-site was then evaluated according to the following criteria:

- ***No Potential***: Habitat on and adjacent to the site is clearly unsuitable for the species requirements (e.g., foraging, breeding, cover, substrate, elevation, hydrology, plant community, site history, disturbance regime).
- ***Unlikely***: Few of the habitat components meeting the species requirements are present, and/or the majority of habitat on and adjacent to the site is unsuitable or of very poor quality. The species is not likely to be found on the site.
- ***Moderate Potential***: Some of the habitat components meeting the species requirements are present, and/or only some of the habitat on or adjacent to the site is unsuitable. The species has a moderate probability of being found on the site.
- ***High Potential***: All of the habitat components meeting the species requirements are present and/or most of the habitat on or adjacent to the site is highly suitable. The species has a high probability of being found on the site.
- ***Present***: The species is observed on the site or has been recorded (i.e., CNDDB other reports) on the site recently.

The site assessment was intended to identify the presence or absence of suitable habitat for each special-status species known to occur in the vicinity of the project site in order to determine the species' potential to occur on-site. The site visit did not constitute a protocol-level survey and was not intended to determine the actual presence or absence of a species; however, if a special-status species was observed during the site visit, the presence was recorded. The results are discussed below.

Listed and Special-Status Plants

Based on a review of the resources and databases discussed above, 87 special-status plant species were documented as part of WRA's analysis in the vicinity of the project site (see Figure 4.3-2 below). Appendix C of the BRA lists all 87 plant species, providing details on each (see Appendix H of this EIR). Special-status plant species were not observed on-site during the site visits. However, three special-status plant species have a moderate potential to occur within the project's areas of disturbance (see Figure 4.3-3 below). The remaining species documented to occur in the vicinity of the project site are unlikely or have no potential to occur due to the following reasons:

- Absence of specific soil types (e.g., serpentine soils);
- Absence of suitable habitat (e.g., chaparral, grassland, coastal salt marsh);
- Dominance of invasive, non-native species;

Figure 4.3-2
CNDDB Plant Occurrences Within 2-Mile Radius of Project Site

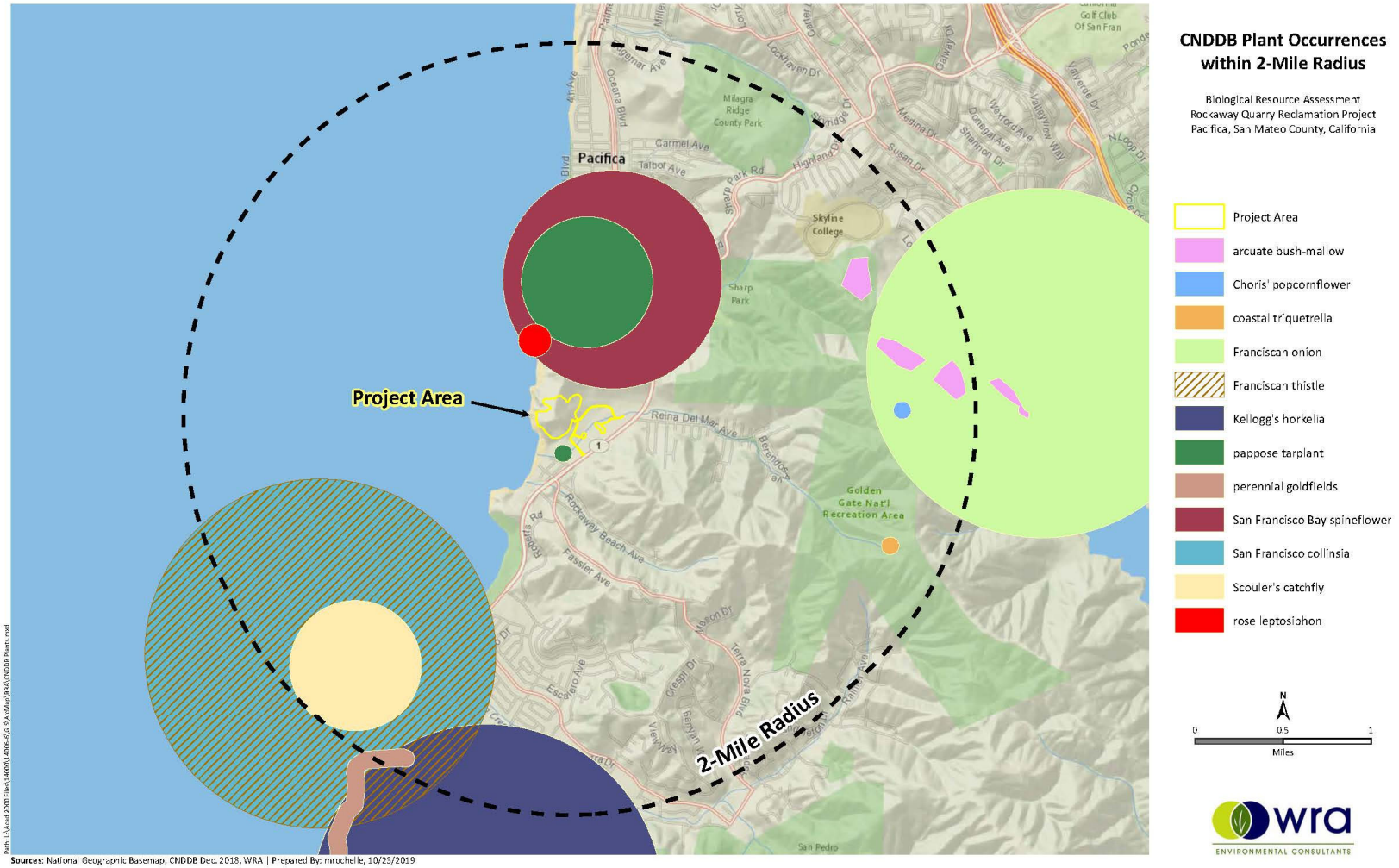


Figure 4.3-3
Special-Status Plant and Wildlife Species Within the Project's Areas of Disturbance

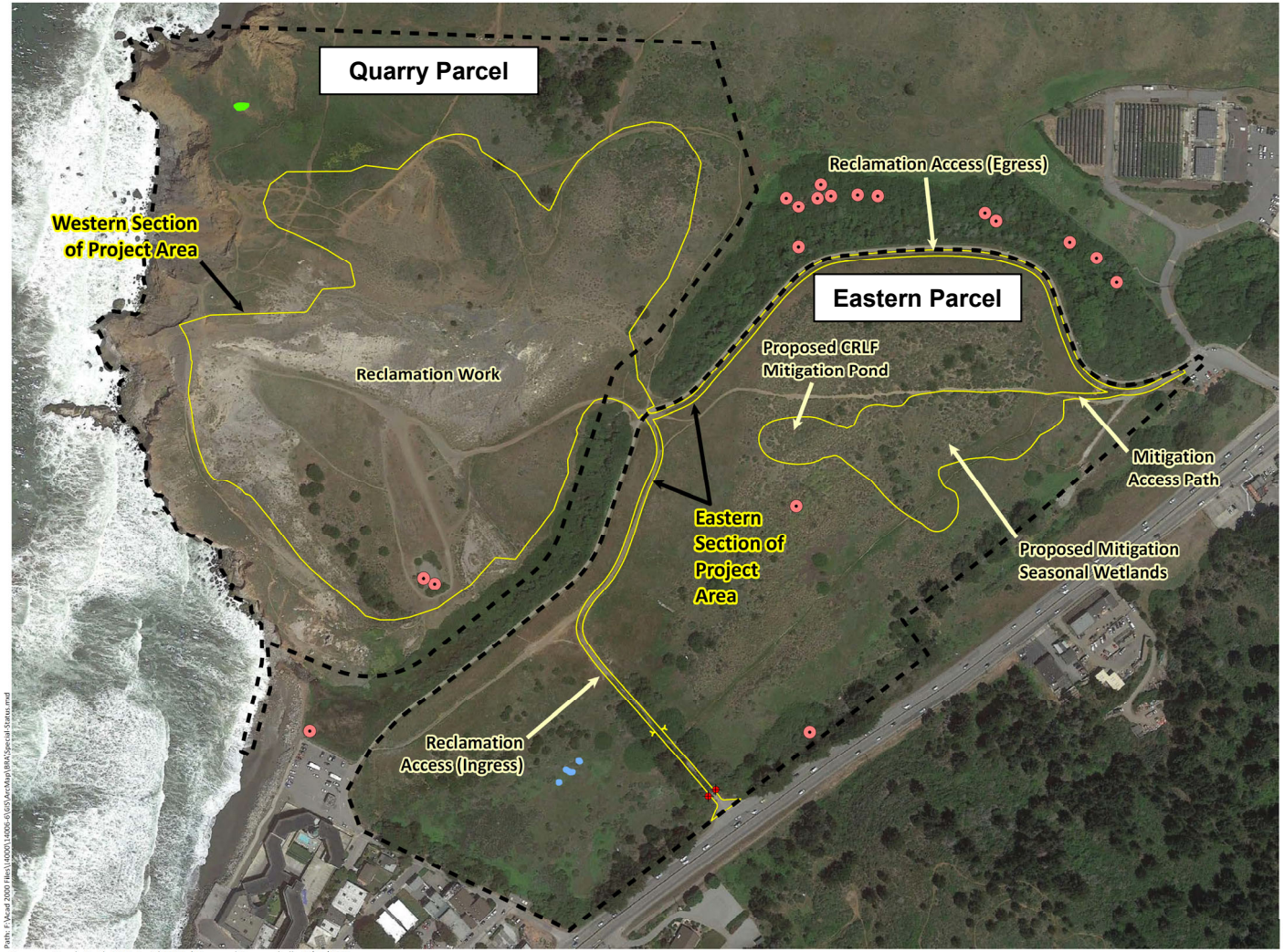


Figure 4.3-3
Special-Status Species

Biological Resource Assessment
Rockaway Quarry Reclamation Project
Pacifica, San Mateo County, California

Property Boundary - 86.20 ac.
Project Area - 29.25 ac.
Culverts

Special-Status Wildlife Species Occurrences

California Red-Legged Frog (EIP/PBSJ 2006, SWAIM 2006, HT Harvey 2002)

* San Francisco Garter Snake (McGinnis 1989)

Special-Status Plant Species Occurrences

Papose Tarplant (2006 EIP)
Rose Leptosiphon (2010 GGNRA)

* San Francisco garter snake occurrences are suppressed for species protection

N
0 200 400
Feet

wra
ENVIRONMENTAL CONSULTANTS

- Outside the geographic range of species (e.g., project site is below known elevation range); and/or
- Outside the known distribution of species (e.g., project site is too far north).

Table 4.3-2 lists the special-status plant species that have a moderate potential to occur on-site. The following is a more detailed discussion of each species.

Pappose Tarplant

Pappose tarplant is an annual herb in the sunflower family (Asteraceae) that blooms from May to November. The species typically occurs in vernally mesic, often alkaline areas in coastal prairie, meadow, seep, coastal salt marsh, and valley and foothill grassland habitat at elevations ranging from five feet to 1,380 feet. The species is a facultative wetland (FACW) plant, and is a vernal pool generalist. Pappose tarplant has been observed in 17 USGS 7.5-minute quadrangles in Butte, Colusa, Glenn, Lake, Napa, San Mateo, Solano, and Sonoma counties. There is a CNDDB occurrence record (10 to 15 individuals observed) from August 2006 approximately 0.5 mile south of the project site. This occurrence is presumed extant but is ranked as "poor". Still, pappose tarplant has a moderate potential to occur in on-site grasslands or wetlands due to the presence of potentially suitable habitat, close proximity to observation records, and the presence of associated species within the project site.

San Francisco Bay Spineflower

San Francisco Bay spineflower is an annual forb in the buckwheat family (Polygonaceae) that blooms from April to August. The species typically grows in sandy substrates on terraces and slopes in coastal bluff scrub, coastal dune, coastal prairie, and coastal scrub habitat at elevations ranging from 10 feet to 700 feet. One CNDDB occurrence is in the greater vicinity of the project site that was last observed in May 1925, approximately two miles north of the project site. This occurrence was not observed during a 2006 rare plant survey in Sharp Park. However, San Francisco Bay spineflower has a moderate potential to occur in the coyote brush scrub community due to the presence of potentially suitable habitat and the presence of associated species.

Rose Leptosiphon

Rose leptosiphon is an annual herb in the phlox family (Polemoniaceae) that blooms from April to July. The species typically occurs in coastal bluff scrub habitat at elevations ranging from zero feet to 330 feet. Rose leptosiphon is known to occur in the counties of Marin, San Francisco, Sonoma, and San Mateo. One CNDDB occurrence exists in the greater vicinity of the project site that was last observed in May 2009. This occurrence is presumed extant and was observed on Mori Point. Rose leptosiphon was also observed approximately 300 feet north of the project site in 2010 by Golden Gate National Recreation Area (GGNRA) staff. Rose leptosiphon has a moderate potential to occur in the on-site coyote brush scrub community due to the presence of potentially suitable habitat, relatively close proximity to a CNDDB occurrence and a GGNRA occurrence, and the presence of associated species.

Listed and Special-Status Wildlife

Based on a review of the resources and databases previously mentioned, 49 special-status wildlife species were documented in the vicinity of the project site as part of WRA's analysis. The occurrences of special-status wildlife species in the CNDDB within two miles of the site are depicted in Figure 4.3-4 below. Appendix C of the BRA lists all 49 species, providing details on each (see Appendix H of this EIR).

Table 4.3-2
On-Site Special-Status Plant Species

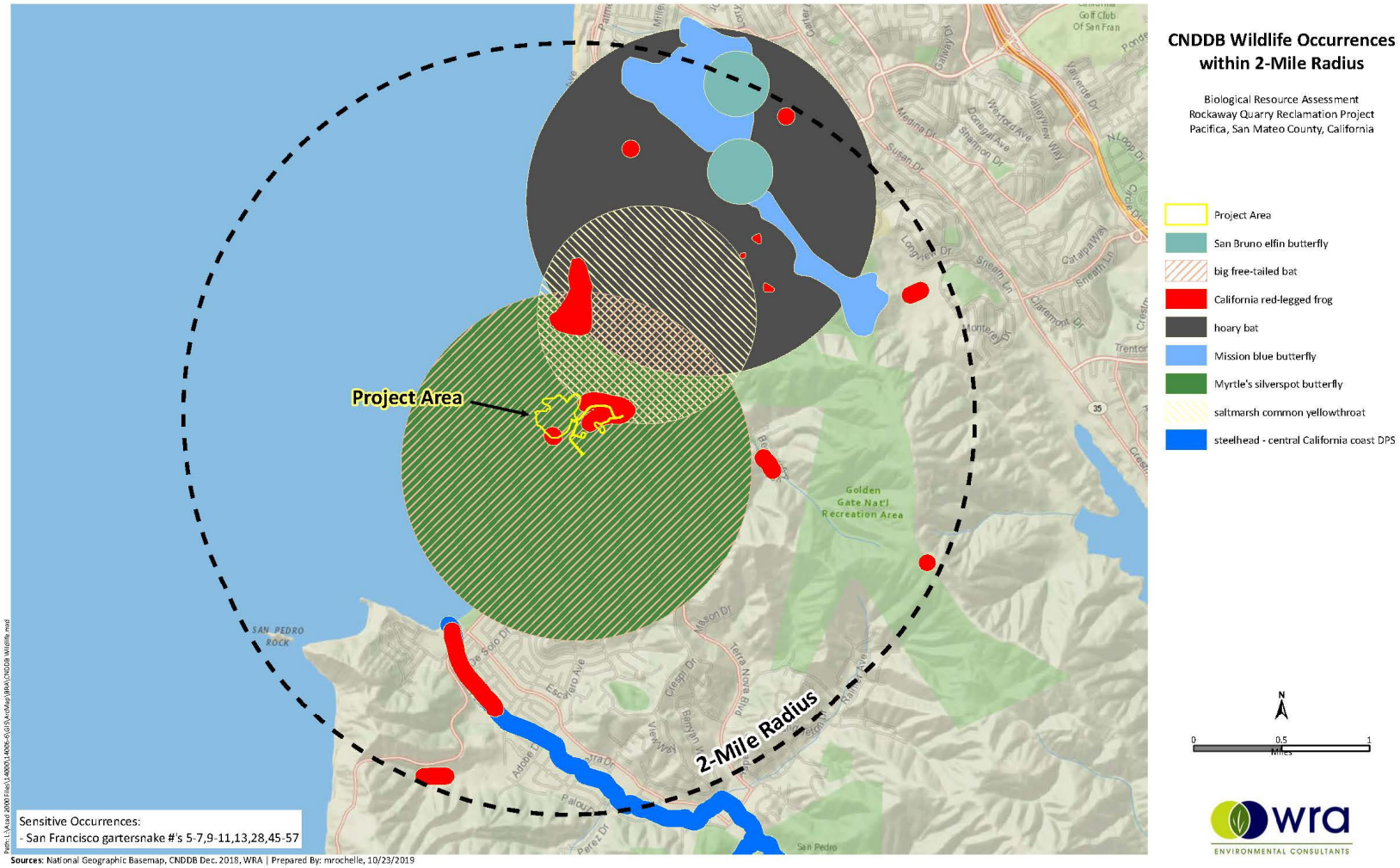
Species	Status	Habitat	Potential for Occurrence	Recommendations
Pappose tarplant *Centromadia parryi ssp. parryi*	Rank 1B.2	Chaparral, coastal prairie, meadows and seeps, marshes and swamps (coastal salt), valley and foothill grassland (vernally mesic). Elevation ranges from zero feet to 1,380 feet (zero meters to 420 meters). Blooms May to November.	**Moderate**. An occurrence was observed less than 0.5 mile from the project site in 2006. Due to proximity of this occurrence and presence of suitable habitat, pappose tarplant has a moderate potential to occur on-site.	Pre-construction rare plant survey is recommended during the blooming season, between May and November, to verify the presence or absence of this species.
San Francisco Bay spineflower *Chorizanthe cuspidata var. cuspidata*	Rank 1B.2	Coastal bluff scrub, coastal dunes, coastal prairie, coastal scrub. Elevation ranges from five feet to 705 feet (three meters to 215 meters). Blooms April to July or August.	**Moderate**. An occurrence was documented within two miles of the project site in May 1925. Due to proximity of this occurrence and presence of suitable habitat, San Francisco Bay spineflower has a moderate potential to occur on-site.	Pre-Construction rare plant survey is recommended during the blooming season, between April and July, to verify the presence or absence of this species.
Rose leptosiphon *Leptosiphon rosaceus*	Rank 1B.1	Coastal bluff scrub. Elevation ranges from zero feet to 330 feet (zero meters to 100 meters). Blooms April to July.	**Moderate**. An occurrence was documented within 0.25 mile of the project site in 2009 and 300 feet north of the project site in 2010. Due to proximity of this occurrence and presence of potentially suitable habitat, rose leptosiphon has a moderate potential to occur on-site.	Pre-construction rare plant survey is recommended during the blooming season, between April and July, to verify the presence or absence of this species.

Status codes: 1B – Considered rare, threatened, or endangered in California and elsewhere.

Threat Ranks: 0.1 – Seriously threatened in California
0.2 – Moderately threatened in California

Source: WRA, Inc. Biological Resources Assessment, Rockaway Quarry Project. March 2020

Figure 4.3-4
CNDDB Wildlife Occurrences Within 2-Mile Radius of Project's Areas of Disturbance



Of the 49 special-status wildlife species that were documented, 43 are considered unlikely, or have no potential, to occur on-site for one or more of the following reasons:

- The project site is outside of the known or historical range of the species;
- The project site lacks suitable aquatic habitat (e.g., rivers, streams, vernal pools);
- The project site lacks suitable foraging habitat (e.g., marshes)
- The project site lacks suitable nesting structures;
- The project site lacks suitable soil for den development;
- No mine shafts, caves, or abandoned buildings are present; and/or
- There is a lack of connectivity with suitable occupied habitat.

While the above factors contribute to the absence of many special-status wildlife species, WRA's analysis determined the project site has adequate conditions and locality to warrant moderate or high potential for three special-status species to occur. In addition, another three special-status species were determined to be present on-site. Nesting birds protected by the California Fish and Game Code (CFGC) and the federal Migratory Bird Treaty Act of 1918 (MBTA) may also occur on-site. These species are detailed in Table 4.3-3, depicted in Figure 4.3-3 above, and discussed in broader detail below.

American Peregrine Falcon

The American peregrine falcon occurs as a generally uncommon resident, as well as a winter visitor and migrant throughout much of California. Occupied habitat (both breeding and non-breeding) is highly variable, but the species is typically associated with open areas and/or bodies of water. Nesting typically occurs on the ledges of steep cliffs, or on man-made structures with ledges above sheer faces, such as bridges and the tops of buildings. The peregrine falcon preys on a wide variety of animals, mostly birds, and in particular on the Pacific Coast, water birds (e.g., waterfowl, shorebirds and seabirds). The species forages over wide areas, even during the breeding season. The bluff and Pacific Ocean west of the project site may support nesting and foraging by this species. The species is a CDFW Fully Protected Species with moderate potential to occur on-site.

San Francisco (Saltmarsh) Common Yellowthroat

The San Francisco common yellowthroat is a subspecies of the common yellowthroat and found in freshwater marshes, coastal swales, riparian thickets, brackish marshes, and saltwater marshes. The species' breeding range extends from Tomales Bay in the north, to Carquinez Strait in the east, and to Santa Cruz County in the south. The species requires thick, continuous cover, such as tall grasses, tule patches, or riparian vegetation down to the water surface for foraging and prefers willows for nesting. The project's areas of disturbance are adjacent to Calera Creek riparian habitat, which may support nesting and foraging by this species, creating a moderate potential for the species to occur. The species is a CDFW Species of Special Concern.

White-Tailed Kite

White-tailed kites occur in low-elevation grasslands, agricultural areas, wetlands, oak woodlands, and savannah habitats. Riparian zones adjacent to open areas are also used. Vegetative structure and prey availability seem to be more important than specific associations with plant species or vegetative communities. Lightly grazed or non-grazed fields generally support large prey populations and are often preferred to other habitats. Kites primarily feed on small mammals, although birds, reptiles, amphibians, and insects are also taken. Nest trees range from single isolated trees to trees within large contiguous forests.

Table 4.3-3
On-Site Special-Status Wildlife Species

Species	Status	Habitat	Potential for Occurrence	Recommendations
American peregrine falcon *Falco peregrinus anatum*	CFP	Year-round resident and winter visitor. Occurs in a wide variety of habitats, though often associated with coasts, bays, marshes and other bodies of water. Nests on protected cliffs and also on man-made structures including buildings and bridges. Preys on birds, especially waterbirds. Forages widely.	**Moderate**. This species has been observed foraging in the vicinity of the project site. Additionally, the bluff to the west of the project site may contain suitable nesting habitat for this species.	Perform ground disturbance and vegetation removal outside of the breeding season. If project activities occur within the breeding season (February 1 to August 31), perform preconstruction breeding bird survey within 14 days start of work. Any active nests will be protected by work windows or exclusion buffers.
San Francisco (saltmarsh) common yellowthroat *Geothlypis trichas sinuosa*	SSC	Resident of the San Francisco Bay region, in fresh and salt water marshes. Requires thick, continuous cover down to water surface for foraging; tall grasses, tule patches, willows for nesting.	**Moderate**. This species may nest in freshwater habitat in Calera Creek.	Perform ground disturbance and vegetation removal outside of the breeding season. If project activities occur within the breeding season (February 1 to August 31), perform preconstruction breeding bird survey within 14 days start of work. Any active nests will be protected by work windows or exclusion buffers.
White-tailed kite *Elanus leucurus*	CFP	Year-round resident in coastal and valley lowlands with scattered trees and large shrubs, including grasslands, marshes and agricultural areas. Nests in trees, of which the type and setting are highly variable. Preys on small mammals and other vertebrates.	**Present**. The project site contains open land with scattered shrubs and trees which may support nesting and foraging by this species. White-tailed kite was observed on-site during the August 2019 site visit.	Perform ground disturbance and vegetation removal outside of the breeding season. If project activities occur within the breeding season (February 1 to August 31), perform preconstruction breeding bird survey within 14 days start of work. Any active nests will be protected by work windows or exclusion buffers.
Yellow warbler *Dendroica petechia brewsteri*	SSC	Summer resident throughout much of California. Breeds in riparian vegetation close to water, including streams and wet meadows. Microhabitat used for nesting variable, but dense willow growth is typical. Occurs widely on migration.	**Moderate**. This species may nest and forage in freshwater habitat in Calera Creek.	Perform ground disturbance and vegetation removal outside of the breeding season. If project activities occur within the breeding season (February 1 to August 31), perform preconstruction breeding bird survey within 14 days start of work. Any active nests will be protected by work windows or exclusion buffers.

Table 4.3-3
On-Site Special-Status Wildlife Species

Species	Status	Habitat	Potential for Occurrence	Recommendations
California red-legged frog *Geothlypis trichas sinuosa*	FT, SSC	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. Requires 11 to 20 weeks of permanent water for larval development. Associated with quiet perennial to intermittent ponds, stream pools and wetlands. Prefers shorelines with extensive vegetation. Disperses through upland habitats after rains.	**Present**. This species has been documented in the CNDDB within the project site and is considered present.	Mitigation measures would include worker environmental awareness training, preconstruction surveys, construction monitoring, exclusion fence, covering trenches, work windows, delineating boundaries, disposal of trash, no monofilament netting, and speed limit restrictions.
San Francisco garter snake *Thamnophis sirtalis tetrataenia*	FE, SE, CFP	Vicinity of freshwater marshes, ponds, and slow-moving streams in San Mateo County and extreme northern Santa Cruz County. Prefers dense cover and water depths of at least one foot. Upland areas near water are also very important.	**Present**. This species is known to occur within the Mori Point segment of the Golden Gate National Recreation Area and is considered present.	Mitigation measures would include worker environmental awareness training, preconstruction surveys, construction monitoring, exclusion fence, covering trenches, work windows, delineating boundaries, disposal of trash, no monofilament netting, and speed limit restrictions.

Status codes:
CFP – CDFW Fully Protected Species
FE – Federal Endangered
FT – Federal Threatened
SE – State Endangered
SSC – CDFW Species of Special Concern

Source: WRA, Inc. Biological Resources Assessment, Rockaway Quarry Project. March 2020

Preferred nest trees are extremely variable, ranging from small shrubs (less than 10 feet tall) to large trees (greater than 150 feet tall). White-tailed kite was observed during WRA's August 22, 2019 site visit. Suitable nesting and foraging habitat for this species is present on-site. Monterey cypresses provide suitable nesting substrate, and the scrub and grassland communities provide suitable foraging habitat for this species. The species is a CDFW Fully Protected Species.

Yellow Warbler

The yellow warbler is a neotropical migrant bird that is widespread in North America, but has declined throughout much of the species' California breeding range. The Brewster's (*brewsteri*) subspecies is a summer resident and represents the vast majority of yellow warblers that breed in California. West of the Central Valley, typical yellow warbler breeding habitat consists of dense riparian vegetation along watercourses, including wet meadows, with willow growth especially being favored. Insects comprise the majority of this species' diet. The project's areas of disturbance are situated adjacent to Calera Creek riparian habitat, which may support nesting and foraging by this species. The species is a CDFW Species of Special Concern with moderate potential of occurring on-site.

California Red-Legged Frog

CRLF is dependent on suitable aquatic, estivation, and upland habitat. During periods of wet weather, starting with the first rainfall in late fall, CRLF disperse from their estivation sites to seek suitable breeding habitat. Aquatic and breeding habitat are characterized by dense, shrubby, riparian vegetation and deep, still or slow-moving water. Breeding occurs between late November and late April. CRLF estivate (period of inactivity) during the dry months in small mammal burrows, moist leaf litter, incised stream channels, and large cracks in the bottom of dried ponds.

The species has been documented on-site by CNDDB. The occurrence notes that one adult, seven juveniles, and "several tadpoles" were located during the course of multiple surveys at the site. A study by the National Park Service at Mori Point also tracked CRLF, which moved from ponds at Mori Point across the ridge and into Calera Creek. Additionally, CRLF was observed on-site in 2006. Surveys for other special-status species, including SFGS, noted the presence of CRLF in 2002 and 2006. Of note, the surveys in 2006 found over 60 individuals within and adjacent to the project site. The locations of these observations are mostly along Calera Creek. Evidence of breeding (e.g., egg masses, and larvae) was observed within Calera Creek during surveys in 2006. CRLF is considered to be present on-site, because the species has been documented numerous times within and adjacent to the project site.

The approximately 10-foot-deep man-made seasonal wetland pond in the Quarry Parcel collects stormwater runoff and is bordered by low-lying herbaceous vegetation and arroyo willow. The Quarry Pit can hold water in above average rainfall years, as was noted during surveys in 2016, 2017, and 2019. Several CRLF were also observed in the man-made seasonal wetland pond within the Quarry Pit, and in wetlands adjacent to SR 1. Due to the size and depth of the man-made seasonal wetland pond, and the presence of tadpoles observed during WRA's March 2019 site visit, the seasonal wetland pond is considered to be breeding habitat for CRLF. No other breeding habitat is currently present on-site. CRLF is a federally threatened species and a CDFW Species of Special Concern.

San Francisco Garter Snake

Historically, SFGS occurred in scattered wetland areas on the San Francisco Peninsula from approximately the San Francisco County line south along the eastern and western bases of the

Santa Cruz Mountains, to at least the Upper Crystal Springs Reservoir, and south along the coast to Año Nuevo Point in San Mateo County, and Waddell Creek in Santa Cruz County.

The preferred habitat of SFGS is a densely vegetated pond near an open hillside where individuals can sun themselves, feed, and find cover in rodent burrows. Temporary ponds and other seasonal freshwater bodies are also used. Emergent and bankside vegetation, such as cattails (*Typha* spp.), bulrushes (*Scirpus* spp.) and spike rushes (*Juncus* spp.and *Eleocharis* spp.), are preferred and used for cover. The area between stream and pond habitats, and grasslands or bank sides, is used for basking, while nearby dense vegetation or water often provides escape cover. SFGS also use floating algal or rush mats, if available. Two key components to SFGS habitat include: (1) ponds that support CRLF, American bullfrog (*Lithobates catesbeiana*), or Pacific tree frog (*Pseudacris sierra*), and (2) surrounding upland that supports Botta's pocket gopher *(Thomomys bottae)* and the California meadow vole (*Microtus californicus*). Ranid frogs are an obligate component of the SFGS's diet.

SFGS travel much shorter distances than other garter snake species, many of which travel over several kilometers between winter and summer sites. Studies at Año Nuevo State Reserve determined that the mean distance of female hibernacula to the Visitor Center Pond was 459 feet, with a maximum distance of 637 feet. Distances of greater than 637 feet have been reported, including an unconfirmed distance of approximately 1,000 feet. However, more recent studies at the Año Nuevo State Reserve have confirmed that SFGS are regularly observed within 300 and 650 feet of foraging (i.e., pond) habitats and upland sites. Dispersal is rarely greater than this distance, although it is not impossible if SFGS are in pursuit of prey. During or shortly after heavy rain events, SFGS may make long-distance movements of up to 1.25 miles along drainages within dense riparian cover; however, SFGS have not been documented to travel over open terrain.

SFGS is known to occur at Mori Point, a park associated with the Golden Gate National Parks Conservancy, which abuts the north side of the project site. Site assessments have been conducted to help determine the presence or absence of SFGS at the site. A protocol-level SFGS survey was last conducted in 2006, during which 38 traplines were placed throughout the local area. SFGS were not detected. However, the report noted that the absence of SFGS observed during the survey did not rule out their presence, as the population may have been too small to detect.

Habitat within Calera Creek and within the man-made seasonal wetland pond are suitable for SFGS. During the aforementioned survey, numerous CRLF, a preferred prey species for SFGS, were observed in the vicinity. Additionally, the man-made seasonal wetland pond dries out annually, creating a shallow area where SFGS can forage on CRLF and Pacific tree frogs. Therefore, habitat and the preferred prey of SFGS are present on-site. As such, SFGS are assumed to be present, due to documented historic occurrences, connectivity to known occupied habitats, the presence of suitable habitat, and the presence of prey species. SFGS is a federally and State endangered species and a CDFW Fully Protected Species.

Migratory Birds

Native nesting birds, including raptors, are protected by CFGC Section 3503. Raptors, passerines, non-passerine land birds, and waterfowl are further protected under the federal MBTA of 1918. The MBTA prohibits the take, possession, purchase, sale, or bartering of any migratory bird, including feathers or other parts, nests, eggs, or products, except as allowed by implementing regulations. All migratory bird species are protected by the MBTA. Any disturbance

that causes direct injury, death, nest abandonment, or forced fledging of migratory birds, is restricted under the MBTA. Any removal of active nests during the breeding season or any disturbance that results in the abandonment of nestlings is considered a 'take' of the species under federal law.

Trees

Per WRA's analysis, a total of 42 trees were verified to be present on-site in the Quarry Parcel, 38 of which would be within the parcel's areas of disturbance. Sixteen of the 38 trees are considered to be heritage trees. According to Pacifica Municipal Code Section 4-12.02, heritage trees include any trees in the City that have a trunk with a circumference of at least 50 inches. Any removal, substantial trimming or new construction within the drip-line of a heritage tree requires approval by the City. In addition, 26 of the 38 trees qualify as "trees" as defined by the City's logging operations ordinances (Ordinance Nos. 636-C.S. and 673-C.S.) (i.e., trees that were larger than 6 inches in diameter measured at 12 inches above the ground). It should be noted that a portion of the on-site trees qualify as both a heritage tree and a tree under the logging operations ordinances.

Additionally, the Eastern Parcel contains 123 heritage and 52 non-heritage trees along the parcel's southern and eastern boundaries, as well as along the ingress to the project site. Trees in the Eastern Parcel would not require removal, as none are located within the proposed area of disturbance. It should be noted that several trees along the ingress could require very minor trimming. The locations of surveyed trees are shown on Figure 3-8 in the Project Description chapter of this EIR. On-site trees include native Monterey pine (*Pinus radiata*) and native Monterey cypress.

4.3.3 REGULATORY CONTEXT

A number of federal, State, and local policies provide the regulatory framework that guides the protection of biological resources. The following discussion summarizes those laws that are most relevant to biological resources in the vicinity of the project site.

Federal Regulations

The following are the Federal environmental laws and policies relevant to biological resources:

Federal Endangered Species Act

Under the FESA, the Secretary of the Interior and the Secretary of Commerce have joint authority to list a species as threatened or endangered (16 USC Section 1533[c]). Two federal agencies oversee the FESA: the USFWS has jurisdiction over plants, wildlife, and resident fish, while the NMFS has jurisdiction over anadromous fish and marine fish and mammals. Section 7 of the FESA mandates that federal agencies consult with the USFWS and NMFS to ensure that federal agency actions do not jeopardize the continued existence of a listed species or destroy or adversely modify critical habitat for listed species.

Section 10 requires the issuance of an "incidental take" permit before any public or private action may be taken that could take an endangered or threatened species. The permit requires preparation and implementation of a habitat conservation plan (HCP) that would offset the take of individuals that may occur, incidental to implementation of a proposed project, by providing for the protection of the affected species.

Pursuant to the requirements of the FESA, a federal agency reviewing a project within the jurisdiction of the agency must determine whether any federally listed threatened or endangered species may be present on-site and whether the proposed project will have a potentially significant impact on such species. In addition, the agency is required to determine whether the proposed action is likely to jeopardize the continued existence of any species proposed to be listed under FESA or result in the destruction or adverse modification of critical habitat proposed to be designated for such species (16 USC Section 1536[3], [4]).

Migratory Bird Treaty Act

Raptors (birds of prey), migratory birds, and other avian species are protected by a number of state and federal laws. The federal MBTA prohibits the killing, possessing, or trading of migratory birds except in accordance with regulations prescribed by the Secretary of Interior. Section 3503.5 of the CFGC states, "It is unlawful to take, possess, or destroy any birds in the order Falconiformes or Strigiformes (birds-of-prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by the code or any regulation adopted pursuant thereto."

Waters of the U.S. and the Clean Water Act

The USACE regulates "Waters of the United States" under Section 404 of the CWA. Waters of the U.S. are defined in the Code of Federal Regulations (CFR) as waters susceptible to use in commerce, including interstate waters and wetlands, all other waters (intrastate waterbodies, including wetlands), and their tributaries (33 CFR Section 328.3). Potential wetland areas, according to the three criteria used to delineate wetlands as defined in the *Corps of Engineers Wetlands Delineation Manual*, are identified by the presence of hydrophytic vegetation, hydric soils, and wetland hydrology.

Waters of the U.S. include a range of wet environments such as lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, and wet meadows. Wetlands are defined as "those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (33 CFR Section 328.3[b]). Areas that are inundated at a sufficient depth and for a sufficient duration to exclude growth of hydrophytic vegetation are subject to Section 404 jurisdiction as "other waters" (i.e., non-wetland waters) and are often characterized by an ordinary high-water mark (OHWM). The OHWM is defined by the USACE as "that line on shore established by the fluctuations of water and indicated by physical character of the soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas" (33 CFR Section 328.3[e]). Other waters, for example, generally include lakes, rivers, and streams. The placement of fill material into Waters of the U.S generally requires an individual or nationwide permit from the USACE under Section 404 of the CWA.

State Regulations

The following are the State environmental laws and policies relevant to biological resources:

California Department of Fish and Wildlife

CDFW administers a number of laws and programs designed to protect fish and wildlife resources under the CFGC, such as CESA (CFGC Section 2050, et seq.), Fully Protected Species (CFGC Section 3511) and the Lake or Streambed Alteration Agreement Program (CFGC Sections 1600 to 1616). Such regulations are summarized in the following sections.

California Endangered Species Act

The State of California enacted CESA in 1984. CESA is similar to the FESA but pertains to State-listed endangered and threatened species. CESA requires State agencies to consult with CDFW when preparing CEQA documents to ensure that the State lead agency actions do not jeopardize the existence of listed species. CESA directs agencies to consult with CDFW on projects or actions that could affect listed species, directs CDFW to determine whether jeopardy would occur, and allows CDFW to identify "reasonable and prudent alternatives" to the project consistent with conserving the species. Agencies can approve a project that affects a listed species if they determine that "overriding considerations" exist; however, the agencies are prohibited from approving projects that would result in the extinction of a listed species.

CESA prohibits the taking of State-listed endangered or threatened plant and wildlife species. CDFW exercises authority over mitigation projects involving State-listed species, including those resulting from CEQA mitigation requirements. CDFW may authorize taking if an approved habitat management plan or management agreement that avoids or compensates for possible jeopardy is implemented. CDFW requires preparation of mitigation plans in accordance with published guidelines.

Fish and Game Code Section 3505

Birds of prey are protected in California under provisions of the CFGC, Section 3503.5, (1992), which states, "it is unlawful to take, possess, or destroy any birds in the order Falconiformes or Strigiformes (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto." Construction disturbance during the breeding season could result in the incidental loss of fertile eggs or nestlings, or otherwise lead to nest abandonment. Disturbance that causes nest abandonment and/or loss of reproductive effort is considered "taking" by CDFW.

Lake or Streambed Alteration Program

The CDFW is responsible for conserving, protecting, and managing California's fish, wildlife, and native plant resources. To meet this responsibility, the Fish and Game Code, Section 1602, requires notification to CDFW of any proposed activity that may substantially modify a river, stream, or lake. Notification is required by any person, business, state or local government agency, or public utility that proposes an activity that will:

- Substantially divert or obstruct the natural flow of any river, stream or lake;
- 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.

For the purposes of Section 1602, rivers, streams, and lakes must flow at least intermittently through a bed or channel. If notification is required and CDFW believes the proposed activity is likely to result in adverse harm to the natural environment, the CDFW will require that the parties enter into a Lake or Streambed Alteration Agreement.

CDFW Species of Special Concern

In addition to formal listings under FESA and CESA, plant and wildlife species receive additional consideration during the CEQA process. Species that may be considered for review are included

on a list of "Species of Special Concern" developed by CDFW. Species whose numbers, reproductive success, or habitat may be threatened are tracked by CDFW in California.

California Coastal Commission

On land, the California Coastal Zone varies in width from several hundred feet in highly urbanized areas up to five miles in certain rural areas, and offshore the coastal zone includes a three-mile-wide band of ocean. Within the California Coastal Zone, an "environmentally sensitive area" is defined by the California Coastal Act as: "Any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments" (Section 30107.5).

The CCC regulates the diking, filling, or dredging of wetlands, which qualify as an ESHA, within the California Coastal Zone. Section 30121 of the California Coastal Act defines "wetlands" as "lands within the Coastal Zone which may be covered periodically or permanently with shallow water and include saltwater marshes, freshwater marshes, open or closed brackish water marshes, swamps, mudflats, and fens." The CCC considers this definition as requiring the observation of one diagnostic feature of a wetland, such as wetland hydrology, dominance by wetland vegetation (i.e., hydrophytes), or presence of hydric soils, as a basis for asserting jurisdiction under the California Coastal Act. In addition to the above definition, the *Statewide Interpretive Guidelines for Identifying and Mapping Wetlands and Other Wet Environmentally Sensitive Habitat Areas* (CCC 1981) provide technical criteria for use in identifying and delineating wetlands and other environmentally sensitive habitat areas within the Coastal Zone. The technical criteria presented in the guidelines are based on the California Coastal Act definition and indicate that wetland hydrology is the most important parameter for determining a wetland. If a project proposes to develop or grade areas within the Coastal Zone, a Coastal Development Permit (CDP) is typically required from the CCC or from a local government with a certified Local Coastal Program (LCP), unless an exception, exclusion, or waiver is applicable.

Native Plant Protection Act

The Native Plant Protection Act (NPPA) was enacted in 1977 and allows the Fish and Game Commission to designate plants as rare or endangered. Currently 64 species, subspecies, and varieties of plants are protected as rare under the NPPA. The NPPA prohibits take of endangered or rare native plants, but includes some exceptions for agricultural and nursery operations, emergencies, and after properly notifying CDFW for vegetation removal from canals, roads, and other sites, changes in land use, and in certain other situations.

Regional Water Quality Control Board

Pursuant to Section 401 of the CWA and U.S. Environmental Protection Agency (USEPA) 404(b)(1) guidelines, in order for a USACE federal permit applicant to conduct any activity which may result in discharge into navigable waters, they must provide a certification from the RWQCB that such discharge will comply with the State water quality standards. The RWQCB has a policy of no-net-loss of wetlands in effect and typically requires mitigation for all impacts to wetlands before the RWQCB will issue water quality certification.

Under the PCWQCA (Cal. Water Code Section 13000-14920), the RWQCB is authorized to regulate the discharge of waste that could affect the quality of the State's waters. Therefore, even if a project does not require a federal permit (i.e., a Nationwide Permit [NWP] from the USACE), the project may still require review and approval by the RWQCB, in light of the approval of new

NWPs on March 9, 2000 and the Supreme Court's decision in the case of the Solid Waste Agency of Northern Cook County (SWANCC) vs. USACE. The RWQCB in response to the above case, issued guidance for regulation of discharges to "isolated" water on June 25, 2004. The guidance states:

> Discharges subject to Clean Water Act section 404 receive a level of regulatory review and protection by the USACE and are also subject to streambed alteration agreements issued by the CDFW; whereas discharges to waters of the State subject to SWANCC receive no federal oversight and usually fall out of CDFW jurisdiction. Absent of RWQCB attention, such discharges will generally go entirely unregulated. Therefore, to the extent that staffing constraints require the RWQCB to regulate some dredge and fill discharges of similar extent, severity, and permanence to federally-protected waters of similar value. Dredging, filling, or excavation of "isolated" waters constitutes a discharge of waste to waters of the State, and prospective dischargers are required to submit a report of waste discharge to the RWQCB and comply with other requirements of Porter-Cologne.

When reviewing applications, the RWQCB focuses on ensuring that projects do not adversely affect the "beneficial uses" associated with waters of the State. Generally, the RWQCB defines beneficial uses to include all of the resources, services and qualities of aquatic ecosystems and underground aquifers that benefit the State. In most cases, the RWQCB seeks to protect the beneficial uses by requiring the integration of water quality control measures into projects that will result in discharge into waters of the State. For most construction projects, RWQCB requires the use of construction and post-construction Best Management Practices (BMPs). In many cases, proper use of BMPs, including bioengineering detention ponds, grassy swales, sand filters, modified roof techniques, drains, and other features, will speed project approval from RWQCB. Development setbacks from creeks are also requested by RWQCB as they often lead to less creek-related impacts in the future.

Local Regulations

The following are the local environmental laws and policies relevant to biological resources:

City of Pacifica General Plan

The following policies from the 1980 City of Pacifica General Plan are applicable to the proposed project:

Conservation Element

Policy 1 Conserve trees and encourage native forestation.

Policy 2 Require the protection and conservation of indigenous rare and endangered species.

Policy 3 Protect significant trees of neighborhood or area importance and encourage planting of appropriate trees and vegetation.

Policy 4 Protect and conserve the coastal environment, sand dunes, habitats, unique and endangered species and other natural resources and features which contribute to the coastal character.

Policy 5 Local year-round creeks and their riparian habitats shall be protected.

Policy 7 Promote the conservation of all water, soil, wildlife, vegetation, energy, minerals and other natural resources.

Local Coastal Land Use Plan

The City of Pacifica's Local Coastal Land Use Plan is the basis for the Local Coastal Implementation Program, which includes a permit issuing procedure and other implementation programs. Per the BRA, it should be noted that because the project site is in an "Area of Deferred Certification," per a 1994 Local Coastal Program (LCP) amendment, the project site is not subject to the City's LCP Land Use Plan and permit issuance jurisdiction remains with the California Coastal Commission.

City of Pacifica Heritage Tree Preservation Ordinance

Title 4, Chapter 12 of the City's Municipal Code (Preservation of Heritage Trees) stipulates regulations designed to preserve and protect heritage trees on private or city-owned property.[6] In general, heritage trees are defined as any trees within the City limits, exclusive of eucalyptus, which have a trunk with a circumference of fifty inches (approximately sixteen inches in diameter) or more, measured at twenty-four inches above the natural grade. See Sections 4-12.02 and 4-12.03 of the Municipal Code for a complete definition of a heritage tree. The City often requires a permit for developments performing work on or engaging in construction around heritage trees.

Municipal Code Section 4-12.07(a) exempts from heritage tree permit requirements any project that also requires a discretionary permit or other land use approval in Municipal Code Title 9. The official or public body authorized to grant the discretionary permit or other land use approval required for the project has the authority to authorize any proposal to cut down, destroy, remove, move, or engage in construction within the dripline of a heritage tree under such circumstances. The applicant must submit a tree protection plan as part of any such request.

City of Pacifica Logging Operation Ordinance

Logging in Pacifica is regulated by Ordinance Nos. 636-C.S. and 673-C.S. Logging operations within the City are defined as any removal, destruction, or harvesting of 20 or more trees within one year from any parcel or contiguous parcel in the same ownership. In reference to logging regulations, a tree is defined as any tree six inches in diameter as measured 12 inches from the ground. Logging operations are prohibited unless one of the following conditions is met:

- Said operations are in conjunction with a City permit(s) requiring Planning Commission and/or City Council approval, at which time said operations shall be evaluated and approved or denied at a duly noticed public hearing by the Planning Commission and/or City Council, concurrently with the other permit(s);
- Said operations are necessary immediately for the safety of life or property, as determined by the director of public works or his/her designee; or
- Said operations occur on City-owned property and are necessary immediately to maintain public health and safety.

4.3.4 IMPACTS AND MITIGATION MEASURES

The following section describes the standards of significance and methodology used to analyze and determine the proposed project's potential impacts related to biological resources. In addition,

[6] City of Pacifica. *Tree Ordinance/Permits*. Available at: https://cityofpacifica.org/trees/ordinances.asp. Accessed December 2020.

a discussion of the project's impacts, as well as mitigation measures where necessary, is also presented.

Standards of Significance

Consistent with Appendix G of the CEQA Guidelines, the City's General Plan, and professional judgment, a significant impact would occur if the proposed project would result in the following:

- 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 CDFW or USFWS;
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFW or USFWS;
- 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.
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or
- Conflict with the provisions of an adopted HCP, Natural Community Conservation Plan (NCCP), or other approved local, regional, or State habitat conservation plan.

With respect to the potential risks to water, wetlands, or wildlife associated with the proposed project's use of Gorilla-Snot as part of the project Dust Control Plan, WRA prepared a Memorandum to assess such potential impacts. Gorilla-Snot is a liquid vinyl copolymer dust palliative manufactured by Soilworks that binds to soil and sediment to reduce the ability of particles to become airborne.

WRA reviewed the Material Safety Data Sheet (MSDS) for the product, and confirmed that, based on USEPA analysis, "this material is classified as practically non-toxic to all species." The LC50 (the concentration of a material in water that is expected to kill 50 percent of a group of test animals) was listed as greater than 1,000 parts per million (ppm) for green algae, fathead minnow, and rainbow trout. Such an amount is based on testing with undiluted Gorilla-Snot and represents a value that would not be considered toxic. While not the species of concern that have potential to occur in Calera Creek, the test species used are representative of potential toxicological effects to wildlife in a natural setting. As such, direct exposure to wildlife would be unlikely to have adverse health effects. In addition, it should be noted that the material additionally does not pose a significant health risk to humans, is not flammable, is non-reactive and non-explosive, and does not pose any other special hazard.

Based on WRA's review of the available materials in Gorilla-Snot, use of the product would not pose a substantial risk to water, wetlands, or wildlife in the project vicinity, provided that the proposed project adheres to the recommendations set forth in the Memorandum. As such recommendations pertain to preventing substantial adverse effects that could occur through stormwater runoff, such potential impacts are assessed in Chapter 4.6, Hydrology and Water Quality, of this EIR.

Method of Analysis

The information contained in the analysis is primarily based on the BRA and Memorandum prepared by WRA.

Biological Resource Assessment

A list of special-status species with potential to occur within the project site was developed by conducting a query of the following sources:

- CNDDB records (CDFW 2019);
- USFWS Information for Planning and Conservation Species Lists (USFWS 2019);
- CNPS Inventory records (CNPS 2019);
- CDFG publication *California's Wildlife, Volumes I-III* (Zeiner et al. 1990);
- CDFG publication *California Bird Species of Special Concern* (Shuford and Gardali 2008);
- CDFW and University of California Press publication *California Amphibian and Reptile Species of Special Concern* (Thomson et al. 2016);
- *A Field Guide to Western Reptiles and Amphibians* (Stebbins 2003);
- Habitat Assessment for Special-status Invertebrates at the Pacifica Quarry in Pacifica (Entomological Consulting Services 2006); and
- Biological Assessment for Federally Listed Species (Zentner and Zentner 2017a).

Site Assessment

WRA conducted site visits on March 18, August 22, and August 26 – all during 2019. Since the time of the field surveys, project site conditions have not changed. During the site visits, the project site was traversed on foot to determine if existing conditions provided suitable habitat for any special-status plant or wildlife species, if plant communities were present, and if sensitive habitats were present. Based on the site visits and the professional expertise of the investigating biologist, habitat conditions observed on-site were used to evaluate the potential for presence of special-status species. All observed plant species are listed in Appendix B of the BRA.

The site visit did not constitute a protocol-level survey and was not intended to determine the actual presence or absence of a species; however, if a special-status species was observed during the site visit, the presence was recorded and is discussed in the Results section of the BRA. Appendix C of the BRA presents WRA's evaluation of the potential for occurrence of each special-status plant and wildlife species known to occur in the vicinity of the project site with the species' habitat requirements, potential for occurrence, and rationale for the classification based on criteria listed.

Additionally, prior to the site visit, WRA examined the Soil Survey of San Mateo County, California to determine if any unique soil types capable of supporting sensitive plant communities and/or aquatic features were present on-site. Vegetation communities present on-site were classified based on existing plant community descriptions described in the *Preliminary Descriptions of the Terrestrial Natural Communities of California* or *Manual of California Vegetation*. In some cases, due to what the situation necessitated, WRA identified variants of community types or described non-vegetated areas not described in the literature. Vegetation communities were classified as sensitive or non-sensitive as defined by CEQA and other applicable laws and regulations.

Finally, the site visits were also to determine the presence of any wetlands, non-wetland waters, or riparian vegetation potentially subject to jurisdiction under the CWA, the PCWQCA, the CFCG, and the California Coastal Act. The assessment was based primarily on the presence of wetland

plant indicators, but also included any observed indicators of wetland hydrology or wetland soils. Any potential wetland areas were identified as areas dominated by plant species with a wetland indicator status of Obligate (OBL), FACW, or Facultative (FAC) as provided on the Corps National Wetlands Plant List. Prior to the survey, the following resources were reviewed: An Approved Jurisdictional Determination of the [Quarry] parcel of Rockaway Quarry, a wetland delineation of the [Quarry] parcel that was used to inform the Approved Jurisdictional Determination, and a Wetland Mitigation Program previously drafted by Zentner and Zentner. The preliminary non-wetland waters assessment was based primarily on the presence of unvegetated, ponded areas or flowing water, areas vegetated with hydrophytic plant species, or evidence indicating their presence, such as an OHWM or a defined drainage course.

Gorilla-Snot Memorandum

WRA prepared a Memorandum to assess potential impacts associated with the use of Gorilla-Snot as part of the project Dust Control Plan. Gorilla-Snot is a liquid vinyl copolymer dust palliative manufactured by Soilworks that binds to soil and sediment to reduce the ability of soil particles to become airborne. As part of assessing potential indirect effects from applying Gorilla-Snot to on-site soils, WRA reviewed the Material Safety Data Sheet (MSDS) for the product to determine the toxicity levels of Gorilla-Snot.

Project-Specific Impacts and Mitigation Measures

The following discussion of impacts related to biological resources is based on implementation of the proposed project in comparison to existing conditions and the standards of significance presented above:

4.3-1 Have a substantial adverse effect, either directly (e.g., threaten to eliminate a plant community) or through habitat modifications, on any plant species identified as a candidate, sensitive, or special-status species. Based on the analysis below and with implementation of mitigation, the impact is *less than significant*.

Although not identified on-site during the site assessments of the project site, special-status plant species pappose tarplant, San Francisco Bay spineflower, and rose leptosiphon were determined by the BRA to have moderate potential to occur on-site based on the availability of suitable habitat to support the special-status species, the presence of associated plant species, and the proximity of documented occurrences of the species to the project site. For example, the BRA determined pappose tarplant has moderate potential to occur in on-site grasslands and wetlands. San Francisco Bay spineflower and rose leptosiphon have moderate potential to occur in the coyote brush scrub on the Hilltop and East Flank in the Quarry Parcel and where 1.75 acres of seasonal wetlands would be constructed in the Eastern Parcel as part of the proposed project's mitigation for impacts to Waters of the U.S./State. Additionally, CNDDB records within proximity to the project site exist for each plant, with an occurrence of pappose tarplant recorded within 0.5 miles south of the project site, San Francisco Bay spineflower recorded approximately two miles north of the site, and an occurrence of rose leptosiphon recorded at Mori Point.

All three special-status plant species, if present, would be potentially impacted by the destruction or adverse modification of habitat through the proposed project's construction of the 1.75 acres of seasonal wetlands in the Eastern Parcel, as the location for the wetlands includes non-native annual grassland and coyote brush scrub. The three plant species, if present, would also be impacted by reclamation activities in the Quarry Parcel's Hilltop and East Flank areas. For example, as part of the proposed project, the upper section of the Hilltop would be graded to a rounded hillock. Reclamation would also include two drainage terraces with a concrete ditch built along on a southern face of the Hilltop. Meanwhile, reclamation would include the installation of a concrete ditch along the existing CCMP Trail in the East Flank.

Based on the above information, if present in the aforementioned areas of the Eastern Parcel and Quarry Parcel, pappose tarplant, San Francisco Bay spineflower, and rose leptosiphon, would be impacted by the aforementioned ground-disturbing activities of the proposed project. Therefore, impacts related to special-status plant species could be ***significant***.

Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the above potential impact to a *less-than-significant* level.

4.3-1(a) *Prior to the commencement of reclamation activities associated with the proposed project, protocol-level, focused plant surveys shall be conducted by a qualified biologist during the documented bloom periods of pappose tarplant, San Francisco Bay spineflower, and rose leptosiphon. Two site visits, including one early-season (May) and one late-season (August) shall be sufficient to cover the blooming periods of the three species with moderate potential to occur. Survey timing may fluctuate based on blooming periods of appropriate reference site locations. If the special-status plant species are not observed during the focused plant surveys, no impact to special-status plant species would occur, and no mitigation would be required. The results of the surveys shall be submitted to the City's Planning Department.*

4.3-1(b) *If special-status plants are identified on-site during the focused plant surveys, the project applicant shall be responsible for ensuring reclamation activities avoid special-status plants through preparation and submittal to the City's Planning Department of an Avoidance Plan Report detailing protection and avoidance criteria, measures, and the extent to which special-status plants were successfully avoided. The Avoidance Plan Report shall be subject to verification from the City's Planning Department.*

If avoidance is infeasible, the qualified biologist shall ensure seed collection for affected special-status plants is completed and plants are re-established at a minimum of a one-to-one ratio (number of newly established plants relative to the number of plants impacted) in a preserved, suitable habitat approved by City. The project applicant shall

document and submit proof of compliance to the City's Planning Department.

4.3-1(c) *Re-established special-status plant populations shall be monitored annually by the project applicant in accordance with an approved Habitat Mitigation and Monitoring Plan prepared in consultation with the City's Planning Department, with annual monitoring taking place for a minimum of five years. The Habitat Mitigation and Monitoring Plan shall include criteria, subject to approval by all applicable agencies, including the City's Planning Department, USFWS, and CDFW, detailing the survival ratio required of re-established populations and performance standards for further replanting for any re-established special-status plant species that do not survive. Reports describing performance results shall be prepared and submitted for years one, three, and five of the monitoring period.*

4.3-2 Have a substantial adverse effect, either directly (e.g., cause a wildlife population to drop below self-sustaining levels, threaten to eliminate an animal community) or through habitat modifications, on California red-legged frog and San Francisco garter snake. Based on the analysis below and with implementation of mitigation, the impact is *less than significant*.

The BRA determined CRLF and SFGS to be present on-site, based on the availability of on-site aquatic habitat involving the man-made seasonal wetland pond, located in the Quarry Pit in the southern portion of the Quarry Parcel. Additionally, CRLF and SFGS could seek refuge in on-site upland habitat located in the Quarry Parcel. Because proposed reclamation activities in the Quarry Pit would include filling the area to its natural pre-mining slope as determined from historic photographs, CRLF and SFGS could be harassed, harmed, or killed during such reclamation activities. In addition, the BRA determined the Reclamation Plan's installation of trails and drainage improvements could also result in the harassment, harm, or death of CRLF and SFGS. Such impacts would be considered significant under CEQA. The proposed project could lead to a temporary loss in upland habitat in the Quarry Parcel during reclamation; however, because the upland habitat area would be revegetated according to the project's Revegetation Plan, reclamation and revegetation could actually increase the acreage of suitable upland habitat in the Quarry Parcel for CRLF and SFGS, particularly the barren slopes and sparsely vegetated areas.

The project applicant has already initiated Section 7 Consultation with USFWS for the potential take of CRLF. A Biological Opinion is anticipated to be drafted by USFWS, which would be incorporated into the Section 404 NWP issued by USACE. The Section 404 NWP would account for potentially significant impacts to on-site jurisdictional seasonal wetlands. The project applicant would be required to adhere to all compliance measures in the Biological Opinion. Additionally, it should be noted that project applicant would mitigate for the loss of aquatic habitat for CRLF and SFGS by creating a USFWS-approved clay-lined pond and a complex of four tiered seasonal wetlands in the project site's Eastern Parcel, which is discussed under Impact 4.3-5.

Nonetheless, because reclamation of the Quarry Pit as well as installation of trails and drainage improvements could result in the harassment, harm, or death of on-site CRLF and SFGS, impacts related to special-status species could be significant.

In addition, according to the Memorandum prepared to assess the risks associated with Gorilla-Snot, the use of the product could potentially result in impacts to wildlife species in locations where wildlife would come into direct contact with the compound. As such, the Memorandum sets forth recommendations to ensure use of Gorilla-Snot avoids locations where wildlife could occur. Without compliance with the recommendations, the proposed project could result in the harm of on-site CRLF and SFGS.

Based on the above, the proposed project could have a substantial adverse effect, either directly or through habitat modifications, on CRLF and SFGS, and a ***significant*** impact could occur.

Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the above potential impact to a *less-than-significant* level. Additionally, it should be noted that the proposed project would mitigate for the loss of aquatic habitat for CRLF and SFGS by creating a USFWS-approved clay-lined pond and a seasonal wetland in the project site's Eastern Parcel, detailed in *Mitigation Measure 4.3-5(a) and (b)*.

4.3-2(a) *Prior to beginning any ground-disturbing work at the project site, the project applicant shall ensure employees of the proposed project attend a Worker Environmental Awareness Training Program (WEAP). The WEAP shall consist of a brief presentation by a USFWS-approved biologist, which may be given either in-person or via an online teleconferencing presentation. The program shall include a description of visual identification of any special-status species and required habitat, an explanation of the status of these species and their protection, consequences of non-compliance, and a description of the project-specific measures being taken to reduce effects to these species. Documentation of the training (i.e., a sign-in sheet) shall be retained at the site and shall be submitted with applicable reports to the City's Planning Department.*

4.3-2(b) *Prior to initiation of reclamation activities, a take permit shall be obtained by the project applicant from USFWS for CRLF. As part of acquiring a take permit, a Biological Opinion from the USFWS shall be acquired through Section 7 Consultation. The project applicant shall adhere to all compliance measures in the Biological Opinion, which shall be incorporated into the Section 404 Nationwide Permit issued by USACE. Proof of compliance shall be submitted to the City's Planning Department.*

4.3-2(c) *Prior to initiation of reclamation activities, a qualified biologist shall place exclusionary fencing around the project's proposed areas of disturbance (i.e., where reclamation is proposed to occur in the Quarry*

Parcel and Eastern Parcel) to prevent CRLF and SFGS from entering such locations. Fencing shall consist of silt fence or suitable substitute (e.g., ERTEC 48-inch high-visibility orange fencing), which shall be buried at least six inches below the surface (or sealed in a like manner) to prevent incursion under the fence, and will stand at least 36 inches above ground. The fence shall also be made of an opaque material. Exit funnels shall be installed to allow any animals that may be occupying the project's areas of disturbance to escape. Exclusionary fencing shall be inspected by and maintained throughout the areas of disturbance by the qualified biologist. Fencing shall be removed only when all reclamation equipment is removed from the site. The exclusionary fence shall be checked for breaches on a daily basis by the qualified biologist. However, if a qualified biologist is not required to be on-site for biological monitoring or other tasks, an on-site representative may be appointed to check the fence on a daily basis and conduct repairs. If an on-site representative is conducting inspections and repairs, a qualified biologist shall verify the fence status on a weekly basis to assure repairs are occurring as needed. A comprehensive fencing plan shall be submitted for appropriate agency approval to the City's Planning Department.

4.3-2(d) *Within 48 hours prior to any reclamation activities, a qualified biologist shall conduct surveys for CRLF and SFGS in and adjacent to the project's proposed areas of disturbance. A qualified biologist shall conduct the foregoing surveys on an ongoing basis before commencement of any reclamation activity. A qualified biologist shall be on-site during ground-disturbing activities, including fence installation and the operation of heavy equipment (e.g., during grading). The qualified biologist(s) shall be given authority to stop any work that may result in take of a listed species. If at any time a CRLF is observed on-site and relocation is necessary, the biologist shall transport and release the animal to a suitable relocation site within Calera Creek, outside of the areas of disturbance. If a SFGS is observed within the areas of disturbance, work shall be halted until the animal leaves the location of its own volition. If CRLF or SFGS is observed, the qualified biologist shall document the occurrence and submit proof of compliance to the City's Planning Department.*

4.3-2(e) *At the close of each working day, to prevent inadvertent entrapment of wildlife, any excavated, steep-walled holes or trenches more than 12 inches deep shall either be covered or have one or more escape ramps installed that are constructed of earth fill or wooden planks. Before any such holes or trenches are filled, they shall be inspected for wildlife by a qualified biologist. The qualified biologist shall document and submit proof of compliance to the City's Planning Department.*

4.3-2(f) *Prior to and throughout reclamation activities, the project applicant shall ensure the following measures are implemented at the project site to additionally protect against take of CRLF and SFGS: (1) The proposed project shall not involve the operation of heavy equipment on-site from*

30 minutes before sunset to 30 minutes after sunrise, year-round, thereby avoiding disturbances during the most active times for CRLF and SFGS; (2) The boundaries of the areas of disturbance shall be clearly delineated with highly visible stakes, fencing, or flagging; (3) Any food-related trash shall be disposed of in closed containers and removed from the project site daily, to eliminate attractants of predators; (4) Monofilament netting or similar material shall not be used on any erosion control devices specified in the Stormwater Pollution Prevention Program (SWPPP); and (5) All vehicle traffic shall be restricted to established or temporary access roads and reclamation areas, and a site-wide 20 mph speed limit shall be observed. The project applicant shall document and submit proof of compliance to the City's Planning Department.

4.3-2(g) *Prior to the issuance of a grading permit, the Final Dust Control Plan shall include the following recommendations, which shall be subject to review and approval by the City Engineer:*

- *The potential application area shall be checked by the project contractor prior to application to ensure that wildlife is not entrapped in a location where any wildlife species would come in direct contact with the compound.*

4.3-3 Have a substantial adverse effect, either directly (e.g., cause a wildlife population to drop below self-sustaining levels, threaten to eliminate an animal community) or through habitat modifications, on American peregrine falcon, white-tailed kite, San Francisco common yellowthroat, yellow warbler, and migratory birds protected under the MBTA. Based on the analysis below and with implementation of mitigation, the impact is *less than significant*.

The BRA determined reclamation activities associated with the proposed project have the potential to impact special-status and non-special-status native nesting birds protected under the CFGC and MBTA, including American peregrine falcon, white-tailed kite, San Francisco common yellowthroat, and yellow warbler. Reclamation activities, such as vegetation removal and ground disturbance in the Quarry Parcel, carry the potential to impact these species by causing direct mortality of eggs or young, or by causing auditory, vibratory, and/or visual disturbance at a sufficient level to cause abandonment of an active nest.

As previously discussed, native nesting birds, including raptors, are protected by CFGC Section 3503. Raptors, passerines, non-passerine land birds, and waterfowl are further protected under the MBTA. The MBTA prohibits the take, possession, purchase, sale, or bartering of any migratory bird, including feathers or other parts, nests, eggs, or products, except as allowed by implementing regulations. All migratory bird species are protected by the MBTA. Any disturbance that causes direct injury, death, nest abandonment, or forced fledging of migratory birds, is restricted under the

MBTA. Any removal of active nests during the breeding season or any disturbance that results in the abandonment of nestlings is considered a 'take' of the species under federal law.

The proposed project would revegetate reclamation areas, which would be expected to prevent the permanent loss of habitat for nesting birds and raptors. However, if reclamation activities occur during the nesting season, which generally extends from February 1 to August 31, nests of both special-status and non-special-status native birds could be impacted by the various components of the Reclamation Plan, including the tree removal, grading of slopes, filling of the Quarry Pit, and installation of new trails in the Quarry Parcel and the installation of temporary and permanent culverts and installation of new wetlands in the Eastern Parcel.

Based on the above, impacts related to migratory birds and raptors could be ***significant***.

Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the above potential impact to a *less-than-significant* level.

4.3-3(a) *Reclamation activities, such as tree and vegetation removal, grading, or initial ground-disturbance, shall be conducted between September 1 and January 31 (outside of the February 1 to August 31 nesting season) to the greatest extent feasible. If reclamation activities associated with the proposed project must be conducted during the nesting season, a pre-construction nesting bird survey shall be conducted by a qualified biologist no more than 14 days prior to vegetation removal or initial ground disturbance. The survey shall include the proposed areas of disturbance and surrounding 250 feet to identify the location and status of any nests that could potentially be affected either directly or indirectly by activities associated with the proposed project. The results of the survey shall be submitted to the City's Planning Department.*

4.3-3(b) *If active nests of native nesting bird species are located during the nesting bird survey, a work exclusion zone shall be established around each nest by the qualified biologist. Established exclusion zones shall remain in place until all young in the nest have fledged or the nest otherwise becomes inactive (e.g., due to predation). Appropriate exclusion zone sizes shall be determined by a qualified biologist and shall vary based on species, nest location, existing visual buffers, anticipated noise levels from reclamation activities proposed in the vicinity of the nest, and other factors. An exclusion zone radius may be as small as 50 feet for common, disturbance-adapted species, or as large as 250 feet or more for raptors. Exclusion zone size shall be reduced from established levels by a qualified biologist, if nest monitoring findings indicate that reclamation-related activities do not adversely impact the nest, and if a reduced exclusion zone would not adversely affect the nest. Proof of compliance shall be documented by a qualified biologist and submitted to the City's Planning Department.*

4.3-4 Have a substantial adverse effect on any riparian habitat or other sensitive natural community. Based on the analysis below, the impact is *less than significant*.

As part of the BRA, the project site was surveyed to determine the presence of any wetlands, non-wetland waters, or riparian vegetation potentially subject to jurisdiction under the CWA, the PCWQCA, the CFGC, and the California Coastal Act. In addition, the BRA evaluated the proposed project's potential impacts to CDFW sensitive natural communities, vegetation alliances/associations, and any such community identified in local or regional plans and regulations. As detailed in Table 4.3-1, the only sensitive vegetation communities determined to be on-site were the 0.44 acre of seasonal wetlands. The sensitive seasonal wetlands include emergent wetlands, scrub-shrub wetlands, and the man-made seasonal wetland pond. Potential impacts to the wetlands are analyzed under Impact 4.3-5 and include emergent wetlands, scrub-shrub wetlands, and the man-made seasonal wetland pond.

The proposed project would not involve reclamation activities that would impact Calera Creek, which bisects the Quarry Parcel and Eastern Parcel. Although reclamation would involve trucks accessing the Quarry Parcel by way of the Calera Creek crossing, use of BMPs required by the RWQCB, such as sand filters, drains, and development setbacks from creeks, would ensure the proposed project would not result in significant impacts to Calera Creek's riparian corridor. Additionally, the proposed project would be required to comply with applicable federal, State, and local regulations with respect to riparian habitats. Thus, the proposed project would result in a ***less-than-significant*** impact.

Mitigation Measure(s)
None required.

4.3-5 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. Based on the analysis below and with implementation of mitigation, the impact is *less than significant*.

Wetlands are considered sensitive environmental resources protected at federal, State, and local levels. Wetlands provide unique habitat functions and values for wildlife, and provide habitat for plant species adapted to wetland hydrology. Throughout the State, the quality and quantity of wetlands has dramatically declined owing to the construction of dams, dikes, and levees, as well as because of water diversions, the filling of wetlands for development, and the overall degradation of water quality by inputs of runoff from agricultural, urban, and infrastructure development and other sources.

As mentioned above, the BRA determined 0.44 acre of seasonal wetlands to be present on-site. The seasonal wetlands were determined to be sensitive. They include emergent wetlands, scrub-shrub wetlands, and the man-made seasonal wetland pond.

In regards to the emergent wetlands, the wetlands occur in the Quarry Parcel in shallow depressions in hummocky terrain in a matrix of depressions and uplands. The Quarry Parcel contains 13 emergent wetlands, which are situated in the Quarry Pit. In the Eastern Parcel, the project site contains four degraded emergent wetlands. USACE verified the emergent wetlands in the Quarry Parcel by way of an Approved Jurisdictional Determination on January 19, 2018, which included verifying the extent and location of wetlands that are subject to USACE (and RWQCB) regulatory authority. A formal wetland delineation of the Eastern Parcel was conducted by WRA in 2015. Additionally, a 1-parameter CCC wetland delineation was conducted by WRA in August of 2019. Wetlands that would be permanently impacted by reclamation activities would be filled, graded, and planted with a native seed mix. Impacts to jurisdictional seasonal wetlands would be considered significant under CEQA and require a Section 404 nationwide permit from the USACE, a Section 401 Water Quality Certification from the RWQCB, and a coastal development permit (CDP) from the CCC.

Based on the above information, the proposed project would have a ***significant*** impact on State or federally protected wetlands. However, pursuant to Mitigation Measures 4.3-5(a) and (b) discussed below, the proposed project would include the installation of new wetlands in the Eastern Parcel to mitigate impacts to wetlands in the Quarry Parcel.

Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the above impact to a *less-than-significant* level.

4.3-5(a) *Prior to initiation of reclamation activities, the project applicant shall obtain the following aquatic resource permits to proceed with proposed impacts to seasonal wetlands: (1) a Section 404 Nationwide Permit from the USACE, (2) a Section 401 water quality certification from the RWQCB, and (3) a CDP from the CCC. All compliance measures included in these permits shall be adhered to by the project applicant. Proof of compliance shall be submitted to the City's Planning Department.*

4.3-5(b) *During reclamation, the project applicant shall ensure the proposed project includes a 4-to-1 on-site wetland replacement for impacts to Waters of the U.S./State. Newly created wetlands shall total 1.75 acres of seasonal wetlands and be implemented within the Eastern Parcel.*

A complex of four tiered seasonal wetlands totaling 1.55 acres shall be constructed in an upland portion of the Eastern Parcel that is currently composed of non-native annual grassland and coyote brush. In addition, a 0.20-acre bentonite clay-lined pond shall be constructed to the west of the four seasonal wetlands, providing high-quality breeding habitat for CRLF and habitat for SFGS. Existing foot trails shall be used for construction access to minimize the temporary impact footprint associated with pond construction. All work required to construct the 1.75 acres of mitigation wetlands shall avoid existing wetlands in the

Eastern Parcel. A wetland maintenance and monitoring program, consistent with the performance standards established by the Section 404 and Section 401 permits and the CDP, shall be adopted in coordination with the City's Planning Department to ensure that newly created wetlands maintain long-term functionality. The wetland maintenance and monitoring program shall stipulate that the proposed project shall result in no net loss of waters.

4.3-6 Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites. Based on the analysis below, the impact is *less than significant*.

Per the BRA, for many species, a landscape is a mosaic of suitable and unsuitable habitat types. Environmental corridors are segments of land that provide a link between these different habitats, while also providing cover. Development that fragments natural habitats (i.e., breaks them into smaller, disjunct pieces) can have a twofold impact on wildlife. First, as habitat patches become smaller, the habitats are then unable to support as many individuals due to patch size. Secondly, the area between habitat patches could be unsuitable for wildlife species to traverse.

Prior to and during reclamation activities, exclusionary fencing would be placed around the areas proposed for reclamation to prevent CRLF and SFGS from entering, which could impede the movement of wildlife species. In addition, noise and vibration generated by vehicles and equipment necessary to complete reclamation of the project site could render areas of the Quarry Parcel and Eastern Parcel temporarily unsuitable for various wildlife species. However, the majority of reclamation would occur in the Quarry Parcel, with the Eastern Parcel undergoing only minimal improvements associated with trails and the installation of new seasonal wetlands. Additionally, according to the project's phasing, work would first take place in the Quarry Parcel, leaving most areas of the Eastern Parcel unaffected by project noise/vibration. As such, most of the Eastern Parcel and portions of the Quarry Parcel would still be available for wildlife movement during project reclamation. While exclusionary fencing would be placed around the project's areas of disturbance, the Calera Creek riparian zones, which represent the most likely movement corridor on-site, would not exclude wildlife access, as the creek is not within the proposed areas of disturbance. Project vehicles and workers would cross Calera Creek to access the Quarry Parcel, but vehicles and workers would use an existing crossing, thereby preventing impacts to the creek and riparian zones. As previously noted within the discussion of the regional setting, intact native habitats persist along the riparian areas of Calera Creek as well as on steep slopes. Therefore, such areas would remain available on-site during reclamation activities.

Furthermore, as the project site is bounded by the Pacific Ocean to the west and SR 1 to the east and is located within close proximity to the CCWRP, commercial businesses, and single-family residences, the potential for use of the site as a wildlife corridor or native wildlife nursery site is limited. Sufficient land suitable for continued wildlife movement would be available during reclamation activities by way of Mori Point

Ridge, which is located immediately to the north of the project site. Additionally, sufficient land in the greater vicinity, specifically in the eastern portions of the City limits and areas to the south of the City, offer land much more conducive to wildlife movement and native wildlife nursery sites, as such areas are devoid of development. Given the amount of suitable land in the immediate and greater vicinity of the project site that could accommodate wildlife movement, reclamation activities would not substantially interfere with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors. Lastly, during project operation, the project site would continue to function for local movement of terrestrial species, because the proposed project would not develop the project site.

Based on the above information, the proposed project would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites. Therefore, the proposed project would have a ***less-than-significant*** impact.

Mitigation Measure(s)

None required.

4.3-7 Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. Based on the analysis below and with implementation of mitigation, the impact is *less than significant*.

According to the BRA, a total of 42 trees were verified to be present on-site in the Quarry Parcel, 38 of which are in the parcel's areas of disturbance. Sixteen of the 38 trees are considered to be heritage trees. According to PMC Title 4, Chapter 12, heritage trees include any trees in the City that have a trunk with a circumference of at least 50 inches measured at 24 inches above the natural grade (except eucalyptus trees), or a tree or grove of trees (including eucalyptus) designated by resolution of the City Council to be of special historical, environmental, or aesthetic value. (Pacifica Municipal Code Section 4-12.02(c)). Any removal, substantial trimming or new construction within the drip-line of a heritage tree requires approval by the City. In addition, 26 of the 38 trees qualify as "trees" as defined by the City's logging operations ordinances (Ordinance Nos. 636-C.S. and 673-C.S.) (i.e., trees that were larger than 6 inches in diameter measured at 12 inches above the ground). The locations of surveyed trees are shown on Figure 3-8 in the Project Description chapter of this EIR. Trees present within the project site include native Monterey pine (*Pinus radiata*) and native Monterey cypress. As previously discussed, a portion of the on-site trees within the Quarry Parcel qualify as both a heritage tree and a tree under the City's logging operations ordinances. All 38 trees in the Quarry Parcel's areas of disturbance, including 16 heritage trees (15 Monterey Cypress and one Monterey pine) would be removed as part of the proposed project, resulting in a permanent impact. Furthermore, because more than 20 on-site "trees" (greater than six inches in diameter as measured 12 inches from the ground) would be removed, the project could qualify as a logging operation by the City, which would require compliance with Ordinance

No. 636-C.S. The ordinance prohibits logging operations unless one of three conditions are met: (1) Operations are in conjunction with a City permit(s) requiring Planning Commission and/or City Council approval, at which time said operations are evaluated and approved or denied at a duly noticed public hearing by the Planning Commission and/or City Council, concurrently with other permit(s); (2) Operations are necessary immediately for the safety of life or property, as determined by the Director of Public Works or his/her designee; or (3) Operations occur on City-owned property and are necessary immediately to maintain public health and safety.

The Eastern Parcel contains 123 heritage and 52 non-heritage trees along the parcel's southern and eastern boundaries, as well as along the project site's ingress. However, trees in the Eastern Parcel would not require removal, as none are located within the parcel's proposed area of disturbance, which is confined to the reclamation ingress and egress as well as the areas proposed for the 1.75 acres of newly constructed mitigation wetlands. While several trees located along the ingress route near to the location of the temporary culverts could require very minor trimming, all trees in the Eastern Parcel would be retained as part of the proposed project.

Based on the above information, while reclamation activities would not impact on-site trees in the Eastern Parcel, the removal of trees to accommodate reclamation of the Quarry Parcel could conflict with a local policy or ordinance protecting biological resources, such as a tree preservation policy or ordinance. Thus, a ***significant*** impact would occur.

Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the above impact to a *less-than-significant* level.

4.3-7(a) *Prior to the removal of any on-site trees, the project applicant shall obtain authorization for heritage tree removal from the Planning Commission or City Council, and shall obtain authorization of a logging operation by the Planning Commission or City Council. All trees removed (heritage trees and non-heritage trees) shall be replaced in like kind in the case of native species or with a native species in the case of non-native species. Minimum replacement size shall be 24-inch box unless a smaller size is recommended by a landscape architect licensed to practice in the State of California in order to increase the likely survivability of the replacement tree. Tree replacement shall occur at a ratio of three replacement trees per one removed tree. The specific placement of the replacement trees shall be determined by a qualified biologist in consultation with a licensed landscape architect. The final Tree Replacement Plan, which shall include the foregoing information, shall include requirements for monitoring and shall be subject to review and approval by the City's Planning Department.*

4.3-7(b) *Prior to the commencement of any reclamation activity, a qualified arborist, horticulturist, landscape architect, or other qualified person shall prepare a Tree Protection Plan to protect in place the existing*

trees located within the Eastern Parcel. The Tree Protection Plan shall be consistent with all applicable requirements set forth in Section 4-12.07 of the Pacifica Municipal Code and detail the installation and maintenance of any measures necessary to protect trees within the Eastern Parcel. The Tree Protection Plan shall be subject to review and approval by the City's Planning Department.

4.3-8 Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan. Based on the analysis below, the proposed project would have *no impact*.

The proposed project would not conflict with the provisions of an adopted HCP, NCCP, or other approved local, regional, or State habitat conservation plan. The project site is not within a geographic area covered by an adopted HCP or a NCCP. Therefore, the proposed project would result in ***no impact***.

Mitigation Measure(s)
None required.

Cumulative Impacts and Mitigation Measures

As defined in Section 15355 of the CEQA Guidelines, "cumulative impacts" refers to two or more individual effects which, when considered together, are considerable, compound, or increase other environmental impacts. The individual effects may be changes resulting from a single project or a number of separate projects. The cumulative impact from several projects is the change in the environment that results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects.

4.3-9 Cumulative impact on biological resources. Based on the analysis below and with implementation of mitigation, the project's impact is *less than significant*.

As discussed in the Project Description chapter of this EIR, because the proposed project serves to reclaim the site, the vast majority of impacts associated with the Reclamation Plan would only be temporary. Long-term, the proposed project results in safer and improved access, improved internal trails, revegetation, and improved drainage. The proposed project would not construct new structures on the project site. Of the permanent impacts that would result from reclamation through the filling of wetlands, Mitigation Measures 4.3-5(a) and (b) would ensure the proposed project includes a four-to-one on-site wetland replacement for impacts to Waters of the U.S./State, which would mitigate impacts to wetlands to a less-than-significant level.

As discussed above in the various analyses of potential impacts, mitigation measures would be included to mitigate for impacts to biological resources, such as mitigation to implement new wetlands in the Eastern Parcel. Other mitigation measures would ensure only less-than-significant impacts would occur to special-status species. Revegetation of the project site would also add habitat to aid special-status species.

The proposed project would be required to adhere to all applicable federal, State, and local policies and regulations that exist to protect against impacts to biological resources. Based on the above, the proposed project's contribution to the cumulative impact would be ***less than significant***.

Mitigation Measure(s)

None required.

4.4 Cultural and Tribal Cultural Resources

4.4 CULTURAL AND TRIBAL CULTURAL RESOURCES

4.4.1 INTRODUCTION

The Cultural and Tribal Cultural Resources chapter of the EIR addresses known and unknown historic and prehistoric cultural resources, including tribal cultural resources, in the vicinity of the project area. Cultural resources can be categorized into prehistoric or historic resources. Prehistoric resources are those sites and artifacts associated with indigenous, non-Euroamerican populations, generally prior to contact with people of European descent. Historic resources include structures, features, artifacts, and sites that date from Euroamerican settlement of the region. The chapter summarizes the existing setting with respect to cultural resources, identifies thresholds of significance, evaluates project impacts to such resources, and sets forth mitigation measures. Information presented in the chapter is primarily drawn from the Historical and Cultural Resources Assessment (Appendix I of this EIR) prepared for the proposed project by Zentner and Zentner,[1] as well as the City of Pacifica General Plan.[2]

4.4.2 EXISTING ENVIRONMENTAL SETTING

The following sections provide further details regarding the prehistoric overview, ethnographic overview, and historic overview of the project area, as well as a description of any identified cultural resources associated with the project site and a discussion of tribal cultural resources.

Prehistoric Overview

Prehistoric cultural resources are composed of Native American structures or sites of historical or archaeological interest. Such resources may include districts, buildings, objects, landscape elements, sites, or features that reflect human occupations of the region, such as villages and burial grounds.

The moderate climate, combined with the abundant natural resources found throughout the nine-county region of the Bay Area, has supported human habitation for several thousand years. The prehistoric occupation of Central California can be interpreted using the PaleoArchaic-Emergent chronological sequence.[3] The sequence consists of three broad periods: The Paleo-Indian period (10,000 to 6,000 B.C.); the Archaic period consisting of the Lower Archaic (6,000 to 3,000 B.C.), Middle Archaic (3,000 to 1,000 B.C., and Upper Archaic (1,000 B.C. to A.D. 500); and the Emergent period (A.D. 500 to 1800). The entry and spread of people into California dates to the Paleo-Indian period.[4] The cultural patterns relevant to the Planning Area include the Windmiller Pattern and Berkeley Pattern during the Archaic period and the Augustine Pattern during the Emergent period.

The Windmiller Pattern was characterized by small communities of hunters and gatherers who moved seasonally. Material attributes typical of the Windmiller Pattern include large leaf-shaped

---

1 Zentner and Zentner. *Pacifica Quarry, Reclamation Project, Historical and Cultural Resources Assessment.* October 10, 2019.
2 City of Pacifica. *City of Pacifica General Plan.* Adopted 1980.
3 City of Pacifica. *Pacifica General Plan Draft Environmental Impact Report.* March 2014.
4 *Ibid.*

and stemmed projectile points, westerly oriented extended burials with grave offerings or burial goods such as red ocher, and a distinctive variety of shell beads and charmstones.[5] Subsistence was based on hunting large animals including deer and elk, along with smaller game animals such as water fowl. Fishing also occurred along with the gathering of nuts and fruits.

The Berkeley Pattern was characterized by larger communities with more permanent settlement patterns. Material attributes typical of the Berkeley Pattern include projectile points with distinctive diagonal flaking across their faces, flexed position burials with burial ornaments such as shell beads, and an extensive bone tool industry. During the Berkeley Pattern, a heavy reliance was developed on acorns which were used throughout the year as a staple food.[6] Food was also obtained through a combination of hunting, fishing, and gathering. Tools were more diverse than the Windmiller Pattern, and included specialized fish spears and hunting gear along with bone and ground-stone tools.

The Augustine Pattern was characterized by large sedentary communities. Material attributes typical of the Augustine Pattern include large spear points, often with serrated edges, and small arrow points, bone harpoons, ceramics and coiled basketry, and flexed position burials, and evidence of the practice of cremation.[7] Hunting and gathering was practiced broadly and important technological innovations include the bow and arrow and shaped mortars and pestles. The Augustine Pattern predated the Miwok, who occupied central California at the time of Spanish contact.[8]

California's Paleo-Coastal peoples were "traveling in seaworthy boats, using fishhooks and other fishing tackle, hunting marine mammals and sea birds, weaving cordage and basketry from sea grass, and making shell beads for ornamental use and exchange with interior peoples"[9] by about 10,000 years ago. Rising sea levels, the formation of the San Francisco Bay, and the resulting filling of inland valleys have covered early sites, which were most likely located along the then existing bay shore and waterways. Existing evidence indicates the presence of many village sites began by at least 5,000 B.C. in the region. The arrival of Native Americans into the Bay Area is associated with documented cultural resources from circa 5,500 B.C.

Ethnographic Overview

Native Americans once had an extensive presence in the City's Planning Area. When Europeans arrived, the area was home was to people speaking the Costanoan/Ohlone language, and living in and around two villages: Pruristac, in San Pedro Valley, and Timiigtac, in Calera Valley. In 1769, an expedition led by Gaspar de Portola, governor of the Spanish territory covering California, discovered San Francisco Bay from a point on Pacifica's Sweeney Ridge, and camped in San Pedro Valley. Not long after, Mission San Francisco de Asis (Mission Dolores in present-day San Francisco) was established, and in 1786 the Mission developed an outpost in San Pedro Valley, alongside Pruristac. The Costanoan village was wiped out by disease in 1791.[10]

Mexican independence from Spain was followed by a "secularization" program, and in 1839 the San Pedro mission outpost and its rancho, covering the majority of the Planning Area, was

5 City of Pacifica. *Pacifica General Plan Draft Environmental Impact Report.* March 2014.
6 *Ibid.*
7 *Ibid.*
8 *Ibid.*
9 *Ibid.*
10 *Ibid.*

granted to Francisco Sanchez, who built the adobe house that stands today as the oldest structure in San Mateo County. Following his death, the land was divided and the area developed slowly.

In 1905 construction began on the Ocean Shore Railway, which was to connect San Francisco with Santa Cruz. The line was never completed, but operated as far south as Half Moon Bay until 1921, supporting a string of small communities in present-day Pacifica including Tobin, Salada Beach, and Rockaway Beach. Regional settlements grew slowly until the building boom following World War II. Pacifica incorporated as a City in 1957.

Project Site Historic Overview

The project site consists of two separate parcels (Quarry Parcel and Eastern Parcel) that comprise the approximately 86-acre Rockaway Quarry property, formerly known as the Rockaway Quarry. In the 20th century, quarry operations at the site were a major industry in Pacifica. The Ocean Shore Railroad was connected to the quarry in 1907 when a spur was constructed into the property to facilitate the removal of large amounts of stone for building the railroad and in rebuilding after the earthquake that ravaged San Francisco. The Ocean Shore Railroad brought prosperity to the quarry, and in turn, the quarry was integral to the development of various developments and historic districts in and around Pacifica.

The eastern boundary of the project site previously included the Ocean Shore Railroad route. However, the railroad was removed over 80 years ago, and visible remains of the railroad do not exist within the site. The visible history of Rockaway Quarry is limited to the partially filled quarry pit, a few nondescript concrete blocks, and the filled and graded flat south of the Calera Creek.

Known Cultural Resources

A historical and cultural assessment of the project site was previously conducted by Holman and Associates Archaeological Consultants (Holman) in 2002, the results of which are summarized in the Historical and Cultural Resources Assessment prepared for the proposed project. The 2002 assessment included a review of available historic documents and a records search. In addition, Holman conducted a general surface survey of the project site, which was focused on locating and examining undisturbed native soil within the site.

Holman concluded that the entirety of the project site had been subject to extensive disturbance as a result of prior mining activities and partial reclamation, including the relocation of Calera Creek. The western edge of the project site, where the topsoil/subsoil/bedrock profile was exposed, and portions of the east and west-facing slopes, were the only areas of the site determined to contain native soils.

Based on the records search conducted by Holman at the Northwest Information Center of the California Historical Resources Information System (CHRIS), two prehistoric sites, SMA-268 and SMA-162, have been identified within the project site. Both sites were located as part of the general surface survey conducted by Holman.

SMA-162 is located in the man-made fill berm located on the west side of State Route (SR) 1 and south of Reina Del Mar Avenue, within the Eastern Parcel. Moratto (1974) first identified the site; due to the strange and diverse composition of the site, Moratto determined that the site was not likely an in situ prehistoric site. Specifically, the site did not retain the original location or composition. In 1978, Desgrandchamp also located and recorded site SMA-162. Desgrandchamp researched Caltrans records and determined that items within the site are the "remains of one or

more archaeological site originally located in Sharp Park Area" that had "been transported during road construction and stockpiled at Reina del Mar as fill material".

SMA-268, is located north of Calera Creek and west of SR 1. The site was formerly located under SR 1 and the associated western berm. Per Zentner and Zentner, the site likely still extends under the highway berm. The site was first formally recorded in 1986 during a Caltrans survey, but has been known since at least 1963. In 1963, a shell midden containing obsidian tools, projectile points, and human remains were reported to be removed when SR 1 was expanded through the project area.

In 1986, based on 1963 Caltrans as-built plans and recollections from the 1963 Caltrans project engineer and an archaeologist who worked in the area, SMA-268 was mapped. The map shows the site extending under the highway berm and the highway and including "three patches of midden" south of the creek. However, due to the difficulty in mapping the site boundary, the map is largely uncertain. In 1993, SMA-268 was rerecorded by Orlins and Schwaderer, who describe the site as a "habitation site: dark brown midden with many shell fragments, mammal bone, fire-affected rock". Orlins and Schwaderer conducted extended reconnaissance with a backhoe in September 1993 and described the site as entirely north of the creek and partially covered with up to 70 centimeters (28 inches) of fill.

Per the Historical and Cultural Resources Assessment, other than SMA-268 and SMA-162, the project site does not contain any other known significant cultural resources. Although the Rockaway Quarry was an historically important feature to Pacifica and the region, little cultural evidence of the feature remains on-site, aside from the existing quarry pit. Sacred sites or other potentially significant historic resources were not identified by any prior analyses conducted on the site, and such resources have not been identified in the records of the Native American Heritage Commission (NAHC), the San Mateo County Historical Association, or the Pacifica Historical Society.

Tribal Cultural Resources

Based on a search of the NAHC Sacred Lands File, as described in further detail in the Method of Analysis section below, recorded Native American sacred sites or traditional cultural properties may exist within the project site.[11] Pursuant to AB 52 (PRC Section 21080.3.1), lead agencies must provide notice to tribes that are traditionally and culturally affiliated with the geographic area of a proposed project if they have requested notice of projects proposed within that area. Because California Native American tribes have not requested that the City of Pacifica provide formal notification of proposed projects in the geographic area, consultation pursuant to AB 52 is not required for the proposed project.

4.4.3 REGULATORY CONTEXT

Federal, State, and local governments have developed laws and regulations designed to protect significant cultural resources that may be affected by actions that they undertake or regulate. The following section contains a summary of basic federal and State laws governing preservation of historic and archaeological resources of national, regional, State, and local significance.

[11] Native American Heritage Commission. *Pacifica Quarry Reclamation Project, San Mateo County.* December 3, 2019.

Federal Regulations

The following are the federal environmental laws and policies relevant to cultural resources.

Section 106 for the National Historical Preservation Act of 1966

Federal regulations for cultural resources are governed primarily by Section 106 of the National Historical Preservation Act (NHPA) of 1966. Section 106 of NHPA requires Federal agencies to take into account the effects of their undertakings on historic properties and affords the Advisory Council on Historic Preservation a reasonable opportunity to comment on such undertakings. The Council's implementing regulations, "Protection of Historic Properties," are found in 36 Code of Federal Regulations (CFR) Part 800. The goal of the Section 106 review process is to offer a measure of protection to sites, which are determined eligible for listing on the National Register of Historic Places (NRHP). The criteria for determining NRHP eligibility are found in 36 CFR Part 60. Amendments to the Act (1986 and 1992) and subsequent revisions to the implementing regulations have, among other things, strengthened the provisions for Native American consultation and participation in the Section 106 review process. While federal agencies must follow federal regulations, most projects by private developers and landowners do not require this level of compliance. Federal regulations only come into play in the private sector if a project requires a federal permit or uses federal funding.

National Register of Historic Places

NRHP is the nation's master inventory of known historic resources. The NRHP includes listings of resources, including: buildings, structures, sites, objects, and districts that possess historic, architectural, engineering, archaeological, or cultural significance at the national, State, or local level. Resources over 50 years of age could be listed on the NRHP. However, properties under 50 years of age that are of exceptional significance or are contributors to a district could also be included on the NRHP. Four criteria are used to determine if a potential resource may be considered significant and eligible for listing on the NRHP. The criteria include resources that:

A. Are associated with events that have made a significant contribution to the broad patterns of history; or
B. Are associated with the lives of persons significant in our past; or
C. Embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
D. Have yielded or may likely yield information important in prehistory or history.

A resource can be individually eligible for listing on the NRHP under any of the above four criteria, or can be listed as contributing to a group of resources that are listed on the NRHP.

A resource can be considered significant in American history, architecture, archaeology, engineering, or culture. Once a resource has been identified as significant and potentially eligible for the NRHP, the resource's historic integrity must be evaluated. Integrity is a function of seven factors: location, design, setting, materials, workmanship, feeling, and association. The factors closely relate to the resource's significance and must be intact for NRHP eligibility.

Historical buildings, structures, and objects are usually eligible under Criteria A, B, and C based on historical research and architectural or engineering characteristics. Archaeological sites are usually eligible under Criterion D, the potential to yield information important in prehistory or history. An archaeological test program may be necessary to determine whether the site has the

potential to yield important data. The lead federal agency makes the determination of eligibility based on the results of the test program and seeks concurrence from the State Historic Preservation Officer (SHPO).

Effects to NRHP-eligible resources (historic properties) are adverse if the project may alter, directly or indirectly, any of the characteristics of an historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association.

State Regulations

The following are the State environmental laws and policies relevant to cultural resources.

California Environmental Quality Act and California Register of Historic Places

State historic preservation regulations affecting this project include the statutes and guidelines contained in CEQA (Public Resources Code Sections 21083.2 and 21084.1 and Sections 15064.5 and 15126.4 (b) of the CEQA Guidelines). CEQA requires lead agencies to consider the potential effects of a project on historic resources and unique archaeological resources. A "historic resource" includes, but is not limited to, any object, building, structure, site, area, place, record or manuscript that is historically or archaeologically significant (Public Resources Code Section 5020.1). Under Section 15064.5 of the CEQA Guidelines, a resource is considered "historically significant" if one or more of the following California Register of Historic Resources (CRHR) criteria have been met:

1. The resource is associated with events that have made a significant contribution to the broad patterns of California history;
2. The resource is associated with the lives of important persons from our past;
3. The resource 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
4. The resource has yielded, or may be likely to yield, important information in prehistory or history.

In addition, the resource must retain integrity. Cultural resources determined eligible for the NRHP by a federal agency are automatically eligible for the CRHR.

CEQA requires preparation of an EIR if a proposed project would cause a "substantial adverse change" in the significance of a historical resource. A "substantial adverse change" would occur if a proposed project would result in physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of a historical resource would be materially impaired (CEQA Guidelines Section 15064.5[b][1]).

In addition to historically significant resources, which can include archeological resources that meet the criteria listed above, CEQA also requires consideration of "unique archaeological resources." If a site meets the definition of a unique archaeological resource, the site must be treated in accordance with the provisions of Public Resources Code Section 21083.2. Under Public Resources Code Section 20183.2(g), an archaeological resource is considered "unique" if it:

1) Is associated with an event or person of recognized significance in California or American history or recognized scientific importance in prehistory;
2) Can provide information that is of demonstrable public interest and is useful in addressing scientifically consequential and reasonable research questions;
3) Has a special kind or particular quality such as oldest, best example, largest, or last surviving example of its kind;
4) Is at least 100 years old and possesses substantial stratigraphic integrity; or
5) Involves important research questions that can be answered only with archaeological methods.

CEQA also includes specific guidance regarding the accidental discovery of human remains. Specifically, CEQA Guidelines Section 15064.5(e) requires that if human remains are uncovered, excavation activities must be stopped and that the county coroner be contacted. If the county coroner determines that the remains are Native American, the coroner must contact the NAHC within 24 hours. The NAHC identifies the most likely descendant, and that individual or individuals can make recommendations for treatment of the human remains under the procedures set forth in Section 15064.5 of the CEQA Guidelines.

The SHPO maintains the CRHR. Properties that are listed on the NRHP are automatically listed on the CRHR, along with State Landmarks and Points of Interest. The CRHR can also include properties designated under local ordinances or identified through local historical resource surveys.

Assembly Bill 52

AB 52 adds tribal cultural resources to the categories of cultural resources in CEQA, which had formerly been limited to historic, archaeological, and paleontological resources. “Tribal cultural resources” are defined as either:

(1) Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:
    (A) Included or determined to be eligible for inclusion in the California Register of Historical Resources.
    (B) Included in a local register of historical resources as defined in subdivision (k) of Section 5020.1.
(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 subdivision (c) of Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.

Under AB 52, a project that may cause a substantial adverse change in the significance of a Tribal Cultural Resource is defined as a project that may have a significant effect on the environment. Where a project may have a significant impact on a Tribal Cultural Resource, the lead agency’s environmental document must discuss the impact and whether feasible alternatives or mitigation measures could avoid or substantially lessen the impact. AB 52 (PRC Section 21080.3.1) requires lead agencies to provide notice to tribes that are traditionally and culturally affiliated with the geographic area of a proposed project if they have requested notice of projects proposed within that area. If the tribe(s) requests consultation within 30 days upon receipt of the notice, the lead agency must consult with the tribe(s). Consultation may include discussing the type of

environmental review necessary, the significance of tribal cultural resources, the significance of the project's impacts on the tribal cultural resources, and alternatives and mitigation measures recommended by the tribe(s).

Local Regulations

The following are the local government's environmental standards that are intended to protect cultural resources by mitigating the potential impacts of ground disturbance in areas containing important cultural resources.

City of Pacifica General Plan

The following policy from the City of Pacifica General Plan is applicable to the proposed project.

Historic Preservation Element

Policy 1 Conserve historic and cultural sites and structures which define the past and present character of Pacifica.

City of Pacifica Municipal Code

Title 9, Chapter 7 of the City of Pacifica Municipal Code comprises the City's Historic Preservation Ordinance. The Historic Preservation Ordinance includes the City's criteria and procedures for designation of historic landmarks, a list of established historic landmarks within the City, as well as the permit procedures to alter historic landmarks.

4.4.4 IMPACTS AND MITIGATION MEASURES

The following section describes the standards of significance and methodology used to analyze and determine the proposed project's potential impacts related to cultural and tribal cultural resources. In addition, a discussion of the project's impacts, as well as mitigation measures where necessary, is also presented.

Standards of Significance

Consistent with Appendix G of the CEQA Guidelines, a significant impact related to cultural or tribal cultural resources would occur if the proposed project would result in any of the following:

- Cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines, Section 15064.5;
- Cause a substantial adverse change in the significance of a unique archaeological resource pursuant to CEQA Guidelines, Section 15064.5;
- Disturb any human remains, including those interred outside of dedicated cemeteries; or
- Cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resource Code, Section 21074.

Method of Analysis

As noted previously, a historical and cultural assessment of the project site was previously conducted by Holman in 2002, the results of which are summarized in the Historical and Cultural Resources Assessment prepared for the proposed project by Zentner and Zentner. Because the project site has remained relatively untouched since the Holman assessment, the conclusions of the 2002 Holman assessment remain applicable.

The Holman cultural resources evaluation of the project site included a records search of the Northwestern Information Center CHRIS. The records search included the entirety of the project site. Based on the results of the records search, Holman found that the project site had been covered by multiple previous cultural resource surveys (Desgrandchamp 1978, Flynn 1978, Moratto 1974, Buss 1981, Melandry 1980, 1986, Holman 1987, O'Connor and Melandry 1988, Orlins and Schwaderer 1994). Holman also completed a records check that examined the National Register of Historic Places data, the California Register, California Historical Landmarks, California Points of historical Interest, the California Inventory of Historic Resources, and other historic maps and archives.

Additionally, Holman completed a general surface survey of the project site. Because of the heavily disturbed nature of the site, the reconnaissance survey focused on attempting to locate and examine undisturbed native soil. Additional archival research was undertaken using in-house resources and the Archives of the San Mateo County Historical Association (SMCHA). Historic maps from 1868 to 1959 were examined. Holman walked wide transects across the Eastern Parcel, surveyed the approximate northern property line near the crest of the ridge, walked contour transects on the hillsides, and examined the quarry from afar.

Project-Specific Impacts and Mitigation Measures

The following discussion of impacts is based on implementation of the proposed project in comparison with the standards of significance identified above.

4.4-1 Cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines, Section 15064.5. Based on the analysis below, the impact is *less than significant*.

As discussed above, the project site does not contain any existing buildings or other structures that could be considered historic. While the Rockaway Quarry formerly located on the site was an historically important feature to Pacifica and the region, little cultural evidence of the feature remains on-site, aside from the existing quarry pit, a few nondescript concrete blocks, and the filled and graded flat south of the Calera Creek. Such features do not retain sufficient integrity or other unique qualities necessary for consideration as historic resources. Generally, the project site is highly disturbed.

Therefore, the proposed project would not result in a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines, Section 15064.5, and a ***less-than-significant*** impact would occur.

Mitigation Measure(s)

None required.

4.4-2 Cause a substantial adverse change in the significance of a unique archeological resource pursuant to CEQA Guidelines, Section 15064.5 or disturb any human remains, including those interred outside of dedicated cemeteries. Based on the analysis below and with implementation of mitigation, the impact is *less than significant*.

As discussed previously, the project site contains two known archaeological resources: SMA-162 and SMA-268. SMA-162 consists of the remains of one or more archaeological sites originally located in Sharp Park Area that have been subsequently transported during road construction and stockpiled at Reina del Mar as fill material. SMA-268 consists of dark brown midden with shell fragments, mammal bone, and fire-affected rock. As confirmed in the Historical and Cultural Resources Assessment prepared for the proposed project by Zentner and Zentner, the project would not include any ground-disturbing activity within the vicinity of either resource. As such, the project would not cause a substantial adverse change in the significance of a known archaeological resource.

The project site has been subject to extensive disturbance associated with prior mining operations at the Rockaway Quarry. Consequently, only a small portion of the site surface consists of native soils, and the potential for unknown, intact cultural resources to occur on the site is relatively limited. Furthermore, the proposed reclamation project would consist primarily of placement of fill, thereby further interring any unknown archaeological resources potentially located within the site. However, the potential exists, while unlikely, for minor excavation activities associated with the proposed project, including construction of drainage improvements and implementation of wetlands on the Eastern Parcel, to uncover undocumented archaeological resources. As such, the proposed project could cause a substantial adverse change in the significance of a unique archeological resource pursuant to CEQA Guidelines, Section 15064.5, and a ***significant*** impact could occur.

Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the above impact to a *less-than-significant* level.

4.4-2(a) *In the event of the accidental discovery or recognition of any human remains, further excavation or disturbance of the find or any nearby area reasonably suspected to overlie adjacent human remains shall not occur until compliance with the provisions of CEQA Guidelines Section 15064.5(e)(1) and (2) has occurred. The Guidelines specify that in the event of the discovery of human remains other than in a dedicated cemetery, no further excavation at the site or any nearby area suspected to contain human remains shall occur until the County Coroner has been notified to determine if an investigation into the cause of death is required. If the Coroner determines that the remains are Native American, then, within 24 hours, the Coroner must notify the Native American Heritage Commission, which in turn will notify the most likely descendants who may recommend treatment of the remains*

and any grave goods. If the Native American Heritage Commission is unable to identify a most likely descendant or most likely descendant fails to make a recommendation within 24 hours after notification by the Native American Heritage Commission, or the landowner or his authorized agent rejects the recommendation by the most likely descendant and mediation by the Native American Heritage Commission fails to provide a measure acceptable to the landowner, then the landowner or his authorized representative shall rebury the human remains and grave goods with appropriate dignity at a location on the property not subject to further disturbances. If human remains are encountered, a copy of the resulting County Coroner report noting any written consultation with the Native American Heritage Commission shall be submitted as proof of compliance to the City of Pacifica Planning Department.

4.4-2(b) *If any prehistoric or historic artifacts, other indications of cultural deposits, such as historic privy pits or trash deposits, or Tribal Cultural Resources, are found once ground disturbing activities are underway, all work within the vicinity of the find(s) shall cease and the find(s) shall be immediately evaluated by a qualified archaeologist and appropriate Native American Tribe, if applicable. If the find is determined to be a historical or unique archaeological resource, the applicant shall make available contingency funding and a time allotment to allow for implementation of avoidance measures or appropriate mitigation (CEQA Guidelines Section 15064.5). Work may continue on other parts of the project site while historical or unique archaeological resource mitigation takes place (Public Resources Code Sections 21083 and 21087).*

The requirements of Mitigation Measures 4.4-2(a) and 4.4-2(b) shall be included via notation on all project grading plans prior to the issuance of grading permits, to the satisfaction of the Planning Director.

4.4-3 Cause a substantial adverse change in the significance of a Tribal Cultural Resource as defined in Public Resources Code, Section 21074. Based on the analysis below and with implementation of mitigation, the impact is *less than significant*.

As discussed above, the project site does not contain any known resources listed or eligible for listing in the CRHR or NRHP, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k) or determined to be significant pursuant to Public Resources Code Section 5024.1(c). However, based on a records search of the NAHC Sacred Lands File, Native American sacred lands and/or traditional cultural properties may exist within the project site vicinity or the proposed off-site improvement areas. As noted above, the project site has been subjected to extensive ground disturbance associated with prior mining operations. The proposed reclamation project would consist primarily of the import and placement of fill, thereby interring any unknown resources potentially located within the site. Given the NAHC

Sacred Lands File search results, the potential exists for the excavation activities associated with the proposed project, including construction of drainage improvements and excavation of the pond on the Eastern Parcel, to uncover previously unknown Tribal Cultural Resources.

Based on the above, Tribal Cultural Resources associated with local tribes could potentially occur in the vicinity of the project site. Thus, ground-disturbing activities associated with the proposed project could have the potential to cause a substantial change in the significance of a Tribal Cultural Resource as defined in Public Resources Code Section 21074, and a ***significant*** impact could occur.

Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the above impact to a *less-than-significant* level.

4.4-3 Implement Mitigation Measures 4.4-2(a) and 4.4-2(b).

Cumulative Impacts and Mitigation Measures

As defined in Section 15355 of the CEQA Guidelines, "cumulative impacts" refers to two or more individual effects which, when considered together, are considerable, compound, or increase other environmental impacts. The individual effects may be changes resulting from a single project or a number of separate projects. The cumulative impact from several projects is the change in the environment that results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects.

4.4-4 Cause a cumulative loss of cultural resources. Based on the analysis below, the cumulative impact is *less than significant*.

Generally, while some cultural resources may have regional significance, the resources themselves are site-specific, and impacts to them are project-specific. For example, impacts to a subsurface archeological find at one project site would not generally be made worse by impacts to a cultural resource at another site due to development of another project. Rather, the resources and the effects upon them are generally independent. A possible exception to the aforementioned general conditions would be where a cultural resource represents the last known example of its kind or is part of larger cultural resources such as a single building along an intact historic Main Street. For such a resource, cumulative impacts, and the contribution of a project to them, may be considered cumulatively significant.

As described throughout this chapter, the project site does not contain known historical resources that would be eligible for inclusion on the NRHP or considered significant pursuant to CEQA. Furthermore, implementation of the project-specific mitigation measures set forth in this EIR (Mitigation Measures 4.4-2(a) and (b)) would ensure that any impacts to previously unknown, subsurface resources that are discovered on the project site during construction activities are reduced to less than significant.

Similar to the proposed project, future development projects within the City would be required to implement project-specific mitigation to ensure any potential impacts to identified cultural resources are reduced to a less-than-significant level, where

possible. Therefore, given that cultural resource impacts are generally site-specific and each future project within the City would be required to mitigate such impacts, any potential impacts associated with cumulative buildout of the City's General Plan would not combine to result in a significant cumulative impact.

Based on the above, the potential for impacts related to a cumulative loss of cultural resources, to which implementation of the proposed project might contribute, is ***less than significant.***

Mitigation Measure(s)

None required.

4.5 Geology and Soils/Mineral Resources

4.5 GEOLOGY AND SOILS/ MINERAL RESOURCES

4.5.1 INTRODUCTION

The Geology and Soils/Mineral Resources chapter of the EIR describes the geologic and soil characteristics of the project site and evaluates the extent to which implementation of the proposed project could be affected by unstable earth conditions and various geologic and geomorphic hazards. In addition, the chapter evaluates known mineral resources on the project site, any potential adverse effects of the proposed project on the availability of such resources, and any adverse impacts on paleontological resources.

Information from this chapter is primarily drawn from a Geotechnical Investigation prepared for the proposed project by Geocon Consultants, Inc. (Geocon) in December 2018 (see Appendix J of this EIR).[1] In addition, information was sourced from the City of Pacifica General Plan[2] and the Soil Management Plan prepared for the proposed project (see Appendix C of this EIR).[3]

4.5.2 EXISTING ENVIRONMENTAL SETTING

Background setting information regarding the geology, soils, seismicity, mineral resources, and paleontological resources associated with the project site and the surrounding region is provided below.

Regional Setting

As noted in the Geotechnical Investigation, the City of Pacifica is located within the Coast Ranges Geomorphic Province of California, on the west side of the San Francisco peninsula. The Coast Ranges are a series of northwest trending mountains and valleys that extend along much of California's coast and inland to the Central Valley and Klamath Mountains. Topography is controlled by the predominant geological structural trends within the Coast Range that generally consist of northwest trending synclines, anticlines and faulted blocks. The dominant structure is a result of both active northwest trending strike-slip faulting, associated with the San Andreas Fault system, and east-west compression within the province.

The San Andreas Fault (SAF) is a major right-lateral strike-slip fault that extends from the Gulf of California in Mexico to Cape Mendocino in northern California. The SAF forms a portion of the boundary between two tectonic plates on the surface of the earth. To the west of the SAF is the Pacific Plate, which moves north relative to the North American Plate, located east of the fault. In the San Francisco Bay Area, movement across this plate boundary is concentrated on the SAF and also distributed, to a lesser extent, across a number of other faults including the Hayward, Calaveras and Rodgers Creek faults, among others. Together, these faults are referred to as the SAF system.

---

1 Geocon Consultants, Inc. *Geotechnical Investigation for Quarry Reclamation, Rockaway Quarry, Pacifica, California.* December 2018.
2 City of Pacifica. *City of Pacifica General Plan.* Adopted 1980.
3 Baylands Soils Pacifica, LLC. *Soil Management Plan for The Preserve at Pacifica, LLC Amended Reclamation Plan at the Pacifica Quarry, Pacifica, California*. September 2021.

Basement rock west of the SAF is generally granitic, while to the east it consists of a chaotic mixture of highly deformed marine sedimentary, submarine volcanic and metamorphic rocks of the Franciscan Complex. Both are typically Jurassic to Cretaceous in age (205 to 65 million years old). Overlying the basement rocks are Cretaceous (about 140 to 65 million years old) marine, as well as Tertiary (about 65 to 1.6 million years old) marine and non-marine sedimentary rocks with some continental volcanic rock. The Cretaceous and Tertiary rocks have typically been extensively folded and faulted largely as a result of movement along the SAF system, which has been ongoing for about the last 25 million years, and regional compression during the last approximately four million years. The inland valleys, as well as the structural depression within which San Francisco Bay is located, are filled with unconsolidated to semi-consolidated deposits of Quaternary age (about the last 1.6 million years). Continental deposits (alluvium) consist of unconsolidated to semi-consolidated sand, silt, clay, and gravel, while the bay deposits typically consist of soft organic-rich silt and clay (bay mud) or sand.

Regional Seismicity

A fault is defined as a fracture or zone of closely associated fractures along which rocks on one side have been displaced with respect to those on the other side. A fault zone is a zone of related faults that is commonly braided and subparallel, but may be branching or divergent. Movement within a fault causes an earthquake. When movement occurs along a fault, the energy generated is released as waves that cause ground shaking. Ground shaking intensity varies with the magnitude of the earthquake, the distance from the epicenter, and the type of rock or sediment through which the seismic waves move.

The potential risk of fault rupture is based on the concept of recency and recurrence. The more recently a particular fault has ruptured, the more likely the fault would rupture again. The California Geological Survey defines an “active fault” as one that has had surface displacement within the past 11,000 years (Holocene). Potentially active faults are defined as those that have ruptured between 11,000 and 1.6 million years before the present (Quaternary). Faults are generally considered inactive if evidence of displacement is not present during the Quaternary.

Geologists and seismologists recognize the San Francisco Bay Area as one of the most active seismic regions in the United States. The significant earthquakes that occur in the San Francisco Bay Area are associated with crustal movements along well-defined active fault zones that generally trend in a northwesterly direction. The site and the entire San Francisco Bay Area are seismically dominated by the presence of the active SAF System. In the theory of plate tectonics, the SAF System is a transform fault that forms the boundary between the northward moving Pacific Plate (west of the fault) and the southward moving North American Plate (east of the fault). In the San Francisco Bay Area, the movement is distributed across a complex system of strike-slip, right lateral parallel and subparallel faults, which include the SAF, Hayward, and Calaveras faults, among others.

Project Site Characteristics

The project site consists of approximately 86 acres across two separated parcels located west of the Pacific Coast Highway (SR 1) in the City of Pacifica. The two adjacent parcels are separated by Calera Creek. The Eastern Parcel is approximately 39.09 acres of relatively level terrain that slopes gradually to the southwest. The Eastern Parcel is bordered by the Calera Creek Water Recycling Plant (CCWRP) to the north and the Rockaway Beach district of Pacifica to the south. The 47.13-acre Quarry Parcel on the western side of Calera Creek consists of the former Pacifica Quarry and is dominated by often steep slopes (elevations range from seven feet to 274 feet

above mean sea level [MSL]), non-native plant species, and informal accessways. The Quarry Parcel can be separated into five sections: the Hilltop (the high ground on the north edge of the parcel); the East Flank (the hillside comprised mostly of old quarry debris on the east slope of the Quarry Parcel); the Quarry Face (the scarp left by mining in the parcel center, consisting of limestone beds); the Quarry Pit (the bowl remaining in the bottom of the old Quarry); and the Southern Bluff (the old edge of the Quarry on the south adjacent to the ocean).

The geologic conditions on the project site are discussed below in further detail, including descriptions of existing site geology and soil conditions, seismicity and ground shaking, potential for earthquake-induced liquefaction, and landslides. In addition, this section includes a description of known mineral and paleontological resources within the project area.

Site Geology and Subsurface Soil Conditions

The existing geology and soil conditions identified within the project site as part of the Geotechnical Investigation are described in the following sections.

Fill

Based on geologic mapping by the United States Geological Survey (USGS), the site is generally mapped as limestone and greenstone of the Franciscan Complex to the west of Calera Creek, with Quaternary age alluvium and terrace deposits to the east of the creek. The mapping (published in 1994) depicts areas of fill in the East Flank area and along the present alignment of Calera Creek, which was realigned subsequent to the USGS mapping.

Fill material is present within the Quarry Pit, East Flank, and Southern Bluff areas. Fill material is also present within the Eastern Parcel. Fill materials in the Quarry Pit and Eastern Parcel were likely placed and graded; however, documentation of fill placement, quality, or compaction was not identified by Geocon. Dumped fill, consisting of unconsolidated material associated with the former quarry operations, has been dumped or pushed down existing slopes in the East Flank and Southern Bluff areas. Fill in the Quarry Pit is on the order of 20 feet thick, over limestone bedrock, and consists variously of loose to medium dense silty sandy gravel, clayey gravel, and gravel with sand, cobbles, boulders up to approximately up to two feet maximum dimension, and asphalt fragments. In the eastern tier of the Quarry Pit, fill is on the order of 11 feet thick. Based on exploratory test pits in the area, fills in the Eastern Parcel are at least six feet thick and extend to depths of 15 feet or more in some locations. As encountered in the test pits, the fills consisted of silty sands and clays with variable amounts of gravel and clayey to gravelly sands. Various debris were observed in the fills, including wire, fabric, asphalt fragments, and concrete chunks up to approximately 2.5 feet in maximum dimension. Given the lack of documentation of fill placement on the project site, additional areas of fill may be present on the site beyond the fill described above.

Dumped Fill

Dumped fill is considered herein to be material that was pushed or dumped down slopes at the project site as waste material. Dumped fill is present as relatively thin cover (approximately five feet or less) over limestone bedrock along the top of the Southern Bluff and down much of the Southern Bluff's southwest, ocean-facing slope, where the fill actively sloughs into the ocean. At the east end of the Quarry Face, dumped fill forms a ramp consisting of loose limestone gravel, cobbles, and boulders. Dumped fill on the East Flank consists variously of loose to medium dense silty sandy gravel, silty gravel, gravelly sand, and silty clay, with trace cobbles, boulders, and

chunks of asphalt. Fill thicknesses in our test pits on the East Flank ranged from approximately five to 17.5 feet.

Alluvium

Alluvium is located below the fills that mantle the Eastern Parcel. The alluvium consists of silty to sandy lean to fat clays. Prior studies on the project site included soil borings that extended to maximum depths of approximately 40 feet below ground surface and reported predominantly fine-grained soils (silts and clays) with some occurrences of dense to very dense sands and gravel. As noted in the Geotechnical Investigation, USGS mapping indicates the alluvial deposits are susceptible to liquefaction.

Landslide Deposits

Landslide deposits identified within the project site are discussed under the "Landslides" section further below.

Franciscan Complex – Calera Limestone

Limestone at the site is identified in geologic references as the mid-Cretaceous age Calera Limestone. Such limestone is prominent south of the shear zone at the site, in the Quarry Face, the west end of the Quarry Pit, and the Southern Bluff as a strong, light gray to dark gray layered rock with bedding on the order of four to 12 inches thick. In the central portion of the Quarry Pit (Test Pit TP11), limestone bedrock at the former quarry floor is present beneath approximately 20 feet of fill material, at an elevation of approximately 28 feet above MSL. In the eastern tier of the Quarry Pit, limestone bedrock was encountered in Test Pit TP8 beneath approximately 11 feet of fill, at an approximate elevation of 22 feet MSL. Limestone blocks and fragments are also present within the shear zone along with other material.

Franciscan Complex – Greenstone

Franciscan Complex greenstone in the region is described in published geologic references as altered mafic (dark) volcanic rock composed mostly of coarse pyroclastic deposits, but also some small intrusions (dikes) and flows. Prior geologic mapping depicts greenstone at the site within the limestone on the northeast side of the Southern Bluff, above the limestone in the western and upper portions of the Quarry Face, and extending northward from the shear zone. Geocon's field observations at the project site were generally consistent with the 1983 map for the Southern Bluff and Quarry Face. However, the Geotechnical Investigation notes that the slope and Hilltop area above the shear zone consist of brown, thinly to moderately-bedded siltstone with some interbedded chert. The siltstone in the Hilltop area is highly to moderately weathered and pervasively fractured, with varied bedding orientations. Greenstone in the region also includes some interbedded/associated sedimentary materials such as siltstone and sandstone. Therefore, the greenstone designation is retained for underlying geology of the northern portion of the site.

Shear Zone

A shear zone extends in an east-west trend across the site midway up the Quarry Face between approximate elevations of 170 and 200 feet MSL. The shear zone generally separates the Calera Limestone to the south and Franciscan greenstone and associated deposits to the north. The shear zone ranges from approximately 30 to 150 feet wide across the mid-slope bench and is approximately 400 feet wide at the west end where it meets the Pacific Ocean. The eastern visible extent of the shear zone is between the Quarry Face and East Flank, where bedrock disappears beneath dumped fill material. Materials within the shear zone include a disrupted mixture of limestone blocks and highly sheared shale and greenstone (mélange). Inactive faults bound the

southern and northern edges of the shear zone at the interfaces with adjacent formational materials.

Groundwater

Groundwater depths were estimated to be nine to 12 feet below existing grade in recent cone penetrometer tests (CPTs) in the Eastern Parcel. However, it should be noted that actual groundwater levels would fluctuate seasonally and with variations in rainfall, temperature, and other factors. Test pits within the Quarry Parcel, which were excavated to depths ranging from nine feet to 21 feet, did not encounter groundwater.

Seismicity and Ground Shaking

Per the Geotechnical Investigation, the project site is not within a currently established State of California Earthquake Fault Zone (i.e., Alquist-Priolo Special Studies Zone) for surface fault rupture hazards. In addition, Quaternary age faults are not present at the site.

Expansive Soils

Expansive soils are those that increase in volume when they absorb water and shrink when they dry out, commonly referred to as “shrink-swell” potential. Soil surveys generally rate shrink-swell potential in soils on a low, medium, and high basis. If the shrink-swell potential is rated moderate to high, shrinking and swelling can cause damage to buildings, roads, and other structures. According to the Geotechnical Investigation prepared for the project, the on-site soils classified as fill or dumped fill have an approximate shrink-swell factor ranging between zero to fifteen percent shrinkage, while the on-site Franciscan Greenstone and Calera Limestone soils are considered to have a shrink-swell factor ranging between five to 25 percent bulk.

Landslides

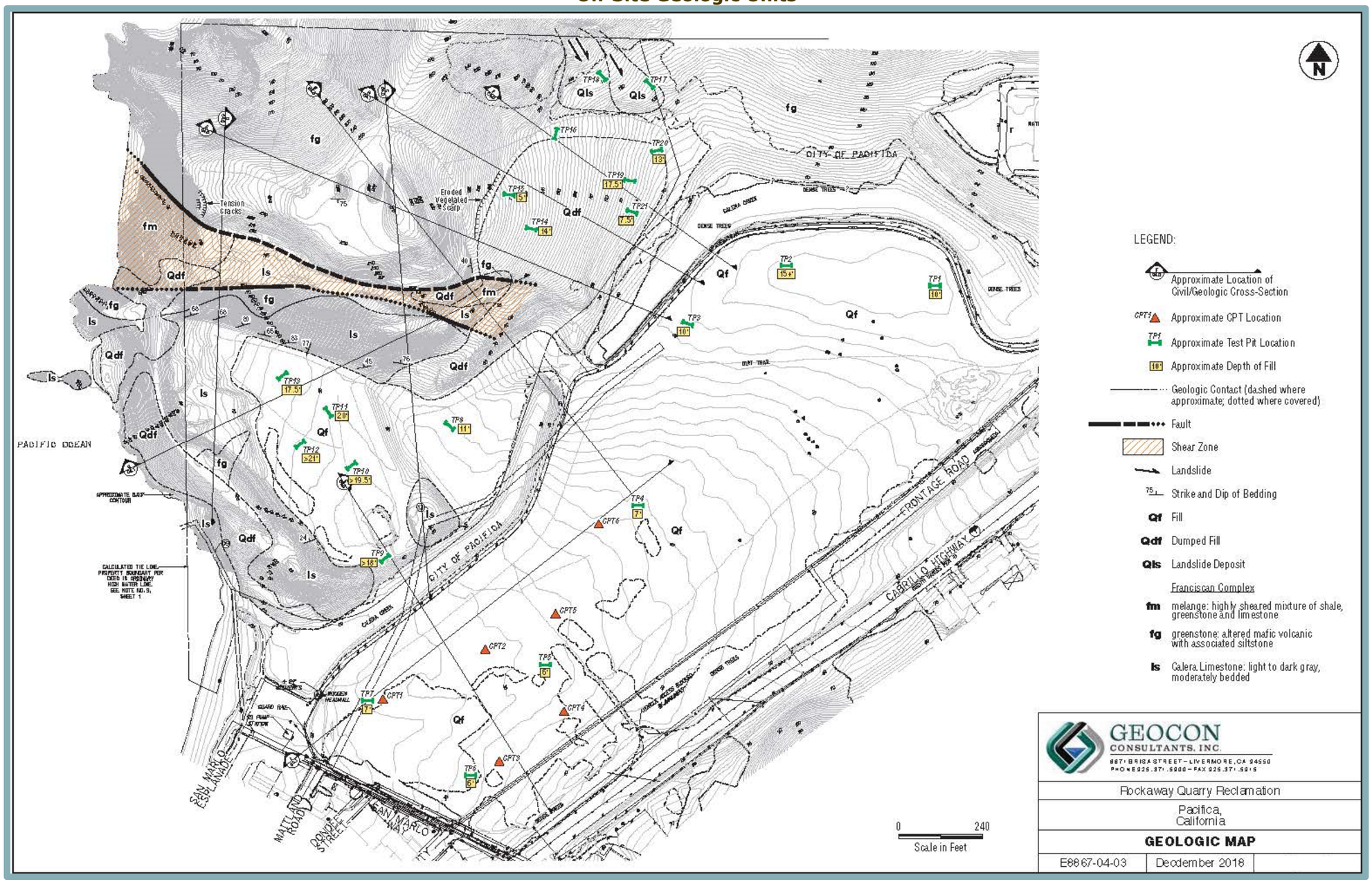
As shown in Figure 4.5-1 below, landslides are present on the project site to the north of the East Flank area, just outside the limits of the planned new roadway to access the Hilltop area. In addition, test pits dug by Geocon identified landslide deposits below dumped fill materials on the project site. The landslide deposits are likely associated with the eroded scarp immediately west of the mapped limits of dumped fill materials. The estimated limits of remedial grading for landslide deposits are depicted on Geologic Cross-Sections H (see Figure 8 of the Geotechnical Investigation).

The coalesced debris flow-type landslides along the northern site boundary, associated with Test Pits TP17 and TP18, are on the order of six to eight feet thick and consist of silty clay overlaying residual soil of generally similar composition. The landslide deposits in the upper portion of the East Flank, associated with Test Pit TP15, are approximately five to 9.5 feet thick, underlying the dumped fill material and overlying residual soil. The East Flank landslide deposit consists of sandy clay with gravel-sized clasts of brown siltstone. Test Pit TP15 was located approximately 50 feet downslope from an eroded and vegetated landslide scarp.

Liquefaction

Liquefaction is a phenomenon in which saturated cohesionless soils are subject to a temporary loss of shear strength due to pore pressure buildup under the cyclic shear stresses associated with intense earthquakes. Primary factors that trigger liquefaction are: moderate to strong ground shaking (seismic source), relatively clean, loose granular soils (primarily poorly graded sands and silty sands), and saturated soil conditions (shallow groundwater).

Figure 4.5-1
On-Site Geologic Units



Due to the increasing overburden pressure with depth, liquefaction of granular soils is generally limited to the upper 50 feet of a soil profile.

The project site is not currently mapped for potential liquefaction hazard by the CGS; however, web-based mapping by the USGS indicates a majority of the Eastern Parcel possesses a "high" susceptibility to liquefaction. As part of the Geotechnical Investigation, Geocon performed an evaluation of liquefaction potential in the southern portion of the Eastern Parcel using in-situ measurements obtained from CPT soundings. The results of the evaluation are presented in Appendix A of the Geotechnical Investigation (Appendix J of this EIR).

The California Geologic Survey (CGS) has designated certain areas within California as potential liquefaction hazard zones, which are areas considered at risk of liquefaction-related ground failure during a seismic event based upon mapped surficial deposits and the depth to the areal groundwater table. The project site is not currently mapped for potential liquefaction hazard by the CGS; however, web-based mapping by the Association of Bay Area Governments (ABAG) indicates a majority of the Eastern Parcel possesses a "moderate" susceptibility to liquefaction.

Lateral Spreading

Lateral spreading is horizontal/lateral ground movement of relatively flat-lying soil deposits towards a free face such as an excavation, channel, slope, or open body of water; typically, lateral spreading is associated with liquefaction of one or more subsurface layers near the bottom of the exposed slope. Per the Geotechnical Investigation prepared for the proposed project, due to the depth of the liquifiable layers, the apparent discontinuity in some of those layers, and the absence of significant descending slopes on the project site, the potential for lateral spreading to occur on the project site is low.

Subsidence/Settlement

Subsidence is the settlement of soils of very low density generally from either oxidation of organic material, desiccation and shrinkage, or both, following drainage. Subsidence takes place gradually, usually over a period of several years, and is a common consequence of liquefaction. Because potentially liquifiable soils were identified at each CPT location within the southern portion of the Eastern Parcel, Geocon determined that total ground surface settlements of less than one inch may occur on the project site as a result from liquefaction and/or cyclic softening after a design-level seismic event.

Erosion

According to Geocon, the bluffs within the project site that overlook the Pacific Ocean are highly stable cliffs with erosion rates less than 0.5-foot per year. It should be noted that a relatively shallow mantle of dumped fills is present on the outside (oceanside) face of the Southern Bluff. Such materials are significantly more susceptible to erosion than the limestone bluffs, and show evidence of sloughing.

Paleontological Resources

Paleontological resources are the mineralized (fossilized) remains of prehistoric plant and animal life exclusive of human remains or artifacts. Fossil remains such as bones, teeth, shells, and leaves are found in geologic deposits (rock formations) where the resources were originally buried. The City of Pacifica General Plan does not identify any paleontological resources in the project vicinity.

Mineral Resources

Per the City of Pacifica General Plan, the State Mining and Geology Board has designated the Rockaway Quarry and Mori Point as a construction aggregate resource area of regional significance. The City recognizes that the Board has designated the mineral resources located at the Rockaway Quarry and Mori Point as a construction aggregate resource of regional significance, and has received the maps prepared by the Board in connection with the designation.

However, the General Plan states the following regarding the mineral resources associated with the Rockaway Quarry:

> The City shall refer to and consider the information prepared by the Board when making land use decisions relating to the Pacifica Quarry. However, it is noted that the Quarry is no longer operating, and the resource has been diminished by several years of operation. The quarry operator has abandoned quarrying, believes the minimal amount of local development does not justify use of the site as a quarry, and intends to satisfy regional customers from his quarry operation located near Brisbane in San Mateo County. Therefore, the regional significance of the Quarry as a construction aggregate resource has been substantially diminished, and the City encourages reclamation of the site. Such reclamation may include removal of mineral resources, depending on the specifics of a revised Reclamation Plan. […]

With respect to the above information, given that the Quarry has been closed and the quarry operator believes that the minimal amount of local development does not justify use of the site as a quarry, the lack of resumption of mining of the project site indicates that the current economic setting does not favor mining of the Quarry and reclamation would be appropriate.

4.5.3 REGULATORY CONTEXT

The following section is a brief summary of the regulatory context under which soils, geology, mineral resources, and paleontological resources are managed at the federal, State, and local levels.

Federal Regulations

The following are the federal environmental laws and policies relevant to soils, geology, seismic hazards, mineral, and paleontological resources.

Federal Earthquake Hazards Reduction Act

Passed by Congress in 1977, the Federal Earthquake Hazards Reduction Act is intended to reduce the risks to life and property from future earthquakes. The Act established the National Earthquake Hazards Reduction Program (NEHRP). The goals of NEHRP are to educate and improve the knowledge base for predicting seismic hazards, improve land use practices and building codes, and to reduce earthquake hazards through improved design and construction techniques.

International Building Code

The Uniform Building Code (UBC) was first published in 1927 by the International Council of Building Officials and is intended to promote public safety and provide standardized requirements for safe construction. The UBC was replaced in 2000 by the new International Building Code (IBC), published by the International Code Council (ICC), which is a merger of the International

Council of Building Officials' UBC, Building Officials and Code Administrators International's National Building Code, and the Southern Building Code Congress International's Standard Building Code. The intention of the IBC is to provide more consistent standards for safe construction and eliminate any differences between the three preceding codes. All State building standard codes are based on the federal building codes.

State Regulations

The following are the State environmental laws and policies relevant to soils, geology, mineral resources, and paleontological resources.

Alquist-Priolo Earthquake Fault Zoning Act

The 1972 Alquist-Priolo (AP) Earthquake Fault Zone Act was passed to prevent the new development of buildings and structures for human occupancy on the surface of active faults. The AP Earthquake Fault Zone Act is directed at the hazards of surface fault rupture and does not address other forms of earthquake hazards. The locations of active faults are established into fault zones by the AP Earthquake Fault Zone Act. Local agencies regulate any new developments within the appropriate zones in their jurisdiction.

The AP Earthquake Fault Zone Act regulates development near active faults so as to mitigate the hazard of surface fault rupture. The Act requires that the State Geologist (Chief of the California Department of Mines and Geology [CDMG]) delineate "special study zones" along known active faults in California. Cities and counties affected by the special study zones must regulate certain development projects within the special study zones. The AP Earthquake Fault Zone Act prohibits the development of structures for human occupancy across the traces of active faults. According to the AP Earthquake Fault Zone Act, active faults have experienced surface displacement during the last 11,000 years. Potentially active faults are those that show evidence of surface displacement during the last 1.6 million years. A fault may be presumed to be inactive based on satisfactory geologic evidence; however, the evidence necessary to prove inactivity sometimes is difficult to obtain and may not exist.

Seismic Hazards Mapping Act

The California Seismic Hazards Mapping Act of 1990 (California Public Resources Code Section 1690-2699.6) addresses non-surface rupture earthquake hazards, including liquefaction, induced landslides, and subsidence. A mapping program is also established by the California Seismic Hazards Mapping Act, which identifies areas within California that have the potential to be affected by such non-surface rupture hazards. The Seismic Hazards Mapping Act specifies that the lead agency for a project may withhold development permits until geologic or soils investigations are conducted for specific sites and mitigation measures are incorporated into plans to reduce hazards associated with seismicity and unstable soils.

California Building Standards Code

The State of California regulates development within the State through a variety of tools that reduce or mitigate potential hazards from earthquakes or other geologic hazards. The 2019 California Building Standards Code (CBSC) (California Code of Regulations [CCR], Title 24) governs the design and construction of all building occupancies and associated facilities and equipment throughout California. In addition, the CBSC governs development in potentially seismically active areas and contains provisions to safeguard against major structural failures or loss of life caused by earthquakes or other geologic hazards. The CBSC includes federal building

standards in the national building code, building standards adapted from national codes to meet California conditions, and building standards adopted to address particular California concerns.

Surface Mining and Reclamation Act

The Surface Mining and Reclamation Act (SMARA) was enacted by the State in 1975, through Public Resources Code Sections 2710-2796, as a means of minimizing adverse environmental effects of surface mining, ensuring that mined lands are reclaimed to a usable condition and that the production and conservation of mineral resources are encouraged. The act establishes state policy regarding reclamation of mined lands and minerals management practices, among other things. Per Section 9-2.12 of the City of Pacifica Municipal Code, all reclamation plans approved by the City are required to comply with the provisions of SMARA.

Public Resources Code Section 5097.5

Section 5097.5 of the Public Resources Code establishes protections for historic, prehistoric, archaeological, and paleontological features. In particular, Section 5097.5 prohibits the intentional excavation, removal, destruction, injury, or defacement of historic or prehistoric ruins, burial grounds, and archaeological or vertebrate paleontological sites on public lands. Public lands are defined as those lands owned by, or under the jurisdiction of, the state, or any city, county, district, authority, public corporation, or any agency thereof.

Local Regulations

The following are relevant policies related to soils, geology, mineral resources, and paleontological resources.

City of Pacifica Local Coastal Land Use Plan

The following policies from the 1980 Local Coastal Land Use Plan are applicable to the proposed project:

Geotechnical

A geological report shall be prepared by a registered geologist before new development is permitted on bluff tops or steep (35 percent slope) parcels. Items examined should include geologic and seismic stability, the appropriate hazard setback from bluff edges to protect structures during their economic life (i.e., net developable area), and specific recommendations for type of construction, drainage, landscaping, irrigation, beach access (if determined to be safe for the public), and mitigation of other identified problems.

Unless no other buildable area exists on the parcel, development shall be prohibited on slopes in excess of 35 percent and on bluff faces, except for drainage improvements and necessary shoreline protection structures.

Protection of Landforms

Development shall be prohibited on prominent ridgelines, slopes in excess of 35 percent, and highly visible tops of prominent landforms, unless there is no other buildable area on the parcel.

Grading shall be regulated to protect the appearance of the landform and to limit potential runoff.

Shoreline Protection and Drainage Structures

Dumping and other unengineered erosion protection shall be prohibited. Existing unauthorized rubble or protective devices shall be removed prior to any additional development in such areas.

Special Areas

Slopes in excess of 35 percent, sensitive habitats, and geologically or geotechnically hazardous areas shall remain undeveloped.

City of Pacifica General Plan

The following policies from the 1980 City of Pacifica General Plan are applicable to the proposed project:

Open Space Element

Policy 4 Promote communitywide links to open space and recreation facilities which do not abuse the open space resource or threaten public safety.

Seismic Safety and Safety Element

Hillside Erosion and Landslides

Policy 1 Prohibit development in hazardous areas unless detailed site investigation ensures that risks can be reduced to acceptable levels.

Other Public Safety

Policy 3 Prohibit mitigation measures for potential geotechnical hazards if the mitigation measures could adversely affect surrounding public or private property. For example, use of the public right-of-way as a landslide repository could adversely affect public health, safety, and welfare.

City of Pacifica Municipal Code

The following section from the City of Pacifica Municipal Code is applicable to the proposed project:

Section 8-1.18

a) Except as exempted in Section J103.2, no grading shall be performed without first having obtained a permit therefore from the building official. A grading permit does not include the construction of retaining walls or other structures.

b) No grading, excavating or filling shall be conducted between the hours of 6:00 p.m. and 7:00 a.m. of any day, or on Saturday or Sunday at any time, without the prior approval of the Building Official. The Building Official shall notify the Department of Public Safety whenever such approval has been granted.

c) The period between October 1 and April 31, inclusive, is hereby determined to be the period in which heavy rainfall normally occurs in the City of Pacifica. No grading, excavating or filling requiring a grading permit pursuant to Appendix J of the California Building Code as herein amended

shall be authorized by the Building Official during that period unless he or she determines in writing that such work will not endanger the public health or safety and that appropriate erosion control devices or methods will be provided.

d) Any grading, excavating or filling which requires a grading permit and, having been granted said permit, either begins during or extends into the period between October 1 and April 31, inclusive, shall be protected by temporary devices to prevent erosion. Proposed erosion control devices or methods shall be submitted with the grading plans to the Building Official and approval of both the grading plan and the erosion control devices and methods must be obtained not later than September 30. All such approved erosion control devices or methods shall be installed not later than October 1 for previously approved ongoing earthwork operations. For earthwork operations approved by the Building Official to start between October 1 and April 31, inclusive, all approved erosion control devices must be in place before earthwork activities may commence.

e) When determined by the Building Official that a bond is required in order to insure that the work will be completed in accordance with the approved plans, specifications and conditions of approval, due to the nature, location, time of year or amount of work to be done, such bond shall be in conformance with City of Pacifica Administrative Policy No. 48. Surety bonds, cash bonds, instruments of credit or other forms of security shall comply with the provisions of City of Pacifica Administrative Policy No. 48."

Section 9-2.12

a) All reclamation plans shall comply with the provisions of SMARA and State regulations as may be amended from time to time. Reclamation plans approved after January 15, 1993, reclamation plans for new mining operations, and any substantial amendments to previously approved Reclamation Plans, shall also comply with the requirements for reclamation performance standards as may be amended from time to time.

b) The City may impose additional performance standards as developed either in review of individual projects, as warranted, or through the formulation and adoption of Citywide performance standards.

c) Reclamation activities shall be initiated at the earliest possible time on those portions of the mined lands that will not be subject to further disturbance. Interim relocation may also be required for mined lands that have been disturbed and that may be disturbed again in future operations. Reclamation may be done on an annual basis, in stages compatible with continuing operations, or upon completion of all excavation, removal, or fill, as approved by the City Engineer. Each phase of reclamation shall be specifically described in the reclamation plan and shall include a) the beginning and expected ending dates for each phase; b) all reclamation activities required; c) criteria for measuring completion of specific

reclamation activities; and (d) estimated cost for completion of each phase of reclamation.

4.5.4 IMPACTS AND MITIGATION MEASURES

This section describes the standards of significance and methodology used to analyze and determine the proposed project's potential impacts related to geology, soils, mineral resources, and paleontological resources. In addition, a discussion of the project's impacts, as well as mitigation measures where necessary, is also presented.

Standards of Significance

Consistent with Appendix G of the CEQA Guidelines, a significant impact to geology and soils or mineral resources would occur if the proposed project would result in any of the following:

- Expose people or structures to substantial adverse effects, including the risk of loss, injury, or death involving:
  - Rupture of a known earthquake fault;
  - Seismic ground shaking;
  - Seismic-related ground failure, including liquefaction; and
  - Landslides;
- Result in substantial soil erosion or loss of topsoil;
- Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslides, lateral spreading, subsidence, liquefaction or collapse;
- Be located on expansive soil, as defined in Table 118-1-B of the UBC (1994), creating substantial risks to life or property;
- Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water;
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature; or
- 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 or of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan.

Method of Analysis

The analysis presented within this chapter is based primarily on the Geotechnical Investigation prepared for the proposed project by Geocon. The purpose of the Geotechnical Investigation was to evaluate the subsurface soil and geologic conditions in the areas of proposed reclamation activities and provide conclusions and recommendations pertaining to the geotechnical and geologic aspects of the proposed project, based on the conditions encountered.

The scope of the Geotechnical Investigation included a field exploration, laboratory testing, and an engineering analysis. The subsurface exploration was performed on August 24 through 26, 2015 and included the excavation of exploratory test pits at selected locations throughout the site. Given that the last commercial operator, Quarry Products, closed the Quarry in 1987, it should be noted that subsurface conditions have not changed since the time of the subsurface exploration. Test pits were excavated at 21 locations with a track-mounted Caterpillar 321D excavator equipped with a 36-inch bucket; representative bulk soil samples were obtained for further examination and laboratory testing. Test pit depths ranged from seven to 21 feet below the

existing ground surface. Upon completion, the test pits were backfilled with tamped lifts of excavation spoils. Geocon Consultants subsequently performed six CPTs to depths of approximately 51 feet or less on October 13, 2018 to evaluate liquefaction potential in the southeastern portion of the site. The locations of the test pits and CPTs are depicted in Figure 4.5-1 above. Logs of the exploratory test pits and CPTs are presented in the appendix to the Geotechnical Investigation (see Appendix J to this EIR).

Subsurface conditions encountered in the exploratory borings were visually examined, classified and logged in general accordance with the American Society for Testing and Materials (ASTM) Practice for Description and Identification of Soils (Visual-Manual Procedure D2488). The ASTM system uses the Unified Soil Classification System (USCS) for soil designations. The logs depict soil and geologic conditions encountered and depths at which samples were obtained. The logs also include Geocon's interpretation of the conditions between sampling intervals. Therefore, the logs contain both observed and interpreted data. Geocon determined the lines designating the interface between soil materials on the logs using visual observations, drill rig penetration rates, excavation characteristics, and other factors. The transition between materials may be abrupt or gradual. Where applicable, the field logs were revised based on subsequent laboratory testing.

The six CPT soundings were advanced to maximum depths of approximately 51 feet below ground surface utilizing a truck-mounted CPT rig with a down-pressure capacity of approximately 20 tons. The CPTs were performed on October 13, 2018 by Middle Earth Geo Testing of Fremont, California using an integrated electronic cone system. The cone has a tip area of 10 square centimeters, a friction sleeve area of 150 square centimeters, and a ratio of friction sleeve area to tip end area equal to 0.85. The cone bearing and sleeve friction were measured and recorded during tests at approximately two-inch depth intervals. The CPT data consisting of cone bearing, sleeve friction, friction ratio and equivalent standard penetration blow counts versus penetration depth below the existing ground surface for each location has been recorded and is included in Appendix A of the Geotechnical Investigation.

Project-Specific Impacts and Mitigation Measures

The following discussion of impacts is based on implementation of the proposed project in comparison with the standards of significance identified above.

4.5-1 Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, strong seismic ground shaking, seismic-related ground failure, including liquefaction, and landslides. Based on the analysis below, the impact is *less than significant*.

As discussed above, the project site is not underlain by any active faults and is not located within an Alquist-Priolo Fault Study Zone. Therefore, the potential for surface rupture due to faulting occurring beneath the project site is considered low. However, the site could be subject to strong seismic ground shaking associated with the SAF and other regional faults in the San Francisco Bay Area.

The proposed project would include reclamation of the Rockaway Quarry site. The majority of the reclamation activity would occur on the westernmost Quarry Parcel,

with minor site improvements such as grading for access roads and through truck traffic occurring on the Eastern Parcel. The project would involve earthwork to regrade the over steepened slopes of the former quarry into a safe condition, installation of new drainage infrastructure, and construction of new unpaved trails. The proposed grading would result in increased stability of on-site trails relative to existing conditions. For example, the existing Eastern Trail would be improved to provide a new, safer surface for walking and a more level slope from the Calera Creek Crossing to Hilltop. Native vegetation and landscaping would also be included. Another new trail, known as the Western Trail, would be constructed from the Calera Creek crossing to the west, along the Southern Bluff, and then eventually reach existing trails leading to Mori Point. The trail would be set back from the bluff to avoid potentially erosive areas and to prevent potential hazards. The new trails would be 17 feet wide and constructed with 12 inches of decomposed granite. Additionally, three hazard signs warning of steep slopes would be placed along the coastal bluffs. Overall, the aforementioned reclamation activities would serve to stabilize the soils at the Rockaway Quarry site, rather than increase the chance for adverse effects related to seismic-related ground failure to occur, including liquefaction and landslides. Landslides and liquefaction are also addressed in Section 4.5-3 below.

Based on the above, the proposed project would reduce potential hazards associated with seismic ground shaking events at the site. In addition, the proposed project would not include the construction of any new habitable structures that would be subject to potential earthquake risks. The proposed project would not expose people or structures to the risk of loss, injury, or death involving rupture of an earthquake fault, strong ground shaking, ground failure, liquefaction, or landslides, and a ***less-than-significant*** impact would occur.

Mitigation Measure(s)

None required.

4.5-2 Result in substantial soil erosion or the loss of topsoil. Based on the analysis below, the impact is *less than significant*.

Erosion refers to the removal of soil from exposed bedrock surfaces by wind or water. Although naturally occurring, erosion is often accelerated by human activities that disturb soil and vegetation. The soils present on the project site are considered moderately susceptible to erosion where drainage concentrations occur. The proposed project would require vegetation removal and ground-disturbing activities within portions of the project site which, prior to completion of the proposed reclamation, could cause topsoil to be exposed, potentially resulting in wind erosion or an accelerated rate of erosion during storm events.

After the proposed regrading, the project would include revegetation of the project site to restore and blend native vegetation into the surrounding landscape. The proposed revegetation would be designed to meet the post-extractive and unmanaged land use goals of the Revegetation Plan and stabilize the ground surface against the effects of long-term erosion. All proposed revegetation would be accomplished through hydroseeding, which would take place between October 15 and November 15 with an appropriate trafficker, such as wood fiber mulch.

As discussed in Chapter 4.6, Hydrology and Water Quality, of this EIR, because the proposed project would result in land disturbance of over an acre, the project applicant would be required by the State to comply with the most current Construction General Permit requirements. Per the requirements, a Stormwater Pollution Prevention Plan (SWPPP) would be prepared for the overall project, which would include the site map, drainage patterns and stormwater collection and discharge points, BMPs, and a monitoring and reporting framework for implementation of Best Management Practices (BMPs), as necessary. In addition, a Notice of Intent (NOI) would be filed with Regional Water Quality Control Board (RWQCB). A Qualified SWPPP Practitioner (QSP) would ensure compliance with the SWPPP through regular monitoring and visual inspections during construction activities. The QSP for the project would amend the SWPPP and revise project BMPs, as determined necessary through field inspections, to protect against substantial erosion or siltation on- or off-site.

In addition, the project contractor would be required to implement Construction Stormwater BMPs identified in the C.3 and C.6 Development Review Checklist prepared for the project and Conservation Measures 27 through 68 identified in Section V(C) of the proposed Reclamation Plan, as described in Chapter 4.6, Hydrology and Water Quality, of this EIR. Implementation of the required BMPs and Conservation Measures would ensure that impacts related to soil erosion and the loss of topsoil would be reduced to ***less-than-significant*** levels.

Mitigation Measure(s)

None Required.

4.5-3 Be located on a geological unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse, or be located on expansive soil, as defined in Table 18-1B of the Uniform Building Code. Based on the analysis below and with implementation of mitigation, the impact is *less than significant*.

Issues associated with unstable geologic units and/or soils, including landslide, lateral spreading, subsidence, liquefaction, and collapse are discussed below.

Expansive Soils

The proposed project would not include the placement of structures, concrete pads, or other built features that would be subject to potential damage due to expansive soils. New trails constructed as part of the proposed project would be surfaced with decomposed granite, as opposed to concrete. Thus, the proposed project would not be subject to risks related to expansive soils.

Landslides

A landslide is defined as the movement of a mass of rock, debris, or earth down a slope. Slope movement occurs when forces acting down-slope exceed the strength of

the earth materials that compose the slope. Within California, landslides occur primarily due to intense rainfall or are triggered by earthquakes.

As discussed previously, landslide conditions are present on the project site to the north of the East Flank area, within the Quarry Parcel, just outside the limits of the planned new roadway to access the Hilltop area. In addition, test pits dug by Geocon identified landslide deposits below dumped fill materials on the project site. As part of the proposed grading activities, portions of the existing landslide deposits would be removed. In addition, the proposed grading plan conforms with the State requirements set by the Division of Mine Reclamation, which require that slopes steeper than 2:1 be stabilized – a standard requirement unless the slope is an exposed rock face with a relatively high integrity. Therefore, the proposed project would result in reduced potential for landslide at the project site relative to existing conditions.

Liquefaction

As discussed previously, the site is not located within a State of California Seismic Hazard Zone for liquefaction. However, web-based mapping by ABAG indicates a majority of the Eastern Parcel possesses a "moderate" susceptibility to liquefaction.[4] As part of the Geotechnical Investigation, Geocon performed an evaluation of liquefaction potential in the southern portion of the Eastern parcel using in-situ measurements obtained from CPT soundings. The results of the evaluation are presented within the February 2021 Response to Peer Review Comments by Geocon Consultants in Appendix J of this EIR. The liquefaction analysis considered the potential for cyclic softening in clayey soils and incorporated an earthquake moment magnitude of 7.9 and a conservative groundwater depth of nine feet. Based on 2019 CBC seismic design criteria, a ground motion/Peak Ground Acceleration of 0.96g was used in the analysis.[5]

Geocon's liquefaction analysis identified potentially liquefiable layers at each CPT location. In general, these layers were located more than nine feet below existing grade. Consequences of liquefaction can include ground surface settlement, ground loss (sand boils), and lateral slope displacement (lateral spreading). For liquefaction-induced sand boils or fissures to occur, pore water pressure induced within liquefied strata must exert enough force to break through overlying, non-liquefiable layers; however, a capping layer of non-liquefiable soil can prevent the occurrence of sand boils and fissures. Based on the presence of the non-liquifiable soil layer that mantles the site, the depth to significant liquefiable layers, and the thickness of liquefiable layers, Geocon concluded that the potential for ground loss due to sand boils or fissures in a seismic event is considered low. Because the proposed project would use this portion of the project site to only implement mitigation wetlands and would not include the development of structures, the liquefaction hazard within the Eastern Parcel would not be a significant constraint on the proposed project, as the hazard is

[4] Geocon Consultants, Inc. *Geotechnical Investigation for Quarry Reclamation, Rockaway Quarry, Pacifica, California.* December 2018.

[5] Geocon Consultants, Inc. *Rockaway Quarry, Pacifica, California, Response to Peer Review Comments*. February 16, 2021.

considered low and implementation of the mitigation wetlands would not exacerbate the hazard existing level of severity.[6]

Lateral Spreading

Lateral spreading, or lateral slope displacement, is associated with terrain near free faces such as excavations, channels, or open bodies of water, and is a common consequence of liquefaction. As discussed above, based on the depth to liquifiable layers, the apparent discontinuity in the liquifiable layers, and the absence of significant descending slopes at the project site, Geocon concluded that the potential for lateral spreading at the project site is considered low and would not be a significant constraint on the proposed project.

Subsidence/Settlement

Subsidence is the settlement of soils of very low density generally from either oxidation of organic material, desiccation and shrinkage, or both, following drainage. Subsidence takes place gradually, usually over a period of several years, and is a common consequence of liquefaction. Because potentially liquifiable soils were identified at each CPT location within the southern portion of the Eastern parcel, Geocon determined that total ground surface settlements of less than one inch may result from liquefaction and/or cyclic softening after a design-level seismic event. Based on the planned land use for the Eastern parcel as mitigation wetlands, it is Geocon's opinion that potential liquefaction-induced settlements are not a significant constraint within this portion of the proposed project. However, as noted in the December 2018 Geotechnical Investigation, because more than 20 feet of undocumented fill exists at the floor of the Quarry Pit, and the planned thickness of new fills for the Reclamation Plan measures up to approximately 100 feet, settlement should be anticipated in the Quarry Pit due to compression within the existing and new fill materials.

Collapse

Given that the proposed project would not include construction of any buildings or other aboveground structures, the project would not be subject to risks associated with building collapse.

Conclusion

Based on the above, the proposed project would not exacerbate hazards related to expansive soils, landslide, lateral spreading, liquefaction, or collapse. However, implementation of the recommendations included in the Geotechnical Investigation would be required in order to ensure adequate support of the proposed site improvements and that impacts related to subsidence and settlement would not occur. Such recommendations include, but are not limited to: subdrains; keyways; bench spacing; and the use of well-graded import material with very low to moderate expansion potential (Expansion Index less than 90), a Plasticity Index less than 20, and that is free of organic material and construction debris. Without implementation of the recommendations included in the Geotechnical Investigation, a ***significant*** impact could occur.

[6] ENGEO. *Quarry Reclamation Plan, Rockaway Quarry, Pacifica, California, Geotechnical Peer Review.* January 18, 2021.

Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the above impact to a *less-than-significant* level.

4.5-3 *Prior to approval of Improvement Plans, a qualified geotechnical engineer, in coordination with the City Engineer, shall review the improvement plans and specifications to assess whether all recommendations from the Geotechnical Investigation report prepared for the proposed project have been properly implemented and shall evaluate if additional analysis and/or recommendations are required. The recommendations include, but are not limited to: the installation of subdrains; the installation of keyways; benches with paved drainage ditches within the 2:1 cut slopes below the Hilltop; grading to address areas containing undocumented fill; and several recommendations regarding the materials used for fill, such as requiring the use of well-graded import material with very low to moderate expansion potential (Expansion Index less than 90), a Plasticity Index less than 20, and that is free of organic material and construction debris.*

4.5-4 Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of wastewater. Based on the analysis below, *no impact* would occur.

As discussed in Chapter 4.11, Utilities and Service Systems, of this EIR, restrooms do not currently exist on the project site, and none of the proposed improvements would result in the construction of restrooms or other land uses which could generate wastewater. As such, the proposed project would not include development that would require connection to the City's existing wastewater infrastructure or the construction of new wastewater infrastructure, including septic tanks. Therefore, ***no impact*** would occur.

4.5-5 Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature. Based on the analysis below and with implementation of mitigation, the impact is *less than significant*.

The project site has been subject to extensive disturbance associated with prior mining operations at the Pacifica Quarry. Consequently, only a small portion of the site surface consists of native soils, and the potential for unknown, intact paleontological resources to occur on the site is relatively limited. The project site does not contain any unique geologic features. Furthermore, the proposed reclamation project would consist primarily of placement of fill, thereby further interring any unknown paleontological resources potentially located within the site. However, the potential exists, while unlikely, for minor excavation activities associated with the proposed project, including construction of drainage improvements, to uncover paleontological resources. As

such, the proposed project could directly or indirectly destroy a unique paleontological resource or site or unique geologic feature, and a ***significant*** impact could occur.

Mitigation Measure(s)

Implementation of the following mitigation measures would reduce the above impact to a *less-than-significant* level.

4.5-5 *In the event that paleontological resources, including individual fossils or assemblages of fossils, are encountered during construction activities all ground disturbing activities shall immediately halt and a qualified paleontologist shall be procured to evaluate the discovery for the purpose of recording, protecting, or curating the discovery as appropriate. The qualified paleontologist shall provide the City of Pacifica Planning Department with a report detailing the findings and method of curation or protection of the resources for review and approval by City Planning staff prior to recommencing reclamation activities.*

4.5-6 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 or of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan. Based on the analysis below, the impact is *less than significant*.

The project site is the location of the Rockaway Quarry, which is a side hill, open pit mine, from which limestone, greenstone, shale, and chert were harvested, crushed, screened, and sold for construction purposes. However, quarry operations have been suspended since the closure of the quarry in 1987. While the project site contains existing mineral resource deposits, as previously discussed, the lack of resumption of mining of the project site, based in part on the quarry operator's conclusion that economic conditions do not justify use of the site as a quarry, indicates that mining of the Quarry is not economically favorable and reclamation would be appropriate. It should be noted that, although the site would undergo reclamation as part of the proposed project, the proposed project would only include the development of trails. Should the property owner or the City decide to explore the possibility of mineral extraction at the project site in the future, mineral extraction would not be precluded by reclamation of the site; although, resumption of mineral extraction would be potentially more expensive due to the amount of new fill placed in the Quarry Parcel and subject to a separate review and approval process by the City.

Based on the above, the proposed project would not 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, or of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan. Thus, a ***less-than-significant*** impact would occur.

Mitigation Measure(s)
None required.

Cumulative Impacts and Mitigation Measures

As defined in Section 15355 of the CEQA Guidelines, "cumulative impacts" refers to two or more individual effects which, when considered together, are considerable, compound, or increase other environmental impacts. The individual effects may be changes resulting from a single project or a number of separate projects. The cumulative impact from several projects is the change in the environment that results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. It should be noted that while the City does not include any other active quarry sites, reclamation of the project site would not cumulatively impact other quarries in the greater region, as impacts, with respect to geology, soils, and mineral resources, is primarily site-specific.

4.5-7 Cumulative increase in the potential for geological related impacts and hazards. Based on the analysis below, the cumulative impact is *less than significant*.

Impacts to geology, soils, seismicity, mineral resources, and paleontological resources related to implementation of the proposed project are analyzed throughout this chapter. As discussed above, all recommendations in the Geotechnical Investigation would be incorporated to mitigate any potential impacts related to geologic hazards. While some geologic characteristics may affect regional construction practices, impacts and mitigation measures are primarily site-specific and project-specific. For example, impacts resulting from undocumented fill at one project site are not worsened by impacts related to undocumented fill at another project site. Rather, the soil conditions, and the implications of such conditions for each project, are independent.

As such, the potential for cumulative impacts related to geology, soils, and mineral resources, to which implementation of the proposed project might contribute, is ***less than significant***.

Mitigation Measure(s)
None required.

4.6 Hydrology and Water Quality

4.6 HYDROLOGY AND WATER QUALITY

4.6.1 INTRODUCTION

The Hydrology and Water Quality chapter of the EIR describes the existing drainage patterns, stormwater flows, and stormwater infrastructure at the project site. The chapter also evaluates potential impacts of the proposed project with respect to changes in the rate or amount of runoff leaving the site, degradation of water quality, and increases in on- and off-site flooding. Information used for this chapter was primarily drawn from a Drainage Report and a C.3 and C.6 Development Review Checklist prepared for the proposed project by Walsh Engineering, Inc. (see Appendix K of this EIR).[1] In addition, WRA, Inc. prepared a Memorandum to address the potential risks associated with the project Dust Control Plan's anticipated use of Gorilla-Snot.[2] Finally, information was drawn from the City of Pacifica General Plan[3] and the Soil Management Plan prepared for the proposed project (see Appendix C of this EIR).[4] It should be noted that issues associated with water supply availability are addressed in Chapter 4.11, Utilities and Service Systems, of this EIR.

4.6.2 EXISTING ENVIRONMENTAL SETTING

The section below describes the regional hydrology, the project site drainage, including peak flows within the project site, and groundwater conditions.

Regional Hydrology

The City of Pacifica is located within all or part of nine watersheds, the majority of which drain to the west towards the Pacific Ocean. A small portion of the City drains to the east, contributing to the upper basin of San Mateo Creek watershed, which flows east toward the San Francisco Bay. From north to south, the major watersheds in the area include Milagra Creek, Laguna Salada (also known as Sanchez Creek), Calera Creek, and San Pedro Creek. The project site is located within the 1,600-acre Calera Creek watershed. Calera Creek is a perennial stream in the lower portions of the watershed. Calera Creek drains through two forks, a main channel to the north and a smaller southern fork that is often referred to as Rockaway Creek.

Project Site Drainage

The project site is composed of the Quarry Parcel and the Eastern Parcel, which are divided by Calera Creek. Calera Creek drains the central portion of the City of Pacifica, eventually flowing through the project site and entering the Pacific Ocean at the northern end of Rockaway Beach. The entirety of Calera Creek that bisects the project site is within the Federal Emergency Management Agency (FEMA) mapped floodplain Zone A (see Figure 4.6-1). FEMA Zone A is defined as being areas subject to inundation by the one percent annual chance flood event.

---

1 Walsh Engineering. *Drainage Report, Hydrologic & Hydraulic Analysis, Rockaway Quarry Reclamation.* June 14, 2019.

2 WRA, Inc. *Memorandum: Risk of the Application of Gorilla-Snot Dust Control Compound Near Potential Sensitive Biological Resources*. November 19, 2021.

3 City of Pacifica. *City of Pacifica General Plan*. Adopted 1980.

4 Baylands Soils Pacifica, LLC. *Soil Management Plan for The Preserve at Pacifica, LLC Amended Reclamation Plan at the Pacifica Quarry, Pacifica, California*. September 2021.

Figure 4.6-1
FEMA 100-Year Floodplain Limits

Source: Federal Emergency Management Agency. FEMA's National Flood Hazard Layer (NFHL) Viewer. Available at: https://hazards-fema.maps.arcgis.com/apps/webappviewer/index.html?id=8b0adb51996444d4879338b5529aa9cd&extent=-122.50223994979875,37.6091209967086,-122.48146892318685,37.61761981456234. Accessed February 19, 2021.

The Drainage Report indicates that two drainage management areas (DMAs) exist within the site: the Quarry Parcel and the Eastern Parcel. The two DMAs are roughly contiguous with the boundaries of the Quarry Parcel and the Eastern Parcel, respectively. The site conditions include a relatively hilly topography on the Quarry Parcel (DMA 1) with gentle slopes on the Eastern Parcel (DMA 2).

Per the Drainage Report, the soils within the site are categorized as Hydraulic Soil Group C per the United States Department of Agriculture (USDA) Web Soil Survey. Soil Type A has the highest infiltration rate and Type D has the lowest infiltration rate.

The existing surface cover of DMA 1 is a mix of vegetated cover and exposed rock surfaces due to the previous mining operations. Historically, stormwater on half of DMA 1 drains by overland flow into a depression, located along the southwest edge of the Quarry Parcel. From the southwest edge of the Quarry Parcel, the drainage is then transported to Calera Creek through a 24-inch corrugated metal pipe (CMP) culvert located within the site. The other half of DMA 1 drains directly into Calera Creek by overland flow. DMA 2 is almost completely covered in vegetation. Stormwater runoff on DMA 2 drains by overland flow to the southwestern portion of the Eastern Parcel, where four existing polyvinyl chloride (PVC) culverts discharge runoff into Calera Creek. Calera Creek discharges into the Pacific Ocean directly to the west of the project site.

The pre- and post-project hydrologic conditions for both DMAs were calculated as part of the Drainage Report. The pre-project peak flows are shown in Table 4.6-1 below. The pre-project hydrologic conditions are shown in Figure 4.6-2.

Table 4.6-1
Pre-Project Drainage Conditions

Drainage Area	Pre-Project Peak Flow (cfs)
DMA 1	70.8
DMA 2	39.5
Total Site	**91.8**

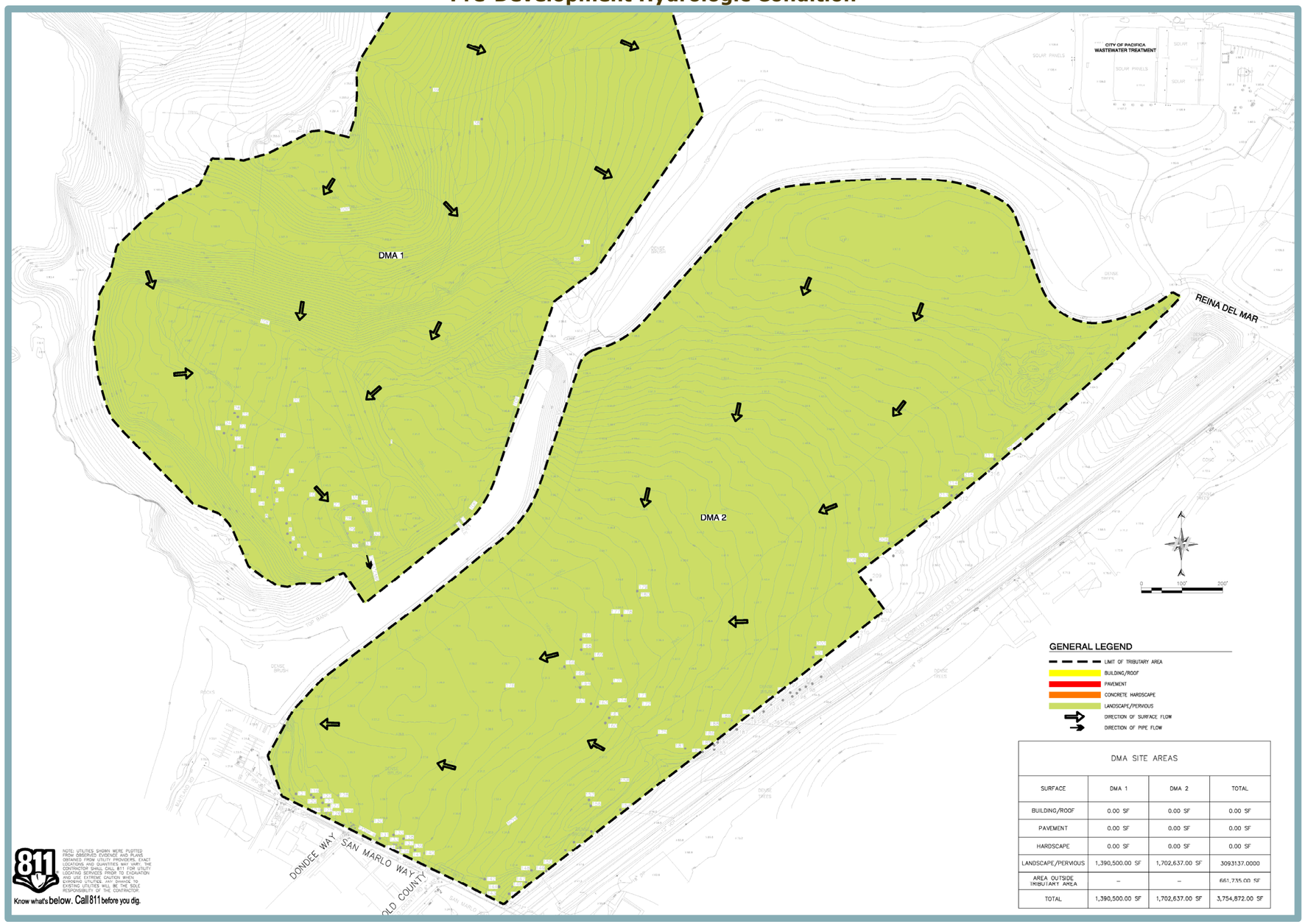
Source: Walsh Engineering, 2019.

Groundwater Conditions

The San Pedro Valley Groundwater Basin lies within the City of Pacifica and has a surface area of approximately 700 acres. Alluvial deposits, or clays, sands, and silts with interspersed gravel deposited by rivers, are found throughout the majority of the basin and are the primary water-bearing formation in the City of Pacifica.[5] The alluvium contains semi-confined and unconfined groundwater that is transmitted and stored through intergranular porosity. The outflow of water from the aquifer occurs by evapotranspiration and seepage to streams, springs, and the ocean. The water table fluctuates seasonally in response to outflow and recharge volumes. The fluctuations vary based on characteristics such as soil permeability, rainfall, and slopes. The San Pedro Valley Groundwater Basin is not covered by a Groundwater Management Plan.

[5] Department of Water Resources. *San Pedro Valley Groundwater Basin, California's Groundwater, Bulletin 118*. 2004.

Figure 4.6-2
Pre-Development Hydrologic Condition



DMA SITE AREAS

SURFACE	DMA 1	DMA 2	TOTAL
BUILDING/ROOF	0.00 SF	0.00 SF	0.00 SF
PAVEMENT	0.00 SF	0.00 SF	0.00 SF
HARDSCAPE	0.00 SF	0.00 SF	0.00 SF
LANDSCAPE/PERVIOUS	1,390,500.00 SF	1,702,637.00 SF	3093137.0000
AREA OUTSIDE TRIBUTARY AREA	–	–	661,735.00 SF
TOTAL	1,390,500.00 SF	1,702,637.00 SF	3,754,872.00 SF

4.6.3 REGULATORY CONTEXT

The following is a description of federal, State, and local environmental laws and policies that are relevant to the review of hydrology and water quality under the CEQA process.

Federal Regulations

The following are applicable federal regulations related to hydrology and water quality.

FEMA

The FEMA is responsible for determining flood elevations and floodplain boundaries based on U.S. Army Corps of Engineers (USACE) studies. FEMA is also responsible for distributing the Flood Insurance Rate Maps (FIRMs), which are used in the National Flood Insurance Program (NFIP). The FIRMs identify the locations of special flood hazard areas, including the 100-year floodplains.

FEMA allows non-residential development in the floodplain; however, construction activities are restricted within flood hazard areas, depending upon the potential for flooding within each area. Federal regulations governing development in a floodplain are set forth in Title 44, Part 60 of the Code of Federal Regulations (CFR). These standards are implemented at the State level through construction codes and local ordinances; however, these regulations only apply to residential and non-residential structure improvements. Although roadway construction or modification is not explicitly addressed in the FEMA regulations, the California Department of Transportation (Caltrans) has also adopted criteria and standards for roadway drainage systems and projects situated within designated floodplains. Standards that apply to floodplain issues are based on federal regulations (Title 23, Part 650 of the CFR). At the State level, roadway design must comply with drainage standards included in Chapters 800-890 of the Caltrans Highway Design Manual. CFR Section 60.3(c)(10) restricts cumulative development from increasing the water surface elevation of the base flood by more than one foot within the floodplain.

Federal Clean Water Act

The National Pollutant Discharge Elimination System (NPDES) permit system was established in the federal Clean Water Act (CWA) to regulate municipal and industrial discharges to surface waters of the U.S. Each NPDES permit contains limits on allowable concentrations and mass emissions of pollutants contained in the discharge. Sections 401 and 402 of the CWA contain general requirements regarding NPDES permits. Section 307 of the CWA describes the factors that the Environmental Protection Agency (USEPA) must consider in setting effluent limits for priority pollutants.

Nonpoint sources are diffuse and originate over a wide area rather than from a definable point. Nonpoint pollution often enters receiving water in the form of surface runoff, but is not conveyed by way of pipelines or discrete conveyances. As defined in the federal regulations, such nonpoint sources are generally exempt from federal NPDES permit program requirements. However, two types of nonpoint source discharges are controlled by the NPDES program – nonpoint source discharge caused by general construction activities, and the general quality of stormwater in municipal stormwater systems. The 1987 amendments to the CWA directed the USEPA to implement the stormwater program in two phases. Phase I addressed discharges from large (population 250,000 or above) and medium (population 100,000 to 250,000) municipalities and certain industrial activities. Phase II addresses all other discharges defined by USEPA that are not included in Phase I.

Section 402 of the CWA mandates that certain types of construction activities comply with the requirements of the NPDES stormwater program. The Phase II Rule, issued in 1999, requires that construction activities that disturb land equal to or greater than one acre require permitting under the NPDES program. In California, permitting occurs under the General Permit for Stormwater Discharges Associated with Construction Activity, issued to the State Water Resources Control Board (SWRCB), implemented and enforced by the nine Regional Water Quality Control Boards (RWQCBs).

As of July 1, 2010, all dischargers with projects that include clearing, grading or stockpiling activities expected to disturb one or more acres of soil are required to obtain compliance under the NPDES Construction General Permit Order 2009-0009-DWQ. The General Permit requires all dischargers, where the project disturbs one or more acres, to take the following measures:

1. Develop and implement a Stormwater Pollution Prevention Plan (SWPPP) to include a site map(s) of existing and proposed building and roadway footprints, drainage patterns and stormwater collection and discharge points, and pre- and post- project topography;
2. Describe types and placement of Best Management Practices (BMPs) in the SWPPP that will be used to protect stormwater quality;
3. Provide a visual and chemical (if non-visible pollutants are expected) monitoring program for implementation upon BMP failure; and
4. Provide a sediment monitoring plan if the area discharges directly to a water body listed on the 303(d) list for sediment.

To obtain coverage, a SWPPP must be submitted to the RWQCB electronically. When project construction is completed, the City must file a Notice of Termination (NOT).

State Regulations

The following are applicable State regulations related to hydrology and water quality.

State Water Resources Control Board

The SWRCB and the RWQCBs are responsible for ensuring implementation and compliance with the provisions of the federal CWA and California's clean water act, the Porter-Cologne Water Quality Control Act. The project site is situated within the jurisdictional boundaries of the San Francisco Bay Regional Water Quality Control Board (SFBRWQCB) (Region 2). The SFBRWQCB has the authority to implement water quality protection standards through the issuance of permits for discharges to waters at locations within their jurisdiction.

The SFBRWQCB issued an Order requiring all municipalities within San Mateo County (and the County itself) to develop more restrictive surface water control standards for new development projects as part of the municipal regional NPDES Permit. Known as "Provision C.3," new development or redevelopment projects that disturb one or more acres of land area must contain and treat stormwater runoff from the site. The proposed project is a C.3 regulated project and is required to include appropriate site design measures, source controls, and hydraulically-sized stormwater treatment and flow control measures.

Local Regulations

Relevant goals and policies from the City of Pacifica General Plan, as well as various other local guidelines and regulations related to hydrology and water quality, are discussed below.

City of Pacifica General Plan

The following policies from the 1980 City of Pacifica General Plan are applicable to the proposed project:

Conservation Element

Policy 5 Local year-round creeks and their riparian habitats shall be protected.

Policy 7 Promote the conservation of all water, soil, wildlife, vegetation, energy, minerals and other natural resources.

Local Coastal Land Use Plan

The City of Pacifica's Local Coastal Land Use Plan is the basis for the Local Coastal Implementation Program, which includes a permit issuing procedure and other implementation programs. The relevant policies within the Local Coastal Land Use Plan that relate to hydrology and water quality are listed below.

Policy 12 The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface waterflow, encouraging wastewater reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration spills that do occur.

Policy 17 Channelizations, dams, or other substantial alterations of rivers and streams shall incorporate the best mitigation measures feasible, and be limited to: (1) necessary water supply projects; (2) flood control projects where no other method for protecting existing structures in the flood plain is feasible and where such protection is necessary for public safety or to protect existing development, or; (3) developments where the primary function is the improvement of fish and wildlife habitat.

NPDES Construction General Stormwater Permit

As noted above, all municipalities within San Mateo County (and the County itself) are required to develop more restrictive surface water control standards for new development projects to comply with Provision C.3 of the RWQCB Municipal Regional Stormwater NPDES Permit order No. R2-2015-0049. The San Mateo Countywide Water Pollution Prevention Program developed a C.3 Stormwater Technical Guidance document for implementing the RWQCB Municipal Regional Stormwater NPDES Permit C.3 requirements, known as the C.3 Standards.[6] The City of Pacifica has adopted the County C.3 Standards as part of the City's NPDES General Permit requirements, which require new development and redevelopment projects that create or alter 10,000 or more square feet (sf) of impervious area to contain and treat all stormwater runoff from the project site.

[6] City/County Association of Governments of San Mateo County, San Mateo Countywide Water Pollution Prevention Program. *C.3 Stormwater Technical Guidance.* June 2016.

During development review, local agencies require projects to include stormwater controls, including site design measures, source controls, treatment measures, low impact development, hydromodification management and construction BMP's (Best Management Practices) as described below.

Site design measures to reduce water quality impacts include the reduction of impervious surfaces and directing stormwater runoff from impervious surfaces to vegetated areas. Source controls present potential pollutant sources from contracting rainfall and stormwater. Examples include bioretention areas/rain gardens, flow-through planters, and vegetated swales.

City of Pacifica Municipal Code

Per Section 6-12.205, Reduction of Pollutants in Storm Water, of the Pacifica Municipal Code, any person engaged in activities which would or may result in pollutants entering the City storm sewer system shall undertake all practicable measures to reduce such pollutants. The following requirements shall apply:

1. Littering. No person shall throw, deposit, leave, maintain, keep, or permit to be thrown, deposited, placed, left, or maintained, any refuse, rubbish, garbage, or other discarded or abandoned objects, articles, and accumulations, in or upon any street, alley sidewalk, storm drain, inlet, catch basin, conduit or other drainage structures, business place, or upon any public or private lot of land in the City, so that the same might be or become a pollutant, except in containers or in lawfully established dumping grounds. The occupant or tenant, or in the absence of occupant or tenant, the owner, lessee, or proprietor of any real property in the City in front of which there is a paved sidewalk shall maintain said sidewalk free of litter to the maximum extent practicable. No person shall throw or deposit litter in any pond, lake, ocean, stream, or any other body of water within the City.
2. Standard for parking lots and similar structures. Persons owning or operating a parking lot, gas station pavement, or similar structure shall clean those structures as frequently and thoroughly as practicable in a manner that does not result in discharge of pollutants to the City storm sewer system.
3. BMPs for new developments and redevelopments. Any construction contractor performing work in the City shall provide filter materials at the catch basin to retain any debris and dirt flowing into the City's storm sewer system. The City may establish controls on the volume and rate of stormwater runoff from new developments and redevelopments as may be appropriate to minimize the discharge and transport of pollutants.
4. Compliance with BMPs. Where BMP guidelines or requirements have been adopted by the City for any activity, operation, or facility which may cause or contribute to stormwater pollution or contamination, illicit discharges, and/or discharge of non-stormwater to the storm system, every person undertaking such activity or operation, or owning or operating such facility, shall comply with such guidelines or requirements as may be identified by the Environmental Services Manager.

4.6.4 IMPACTS AND MITIGATION MEASURES

The following section describes the standards of significance and methodology used to analyze and determine the proposed project's potential impacts related to hydrology and water quality. In addition, a discussion of the project's impacts, as well as mitigation measures where necessary, is also presented.

Standards of Significance

Consistent with Appendix G of the CEQA Guidelines, a significant impact would occur if the proposed project would result in any of the following:

- Violate any water quality standards or waste discharge requirements, or otherwise substantially degrade water quality;
- Substantially deplete groundwater supplies or interfere substantially with groundwater recharge;
- 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:
    - Result in substantial erosion or siltation on- or off-site;
    - Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;
    - Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or;
    - Impede or redirect flood flows;
- In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation; and
- Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

The proposed project's impacts associated with water supply availability are addressed in Chapter 4.11, Utilities and Service Systems, of this EIR.

Method of Analysis

The analysis presented within this chapter is based primarily on the Drainage Report and the C.3 and C.6 Development Review Checklist prepared for the proposed project by Walsh Engineering, Inc. In addition, WRA prepared a Memorandum to assess the potential risks associated with the use of Gorilla-Snot as an on-site dust control palliative.

Drainage Report

As part of the Drainage Report, the hydraulic characteristics of the drainage features within the project site were evaluated for both pre- and post-project conditions using AutoDesk's Civil 3D Storm and Sanitary Analysis 2014 Program (SSA). The program performs calculations based on the Hydrograph Analysis Method of the National Resources Conservation Service (NRCS TR-55 Method), with Pond Routing Method for Storage-indication, based on site conditions.

The Rainfall Distribution modeled in the calculations is a USDA Soil Conservation Service (SCS) Type I storm event contained in SSA. The storm event modeled the 100-year, 24-hour event with a total rainfall amounting to 6.7 inches. Only the 100-year storm event was modeled, as the 100-year event drives the basis for the flood control analysis. The SSA model was used to compare the pre- and post-development flow rates at critical drainage points along Calera Creek.

C.3 and C.6 Development Review Checklist

In accordance with the *Stormwater C.3 Guidebook*, the C.3 and C.6 Development Review Checklist demonstrates the project's compliance with applicable requirements of Provision C.3 to minimize imperviousness, retain or detain stormwater, slow runoff rates, incorporate required

source controls, treat stormwater prior to discharge from the site, control runoff rates and durations, and provide for operation and maintenance of treatment and flow-control facilities.

Gorilla-Snot Memorandum

WRA prepared a Memorandum to assess potential impacts associated with the use of Gorilla-Snot as part of the project Dust Control Plan. Gorilla-Snot is a liquid vinyl copolymer dust palliative manufactured by Soilworks that binds to soil and sediment to reduce the ability of soil particles to become airborne. As part of assessing potential indirect effects from applying Gorilla-Snot to on-site soils, WRA reviewed the Material Safety Data Sheet (MSDS) for the product to determine the toxicity levels of Gorilla-Snot.

Project-Specific Impacts and Mitigation Measures

The following discussion of impacts is based on the implementation of the proposed project in comparison with the standards of significance identified above.

4.6-1 Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality during implementation. Based on the analysis below and with implementation of mitigation, the impact is *less than significant*.

Implementation of the proposed Reclamation Plan would include soil import, minor excavation, and other ground-disturbing activities that could cause soil erosion at an accelerated rate during storm events. In addition, the proposed Dust Control Plan is anticipated to use Gorilla-Snot as a dust palliative, which would be combined with water and applied to all exposed earth surfaces during site clearing, grading, earthmoving, and other site-preparation activities during implementation of the Reclamation Plan. All such activities have the potential to affect water quality and contribute to localized violations of water quality standards if impacted stormwater runoff from ground-disturbing and/or dust control activities enters Calera Creek.

Soils exposed by ground-disturbing reclamation activities have the potential to affect water quality in two ways: 1) suspended soil particles and sediments transported through runoff; or 2) sediments transported as dust that eventually reach local water bodies. Spills or leaks from heavy equipment and machinery and/or staging areas also have the potential to enter runoff. Typical pollutants include, but are not limited to, petroleum, heavy metals, and oils from heavy equipment, which could contain hazardous constituents. Sediment from erosion of graded or excavated surface materials, leaks or spills from equipment, or inadvertent releases of products involved in the proposed reclamation activities could result in water quality degradation if runoff containing the sediment or contaminants should enter receiving waters in sufficient quantities. Discharge of polluted stormwater or non-stormwater runoff could violate waste discharge requirements.

Because implementation of the proposed project would require land disturbance of approximately 36.5 acres (per the C.3 and C.6 Development Review Checklist), the project would be required to comply with the San Mateo County Municipal Regional Stormwater Permit requirements as well as the Construction General Permit. The San Mateo Countywide Pollution Prevention Program provides a list of construction BMPs

with which all projects involving substantial ground disturbance within the County, such as the proposed project, are required to comply.[7]

The Construction General Permit prohibits the discharge of materials other than stormwater and authorized non-stormwater discharges (such as irrigation and pipe flushing and testing). Non-stormwater BMPs tend to be management practices with the purpose of preventing stormwater from coming into contact with potential pollutants. Examples of non-stormwater BMPs include preventing illicit discharges, and implementing good practices for vehicle and equipment maintenance, cleaning, and fueling operations, such as using drip pans under vehicles. Waste and materials management BMPs include implementing practices and procedures to prevent pollution from materials used on construction sites. Examples of materials management BMPs include the following:

- Good housekeeping activities such as storing of materials covered and elevated off the ground, in a central location;
- Securely locating portable toilets away from the storm drainage system and performing routine maintenance;
- Providing a central location for concrete washout and performing routine maintenance;
- Providing several dumpsters and trash cans throughout the reclamation site for litter/floatable management; and
- Covering and/or containing stockpiled materials and overall good housekeeping on the site.

Various erosion control measures, revegetation plans, and other measures designed to ensure compliance with SWRCB and RWQCB regulations related to water quality are identified in the proposed Reclamation Plan. Measures are included that are designed to protect the surface and groundwater quality, as well as prevent siltation of downslope areas such as Calera Creek. For example, the proposed erosion control on the 2:1 slopes within the Quarry Parcel, which includes installation of fiber rolls, follows the California Stormwater Quality Association (CASQA) and Caltrans standards for such slopes. Interrupting the length of a slope with fiber rolls is effective in reducing sheet and hill erosion. Some of the steeper proposed fill slopes would require jute netting, in addition to the hydroseeding and fiber rolls. Check dams and drop inlet protection measures identified in the Reclamation Plan would help reduce the amount of sediment collected while construction is taking place.

In addition, the following erosion control Conservation Measures, among others, are included in the Reclamation Plan:

29. The contractor shall be responsible for constant maintenance of erosion and sediment control measures at all times to the satisfaction of the engineer and City agency. Erosion and sediment control measures and their installation shall be accomplished using BMPs.

[7] City/County Association of Governments of San Mateo County, San Mateo Countywide Water Pollution Prevention Program. *Construction Best Management Practices.* Available at: http://www.cityofpacifica.org/depts/planning/stormwater_compliance/default.asp. Accessed August 3, 2020.

31. Storm water runoff from the construction site shall be directed toward an inlet with a sediment or filtration interceptor prior to entering the storm drain system.
47. Contractor shall adjust the sedimentation and erosion control methods as the Project develops. It shall be the Qualified Storm Water Pollution Prevention Plan (SWPPP) Practitioner's responsibility to ensure that the installed erosion control and sedimentation improvements are in conformance with the state of California SWPPP guidelines and the California BMPs.
48. Temporary silt and drainage control facilities shall be installed to control and contain erosion-caused silt deposits and to provide for the safe discharge of storm waters into existing storm water facilities. Design of these facilities must be approved by the City Engineer and in place prior to the start of grading.
49. The contractor shall comply with all rules, regulations, and procedures of the national pollutant discharge elimination system for construction and activities as promulgated by the California state water resource control board or any of its regional water quality control boards.
57. Access roads: as necessary, any sediment or other construction related materials deposited on access roads shall be removed prior to any rain event.
58. Wind erosion control: stockpiled waste material shall be contained and securely protected from wind erosion at all times when not in use.
59. The Contractor shall provide effective soil cover for inactive areas where construction activity has disturbed soil but are not scheduled to re-disturb soil for at least 14 days.

The aforementioned requirements would ensure that all applicable water quality standards and waste discharge requirements are achieved.

However, according to the Memorandum prepared to assess the risks associated with Gorilla-Snot, the use of the product could potentially result in water quality degradation if specific preventative measures are not incorporated into the proposed Dust Control Plan. Such measures are set forth through the product-specific recommendations included in the Memorandum. Without compliance with the recommendations, the proposed project could violate water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality during project implementation.

Based on the above, without compliance with the recommendations set forth in the Memorandum, the proposed project could violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality during project implementation. Therefore, a ***significant*** impact could occur.

Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the above potential impact to a *less-than-significant* level.

4.6-1 *Prior to the issuance of a grading permit, the Final Dust Control Plan shall include the following recommendations, which shall be subject to review and approval by the City Engineer:*

- *Dust palliative (e.g., Gorilla-Snot) shall not be applied immediately before or after a precipitation event in order to prevent potential runoff of the compound while it is in liquid form. Rather, the compound shall be applied to dry soil and allowed to cure completely before water is applied to the road surface by either artificial means or by precipitation;*
- *Spill containment materials shall be kept on-hand during application to prevent the compound from entering Calera Creek. Such materials may include sand, clay, or other suitable absorbent materials. Any spills shall be attended to immediately, and abatement materials shall be properly disposed of in an approved landfill; and*
- *Care shall be taken to ensure that applied dust palliative does not enter any sensitive habitat area. Application of the compound shall occur in a localized fashion such that it is only applied on roadways in need of dust control.*

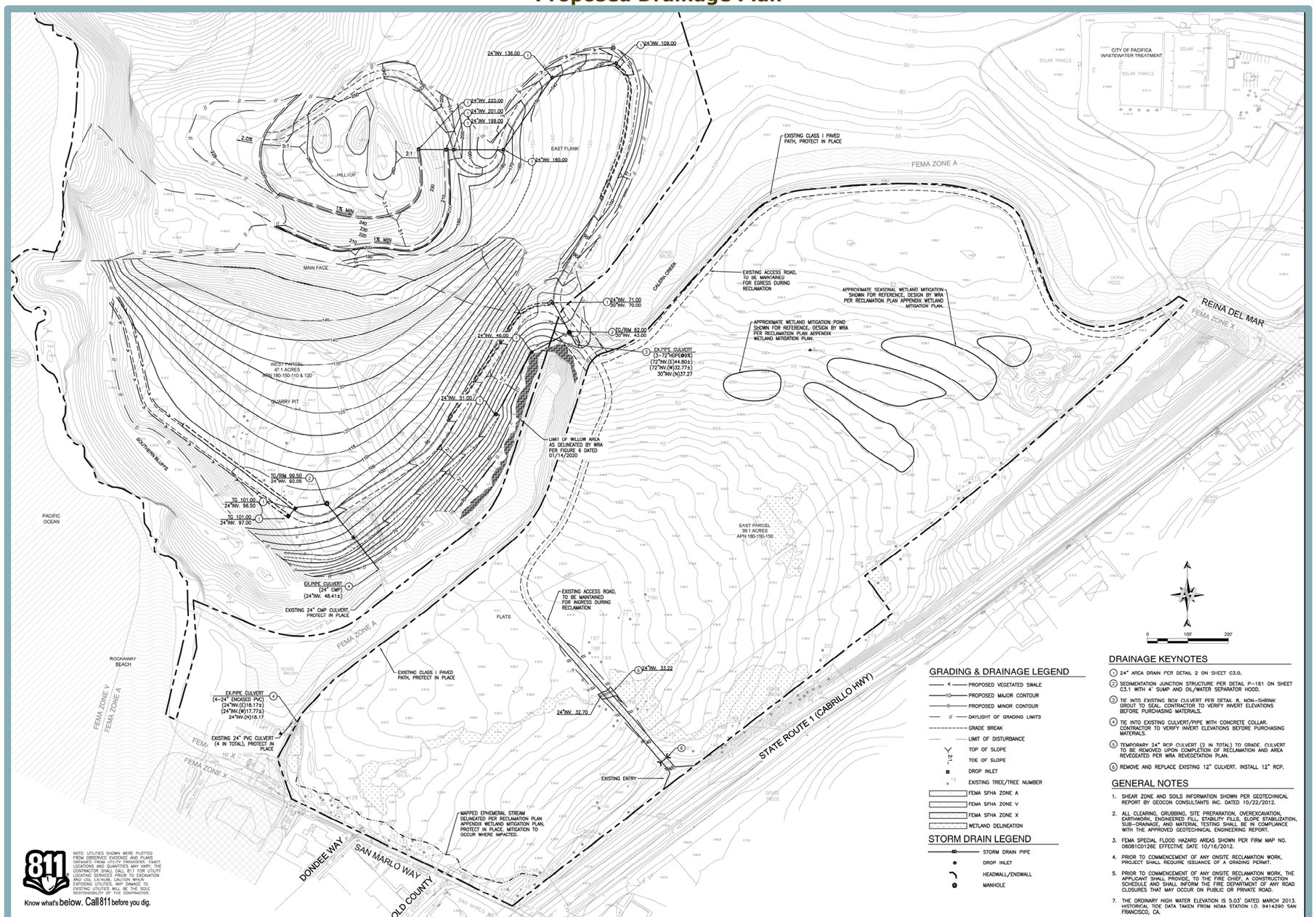
4.6-2 Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality during operations. Based on the analysis below, the impact is *less than significant*.

Upon completion of the proposed reclamation activities, the project site would continue to be open to the public for recreational use. Similar to existing conditions, continued public use of the site has the potential to result in introduction of pollutants such as trash, organics, and other debris to the site, which could reach Calera Creek. In addition, the potential exists for eroded sediments from exposed areas of the site to flow to Calera Creek during storm events. Discharge of polluted stormwater runoff could violate waste discharge requirements.

The proposed project would include new drainage features that would direct stormwater runoff within the project site through a series of concrete ditches, vegetated swales, and pipes to the ultimate discharge point of Calera Creek (see Figure 4.6-3).

The upper section of the Hilltop would be graded to a rounded hillock that drains in a southerly direction. Two drainage terraces with a concrete ditch would be built along the graded slope on a southern face of the Hilltop to collect runoff. Both the upper six-foot wide drainage terrace and the lower 12-foot-wide drainage terrace would be bordered by a two- to three-foot wide, v-shaped concrete ditch that would be built along the graded slope on the southern face of the Hilltop. The two terraces would run parallel to each other, with the lower terrace approximately 30 feet below the upper terrace. An earthen berm would be installed at the top of the slope. Concrete ditches on the perimeter of the terraces would capture runoff from the hillside below the Hilltop. The ditches would convey flows into a sub-surface storm drain system that would follow the existing Calera Creek Multi-Purpose (CCMP) Trail into a 10-foot-deep sedimentation junction structure with a 24-inch-wide opening (covered by a manhole grate), located where the CCMP Trail crosses Calera Creek.

Figure 4.6-3
Proposed Drainage Plan



The East Flank of the project site would be left in the current condition with the exception of a concrete ditch along the existing CCMP Trail, as noted above, and a new four-foot-wide vegetated swale also along the CCMP Trail. The ditch would have inflows to the storm drain system at various intervals. The storm drain would convey flows down the CCMP Trail and into sedimentation junction structure referenced above.

The Quarry Face and Pit would be filled in with a slope that would mimic natural conditions, and drainage would travel through sheet flow down the hillside to the concrete ditch located alongside the proposed multi-use Western Trail. Additionally, a graded terrace with a concrete ditch would be constructed to prevent direct runoff into Calera Creek. Both the runoff from the hillside and the runoff collected in the terrace would be conveyed to the aforementioned sedimentation junction structure.

Runoff associated with the Southern Bluff would drain by way of sheet flow to a newly constructed four-foot-wide vegetated swale that would be located along the base of the bluff. From there, runoff flows would tie into an existing 24-inch CMP (protected in place) that is located in the southwestern portion of the Quarry Parcel and then to Calera Creek.

Based on the above, the proposed project includes site design measures, including vegetated swales to ensure that stormwater runoff is properly treated prior to discharge to Calera Creek. Furthermore, given that the proposed project would not include the construction of new impervious surfaces within the site, the project would not result in increased potential for polluted runoff. Because the project would include regrading of impacted areas of the Quarry Parcel and would revegetate substantial portions of the site, the project would improve sediment capture and stormwater management relative to existing conditions. Thus, urban pollutants entering and potentially degrading local water quality would not be expected to increase from current conditions as a result of the project. The proposed project would result in a ***less-than-significant*** impact related to a violation of water quality standards or waste discharge requirements or otherwise substantial degradation of surface or ground water quality during operations.

Mitigation Measure(s)
None required.

4.6-3 Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin or conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. Based on the analysis below, the impact is *less than significant*.

Groundwater relies on annual rainfall and percolation through pervious soils to recharge the system. As noted in the Drainage Report prepared for the proposed project, on-site soils are characterized as Hydraulic Soil Group C per the USDA Web Soil Survey. Soil Type A has the highest infiltration rate and Type D has the lowest

infiltration rate. Because the majority of the site is characterized by Type C soils, the project site would not be considered an important groundwater recharge area. Furthermore, with the exception of the proposed 0.20-acre bentonite clay-lined mitigation pond that would be implemented in the Eastern Parcel, the proposed project would not include the creation of new impervious surfaces on the project site such that groundwater recharge would be impeded.

As discussed above under Groundwater Conditions, the San Pedro Valley Groundwater Basin lies within the City of Pacifica and has a surface area of approximately 700 acres; however, the basin is not covered by a Groundwater Management Plan. Furthermore, the proposed project would not include development that would result in increased water usage. Water could be used during grading, revegetation, and reclamation activities; however, the amount of water would be minimal and operation of the proposed project would not require water infrastructure or any long-term operational water usage. The North Coast County Water District (NCCWD), which provides water supplies to the City, does not currently rely on groundwater wells for water supply. Thus, the project would not result in the depletion of groundwater supplies.

Based on the above, the proposed project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the underlying groundwater basin or conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. Thus, impacts related to groundwater would be ***less than significant***.

Mitigation Measure(s)

None required.

4.6-4 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: result in substantial erosion or siltation on- or offsite; substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site; or create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. Based on the analysis below, the impact is *less than significant*.

The potential for the proposed project to result in substantial additional sources of polluted runoff, including erosion, is addressed under Impacts 4.6-1 and 4.6-2 above. Further discussion regarding erosion is provided under Impact 4.5-2 in Chapter 4.5, Geology and Soils/Mineral Resources, of this EIR.

Implementation of the proposed project would include altering the existing drainage pattern of the site (see Figure 4.6-4). As noted in the C.3 and C.6 Development Review Checklist prepared for the project, the project would decrease the total amount of impervious surface within the project site from 2,087,187 sf to 2,076,464 sf, for an overall reduction of approximately 10,723 sf. While the project would ultimately reduce the total amount of on-site impervious surfaces, the proposed drainage pattern changes have the potential to alter the rate and/or amount of stormwater runoff leaving the site.

As noted above, the Drainage Report included an analysis of pre- and post-project conditions for the 100-year, 24-hour event. The results of the analysis are summarized in Table 4.6-2 below, with peak flows shown in units of cubic feet per second (cfs).

Table 4.6-2
Pre- and Post-Project Drainage Conditions

Drainage Area	Peak Flow (cfs)		
	Pre-Project	Post-Project	Net Change
DMA 1	70.8	60.0	-10.8
DMA 2	39.5	39.9	+0.4
Total Site	**91.8**	**84.4**	**-10.4**

Source: Walsh Engineering, 2019.

As shown in the table, peak stormwater flows from DMA 1 would be reduced from 70.8 cfs to 60.0 cfs. The projected decrease in peak flows is due to the fact that the proposed grading activities would substantially soften the existing slopes within DMA 1, altering the flow of water over the ground surface. In addition, the existing exposed rock face within DMA 1 would be revegetated, and the flow path would be redirected through a series of concrete swales and storm drains. Per the Drainage Report, the three existing 72-inch high-density polyethylene (HDPE) culverts at the CCMP Trail/Calera Creek crossing, and the existing 24-inch CMP culvert, would be capable of handling stormwater runoff for the 100-year, 24-hour storm event.

As for DMA 2, peak flows would be slightly increased from 39.5 cfs to 39.9 cfs. Although slopes within DMA 2 would be dramatically softened as a result of the project, the proposed channelization would slightly increase peak runoff flows. Despite the projected increase, the existing four 24-inch PVC culverts would be adequate to convey the 100-year storm event. Furthermore, at the point of confluence between the DMAs, the overall peak flow would decrease from 91.8 cfs to 84.4 cfs due to decrease in peak flow rate from DMA 1. As such, the proposed project would not substantially alter the drainage pattern of the site in a manner that would significantly increase stormwater flows leaving the site.

Conclusion

Based on the above, the proposed project would result in a decrease in peak runoff relative to existing conditions. Therefore, the proposed project would result in a ***less-than-significant*** impact related to substantially altering the drainage pattern of the site or area, or increasing the rate or amount of surface runoff.

Figure 4.6-4
Post Development Hydrologic Conditions

DMA SITE AREAS

SURFACE	DMA 1	DMA 2	TOTAL
BUILDING/ROOF	0.00 SF	0.00 SF	0.00 SF
PAVEMENT	0.00 SF	0.00 SF	0.00 SF
HARDSCAPE	9,690.00 SF	0.00 SF	9,690.00 SF
LANDSCAPE/PERVIOUS	1,383,534.00 SF	1,702,637.00 SF	3,086,171.00 SF
AREA OUTSIDE TRIBUTARY AREA	–	–	661,735.00 SF
TOTAL	1,393,224.00 SF	1,702,637.00 SF	3,757,596.00 SF

Mitigation Measure(s)
None required.

4.6-5 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 impede or redirect flood flows. Based on the analysis below, the impact is *less than significant*.

As noted previously, the project site is divided by Calera Creek. The entirety of Calera Creek that bisects the project site is within a FEMA mapped floodplain Zone A (see Figure 4.6-1). The FEMA Zone A is defined as being areas subject to inundation by the one percent annual chance flood event. The remainder of the site is classified as Zone X, defined by FEMA as an area not within a 100-year or 500-year floodplain.

The proposed project would not include development of any buildings or introduction of new impervious surfaces. While the project would alter the drainage patterns within the Quarry Parcel and Eastern Parcel as a result of the proposed grading and drainage improvements, the project would not include any grading activities or placement of fill within the Calera Creek floodplain. As such, the proposed project would not substantially alter the existing drainage pattern of the site or area, including through the alteration of a stream or river or through the addition of impervious surfaces, in a manner which would impede or redirect flood flows. Thus, a ***less-than-significant*** impact would occur.

Mitigation Measure(s)
None required.

4.6-6 In a flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation. Based on the analysis below, the impact is *less than significant*.

As discussed under Impact 4.6-5, the project would not result in the impediment or redirection of flood flows in a flood hazard zone, nor would the project expose people or structures on- or off-site to risk of loss injury, or death involving flooding. Consequently, the project would not risk the release of pollutants due to inundation from flood flows.

Tsunamis are defined as sea waves created by undersea fault movement as a result of an earthquake beneath the sea floor. The California Department of Conservation maintains Tsunami Inundation Maps for most populated areas along the California coastline. The maps are created by combining inundation results for a variety of different seismic source events. As such, the maps represent a worse-case scenario. According to the Tsunami Inundation Map for the Montara Mountain Quadrangle, the

project site is located in a Tsunami Inundation Area.[8] However, given that the project would not include long-term storage, handling, use, or disposal of pollutants on-site, a potential tsunami event at the project site would not result in the release of pollutants.

A seiche is a long-wavelength, large-scale wave action set up in a closed body of water such as a lake or reservoir, whose destructive capacity is not as great as that of tsunamis. Seiches are known to have occurred during earthquakes, but none have been recorded in the Bay Area. The project site is located approximately 3.1 miles west of the nearest closed body of water, San Andreas Lake. As such, the proposed project would not be expected to be at risk of inundation from seiche.

Based on the above, the proposed project would result in a ***less-than-significant*** impact related to the release of pollutants due to inundation from flooding, tsunami, or seiche.

Mitigation Measure(s)

None required.

Cumulative Impacts and Mitigation Measures

As defined in Section 15355 of the CEQA Guidelines, "cumulative impacts" refers to two or more individual effects which, when considered together, are considerable, compound, or increase other environmental impacts. The individual effects may be changes resulting from a single project or a number of separate projects. The cumulative impact from several projects is the change in the environment that results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects.

The cumulative setting for impacts related to hydrology and water quality is the Calera Creek Watershed. Calera Creek drains approximately 1,600 acres via two forks: a main channel to the north and a smaller southern fork.

4.6-7 Cumulative impacts related to hydrology and water quality. Based on the analysis below, the cumulative impact is *less than significant*.

Currently, the Calera Creek Watershed includes existing residential development along Rockaway Beach Avenue and Reina Del Mar Avenue, as well as various other development and open space areas along State Route (SR) 1 in the project vicinity. Generally, the Calera Creek Watershed is largely built-out; however, the potential exists for new development to occur within the watershed. Runoff from new construction sites within the Calera Creek Watershed could carry sediment from erosion of graded or excavated surface materials, leaks or spills from equipment, or inadvertent releases of building products, which could result in water quality degradation if runoff containing such sediment or contaminants should enter receiving waters in sufficient quantities. Furthermore, cumulative development within the watershed has the potential to create new impervious surfaces, thereby increasing the stormwater runoff rates and volumes within Calera Creek.

[8] California Department of Conservation. *Tsunami Inundation Map for Emergency Planning, Montara Mountain Quadrangle.* June 15, 2009.

However, similar to the proposed project, such cumulative development would be subject to the San Mateo County Municipal Regional Stormwater Permit requirements and, thus, would be required to implement construction BMPs to limit discharge of pollutants to downstream waterways. Cumulative development would also be required to comply with the County's C.3. Standards and include appropriate site design measures, source controls, and hydraulically-sized stormwater treatment and flow control measures to limit post-development runoff rates and amounts to below pre-development levels. As such, cumulative impacts to hydrology and water quality would be less than significant.

As discussed above, all project-specific impacts related to hydrology and water quality could be reduced to less-than-significant levels with implementation of mitigation measures and compliance with applicable stormwater regulations. Furthermore, as shown in Table 4.6-2 the proposed project would result in a net reduction in peak flow rates at Calera Creek due to the proposed grading and drainage improvements within the Quarry Parcel.

Based on the above, cumulative impacts to hydrology and water quality would be ***less than significant***.

Mitigation Measure(s)

None required.

4.7 Land Use and Planning

4.7 LAND USE AND PLANNING

4.7.1 INTRODUCTION

The purpose of the Land Use and Planning chapter of the EIR is to identify any significant environmental impacts due to conflicts with applicable land use plans, policies and regulations adopted for the purpose of avoiding environmental effects, including the City of Pacifica General Plan,[1] the City of Pacifica Local Coastal Land Use Plan,[2] and the Rockaway Beach Specific Plan.[3] The reader is referred to the various environmental resource evaluations presented in the other technical chapters of this EIR for a discussion of potential physical/environmental effects that may result from the proposed Reclamation Plan.

4.7.2 EXISTING ENVIRONMENTAL SETTING

This section describes the existing land uses on the project site and within the surrounding area. In addition, the Existing Environmental Setting section describes current zoning and land use designations, as well as the allowed uses within the specified areas.

Project Site Characteristics and Surrounding Land Uses

The project site consists of slightly more than 86 acres across two separated parcels along the coast in the City of Pacifica. The two adjacent parcels are separated by Calera Creek. The 47.13-acre Quarry Parcel on the western side of Calera Creek consists of the former Rockaway Quarry and is dominated by often steep slopes (elevations range from seven feet to 274 feet above mean sea level), non-native plant species and informal accessways. The Quarry Parcel can be separated into five sections: the Hilltop (the high ground on the north edge of the parcel); the East Flank (the hillside comprised mostly of old quarry debris on the east slope of the Quarry Parcel); the Quarry Face (the scarp left by mining in the parcel center, consisting of limestone beds); the Quarry Pit (the bowl remaining in the bottom of the old Quarry); and the Southern Bluff (the old edge of the Quarry on the south adjacent to the ocean).

The 39.09-acre Eastern Parcel is located adjacent to and directly west of State Route (SR) 1 and south of Calera Creek. The topography of the Eastern Parcel is relatively flat, with elevations ranging from approximately 20 feet to 67 feet above mean sea level. The parcel contains natural features such as wetlands and a small ephemeral ditch running through the southern portion of the site. Although the Eastern Parcel was used in support of the Quarry operations and has been significantly disturbed, the parcel has been partially reclaimed by the City of Pacifica as part of construction of the Calera Creek Water Recycling Plant (CCWRP) to the north.

Surrounding existing land uses for the Quarry Parcel and Eastern Parcel include Mori Point (part of the Golden Gate National Recreation Area) and the CCWRP to the north, commercial businesses and single-family residential homes to the east across SR 1, commercial businesses and residences to the south, and the Pacific Ocean to the west, and the Calera Creek Multi-Purpose (CCMP) Trail located between the Quarry Parcel and the Eastern Parcel.

---

1 City of Pacifica. *City of Pacifica General Plan.* Adopted 1980.
2 City of Pacifica. *City of Pacifica Local Coastal Land Use Plan.* March 24, 1980.
3 City of Pacifica. *Rockaway Beach Specific Plan*. Amended 1992.

Land Use and Zoning Designations

The City of Pacifica General Plan designates the project site Special Area. The current zoning designation for the site is Service Commercial with Public Vote Required to Rezone for Residential Use (C-3X) with a Hillside Preservation District (HPD) overlay. Table 4.7-1 below provides a summary of the current land use and zoning designations of the properties adjacent to the project site.

Table 4.7-1
Summary of Adjacent General Plan Land Use and Zoning Designations

Relationship to Project Site	Present Land Use	Land Use Designation	Zoning Designation
North	Mori Point	Special Area	Planned Development (P-D)
	Calera Creek Water Recycling Plant	Special Area	P-D
East	Single-Family Residences	Low Density Residential	Single-Family Residential (R-1/B-10)
			Multi-family Residential (R-3)
	Commercial	Commercial	Neighborhood Commercial (C-1)
			Community Commercial (C-2)
South	Commercial	Commercial	Commercial Recreation (C-R)
			C-1
	Single-Family Residences	Commercial	C-1
	Rockaway Beach	Greenbelt	C-R
West	Pacific Ocean	N/A	N/A

Land Use Designation Definitions

The following sections provide definitions of the General Plan land use designations noted above, as summarized from the City of Pacifica General Plan.

Special Area

The Special Area land use designation describes areas within which special physical or economic problems exist and for which more than one use would be acceptable as defined by the General Plan and the findings of an EIR, site plan, and other required evaluation.

Low Density Residential

The Low Density Residential land use designation is intended for single-family residential uses with an average of three to nine dwelling units per acre (du/acre). The specific density and type of units is determined by site conditions, including slope, geology, soils, access, availability of utilities, public safety, visibility, and environmental sensitivity.

Commercial

The Commercial land use designation typically indicates the variety of potential commercial uses the City might attract, including visitor-serving commercial, retail commercial, office, heavy commercial, and light industrial. Mixed residential and commercial uses are allowed when the dwelling units are located above commercial uses. Intensity of residential development is regulated with a minimum of 2,000 square feet (sf) of lot area per unit.

Greenbelt

The Greenbelt land use designation is used to identify publicly- or privately-owned pieces of land that are not intended for development. Per the General Plan, greenbelt areas may include, but not be limited to, the following:

- Land which is physically unsuitable for development due to geotechnical hazards, excessive steepness, or other environmental constraints;
- Areas to remain undeveloped as a result of density transfer or trade off;
- Areas covered by open space, recreation areas, or scenic easements;
- Open areas providing a physical and visual buffer between developed or open areas; and
- Open space required as mitigation for environmental impacts.

Zoning Designation Definitions

The following sections provide definitions of the zoning designations noted above, as summarized from Title 9, Chapter 4 of the City's Municipal Code:

Service Commercial

Per Section 9-4.1201 of the City's Municipal Code, the C-3 zoning designation permits land uses that may include, but not be limited to, the sale, lease, service, and maintenance of automobiles and related equipment, as well as warehouses, storage facilities, shops, car washes, service stations, and retail sales. The project site additionally has a requirement for a public vote to rezone the site to allow residential development.

Planned Development

Per Section 9-4.2202 of the City's Municipal Code, the P-D district is intended to allow for diversity in the relationships of various buildings, structures, and open spaces in planned building groups, while ensuring compliance with district regulations and City zoning provisions. Standards related to public health, safety, and general welfare shall be observed without unduly inhibiting the advantage of large-scale site planning for residential, commercial, or industrial purposes. The amenities and compatibilities of the P-D district shall be ensured through the adoption of a development plan and specific plans showing proper orientation, desirable design character, and compatible land uses. To this end, the use of the P-D district is encouraged.

Single-Family Residential

Per Section 9-4.401 of the City's Municipal Code, the R-1 zoning designation permits one single-family dwelling per lot, as well as other compatible uses. Other compatible uses include accessory buildings, child day care facilities, special care facilities, indoor and outdoor cannabis cultivation facilities, as well as other conditionally allowed uses. The B-10 combining lot site district indicates a minimum lot size of five acres per dwelling unit.

Multi-Family Residential

Per Section 9-4.601 of the City's Municipal Code, the R-3 zoning designation allows for duplexes and multi-family dwellings as permitted uses. Similar to the R-1 zoning designation, the R-3 zoning designation allows accessory buildings, child day care facilities, and special care facilities, as well as other conditionally allowed uses.

Neighborhood Commercial

Per Section 9-4.1001 of the City's Municipal Code, the C-1 zoning designation permits retail uses, including but not limited to, food markets, drug stores, liquor stores and retail restaurants. Personal service uses include professional offices, dry cleaning establishments, beauty shops, and other administrative offices. Residential development may occur at a density of up to one dwelling unit per 2,000 square feet of site area, above the ground floor, in the same building as a commercial use.

Community Commercial

Per Section 9-4.1101 of the City's Municipal Code, the C-2 zoning designation permits retail stores, restaurants, shops, personal and business service establishments, including financial institutions, and offices. Residential development may occur at a density of up to one dwelling unit per 2,000 square feet of site area, above the ground floor, in the same building as a commercial use.

Commercial Recreation

Per Section 9-4.1501 of the City's Municipal Code, the permitted uses within the C-R zone district are the same as those permitted for the C-2 zone district.

4.7.3 REGULATORY CONTEXT

Applicable federal laws or regulations pertaining to land use and planning for mining/quarry operations on private land do not exist. The existing State and local laws and regulations applicable to the proposed project are listed below.

State Regulations

At the State level, the Surface Mining and Reclamation Act of 1975 (SMARA, Public Resources Code, Sections 2710-2796) provides a comprehensive surface mining and reclamation policy with the regulation of surface mining operations to assure that adverse environmental impacts are minimized and mined lands are reclaimed to a usable condition. In addition, SMARA encourages the production, conservation, and protection of the State's mineral resources. SMARA Chapter 9, Division 2 of the Public Resources Code, requires the State Mining and Geology Board to adopt State policy for the reclamation of mined lands and the conservation of mineral resources. The applicable SMARA regulations adopted for the purpose of avoiding or mitigating environmental effects are presented below in Table 4.7-2.

Local Regulations

Specific goals and policies from the City of Pacifica General Plan and Local Coastal Land Use Plan are listed in Table 4.7-2 at the end of this chapter.

4.7.4 IMPACTS AND MITIGATION MEASURES

The following section describes the standards of significance and methodology used to analyze the proposed project's potential impacts related to land use and planning. A discussion of the project's impacts, as well as mitigation measures where necessary, are also presented.

Standards of Significance

Consistent with Appendix G of the CEQA Guidelines, a significant impact would occur if the proposed project would result in any of the following:

- Physically divide an established community; or
- 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.

Method of Analysis

The section below evaluates the proposed project for consistency with the City's adopted plans, policies, and zoning regulations. Physical environmental impacts resulting from implementation of the proposed project are discussed in the environmental resource sections of the various technical chapters within this EIR. The following discussion complies with Section 15125(d) of the CEQA Guidelines, which requires EIRs to discuss inconsistencies with general plans and regional plans as part of the environmental setting. The ultimate determination of consistency rests with the City Council. Consistency with policies and regulations specific to environmental issue areas is also evaluated through each of the other technical chapters of this EIR.

Project-Specific Impacts and Mitigation Measures

The following discussion of impacts is based on implementation of the proposed project in comparison to existing conditions and the standards of significance presented above.

4.7-1 Physically divide an established community. Based on the analysis below, the impact is *less than significant*.

A project risks dividing an established community if the project would introduce infrastructure or alter land use so as to change the land use conditions in the surrounding community, or isolate an existing land use.

The proposed project would include reclamation of the project site consistent with the requirements of SMARA. The majority of the reclamation activity would occur on the westernmost Quarry Parcel, with minor site improvements such as grading for access roads and through truck traffic occurring on the Eastern Parcel. The project would involve earthwork to regrade the over steepened slopes of the former Quarry into a safe condition, installation of new drainage infrastructure, and construction of new unpaved trails. The proposed site improvements would not alter the on-site uses relative to existing conditions – the site would continue to provide recreational trails for public use. Given that on-site uses would not be altered, and the CCMP trail would continue to provide connectivity between the areas to the north and south of the project site, the proposed project would not isolate an existing land use. Therefore, the proposed project would not physically divide an established community, and a ***less-than-significant*** impact would occur.

Mitigation Measure(s)

None required.

4.7-2 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. Based on the analysis below, the impact is *less than significant*.

The General Plan Guidelines published by the State Office of Planning and Research defines consistency as, "An action, program, or project is consistent with the general plan if, considering all its aspects, it will further the objectives and policies of the general plan and not obstruct their attainment." Therefore, the standard for analysis used in this EIR is based on general agreement with the policy language and furtherance of the policy intent (as determined by a review of the policy context). The determination that the project is consistent or inconsistent with the City of Pacifica General Plan policies, the Local Coastal Land Use Plan, or other plans and policies is ultimately the decision of the City of Pacifica City Council. Furthermore, although CEQA analysis may identify some areas of general consistency with City policies, the City has the ability to impose additional requirements or conditions of approval on a project, at the time of its approval, to bring a project into more complete conformance with existing policies.

As noted previously, the City's General Plan designates both parcels of the project site as Special Area and the sites are zoned C-3X with an HPD overlay. The proposed project would not alter the site's existing General Plan land use or zoning designation. As shown in Table 4.7-2, at the end of this chapter, the proposed project would be generally consistent with the applicable policies outlined in the 1980 General Plan, the Local Coastal Land Use Plan, and SMARA. The project also would not change the use of the site from its current use as undeveloped land with various public access trails. Thus, the project would not cause or increase any conflict with the 1980 General Plan, the Local Coastal Land Use Plan, and SMARA.

Per Section 9-2.05 of the City's Municipal Code, the project would require approval of a Quarry Use Permit. In addition, the proposed project would require approval of tree removal of 16 heritage trees, pursuant to Section 4-12.05, and could potentially require authorization for removal of 26 trees that qualify as "trees" under the City's logging operations ordinances (Ordinance Nos. 636-C.S. and 673-C.S.). The project would also require several approvals related to the City's HPD (Hillside Preservation District) and P-D (Planned Development) zoning provisions, which include a Variance pursuant to PMC Section 9-4.3404 from the HPD land coverage controls included in PMC Section 9-4.2257, due to the extent of grading activities associated with the parcel; Rezoning to the P-D zoning district, pursuant to PMC Section 9-4.2256, due to the site's location within the HPD overlay zoning district; Development Plan approval, pursuant to PMC Section 9-4.2203, as required by P-D zoning district provisions to establish permitted use(s) of the project site; and Specific Plan approval, pursuant to PMC Section 9-4.2212, as required by P-D zoning district provisions prior to issuance of a grading permit. Approval of the Reclamation Plan through approval of a Quarry Use Permit, Heritage Tree removal authorization, Variance, Specific Plan, and logging operation authorization are considered discretionary actions subject to approval by the City of Pacifica Planning Commission. The Rezoning and Development Plan are also discretionary actions that require a recommendation by the Planning Commission to the City Council and final City Council approval as legislative entitlements. Should the Planning Commission approve the requested permit entitlements, and should the City Council approve the requested legislative entitlements (Rezoning and Development Plan), the proposed project would be rendered consistent with the City's Municipal Code.

Conclusion

Based on the above, and as shown in Table 4.7-2, the proposed project would not cause a significant environmental impact due to conflicts with a land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect, and a ***less-than-significant*** impact would occur.

Mitigation Measure(s)

None required.

Cumulative Impacts and Mitigation Measures

As defined in Section 15355 of the CEQA Guidelines, "cumulative impacts" refers to two or more individual effects which, when considered together, are considerable, compound, or increase other environmental impacts. The individual effects may be changes resulting from a single project or a number of separate projects. The cumulative impact from several projects is the change in the environment that results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Additional detail regarding the cumulative setting is included in Chapter 5, Statutorily Required Sections, of this EIR.

4.7-3 Cause a significant cumulative 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. Based on the analysis below, the cumulative impact is *less than significant*.

Typically, a cumulative analysis of land use is not included because land use plans or policies and zoning generally do not combine to result in cumulative impacts. The determination of significance for impacts related to such issues is whether the project would cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. Such a conflict is site-specific, and, thus, is typically only addressed on a project-by-project basis. As shown in Table 4.7-2 of this chapter, the proposed project would be generally consistent with relevant policies in the City of Pacifica General Plan and the Local Coastal Land Use Plan for the purpose of avoiding or mitigating an environmental effect.

Additionally, the General Plan inherently serves as a cumulative analysis. Because the proposed project would not change land use designations established by the General Plan or the current use of the site, the proposed project would result in a ***less-than-significant*** cumulative 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.

Mitigation Measure(s)

None required.

Table 4.7-2
Applicable Land Use Policies Discussion

Policy		Project Consistency
City of Pacifica General Plan		
Circulation Element		
Policy 9	Develop safe and efficient bicycle, hiking, equestrian and pedestrian access within Pacifica and to local points of interest.	The proposed project includes several measures to improve the safety, quality, and appearance of the hiking trails on the project site. For example, a new trail, known as the Western Trail, would be constructed along the southern bluff to connect to existing trails which lead to Mori Point, a major natural promontory. Furthermore, the proposed project would improve existing trails within the project site. Because the proposed project would include the construction of new public trails and the improvement of existing trails within the site, the project would be generally consistent with this policy.
Policy 10	Provide recreational access in keeping with the recreational area's natural environment and the quality of the recreational experience offered.	The proposed project would include improvements to existing on-site hiking trails and construction of new trails. By extending and improving the existing hiking trails, the on-site recreational facilities would be enhanced. Thus, the proposed project would be consistent with this policy.
Conservation Element		
Policy 1	Conserve trees and encourage native forestation.	The proposed project would require removal of 16 heritage trees. As discussed in Chapter 4.3, Biological Resources, of this EIR, implementation of Mitigation Measure 4.3-6, which would require authorization to remove the heritage trees to be obtained from the City's Planning Commission. The same would be required to authorize a logging operation. The identified mitigation measures would be sufficient to reduce impacts related to tree removal to less-than-significant level. The mitigation measures would also require replacement plantings of native tree species. The project includes the revegetation of the project site to restore and blend native vegetation into the surrounding landscape, including the reclamation of disturbed lands to a self-sustaining community of native species. After regrading, revegetation would be designed to meet the post-extractive and unmanaged land use goals of the Revegetation Plan and stabilize the surface against the effects of long-term erosion.

Table 4.7-2
Applicable Land Use Policies Discussion

Policy		Project Consistency
		Additionally, a Tree Protection Plan, which outlines avoidance and minimization measures to protect heritage trees proposed for retention directly outside the project site, would be approved by the City during the project review process, if the project is approved. Based on the above, the proposed project would be generally consistent with this policy.
Policy 2	Require the protection and conservation of indigenous rare and endangered species.	As discussed in Chapter 4.3, Biological Resources, of this EIR, several special-status species are known to occur in the project area and could inhabit the project site. Implementation of Mitigation Measures 4.3-1(a) through 4.3-1(c) and 4.3-2(a) through 4.3-2(k) ensure that potential impacts to special-status species are reduced to a less-than-significant level. As such, the proposed project would be generally consistent with this policy.
Policy 3	Protect significant trees of neighborhood or area importance and encourage planting of appropriate trees and vegetation.	See discussion under Conservation Element, Policy 1, above.
Policy 4	Protect and conserve the coastal environment, sand dunes, habitats, unique and endangered species and other natural resources and features which contribute to the coastal character.	As discussed in Chapter 4.3, Biological Resources, of this EIR, a total of 0.25-acre of wetlands would be graded and filled within the Quarry Parcel. In order to mitigate for the loss of wetlands, a 4-to-1 on-site wetland replacement, including a complex of four tiered seasonal wetlands totaling 1.55 acres as well as a 0.20-acre bentonite clay-lines seasonal wetland pond , would be created on the Eastern Parcel. In addition, pursuant to Mitigation Measure 4.3-5(b), a wetland maintenance and monitoring program shall be adopted in coordination with the City's Planning Department to ensure that newly created wetlands maintain long-term functionality. To comply with Mitigation Measure 4.3-5(a), a Section 404 nationwide permit from the United States Army Corps of Engineers (USACE), a Section 401 water quality certification from the Regional Water Quality Control Board (RWQCB), and a Coastal Development Permit from the California Coastal Commission must be obtained in order to proceed with the proposed impacts to seasonal wetlands.

Table 4.7-2
Applicable Land Use Policies Discussion

Policy		Project Consistency
		Based on the above, the proposed project would be generally consistent with this policy.
Policy 5	Local year-round creeks and their riparian habitats shall be protected.	See discussion under Conservation Element, Policy 4, above.
Open Space Element		
Policy 1	Retain open space which preserves natural resources, protects visual amenities, prevents inappropriate development, provides for the managed use of resources, and protects the public health and safety.	As discussed in Chapter 4.1, Aesthetics, of this EIR, views of the project site from SR 1 would be enhanced by the proposed grading and revegetation activities within the project site. Furthermore, reclamation activities would return the Quarry Parcel to a more natural state and improve the visual quality of the site. All project elements would comply with applicable guidelines and regulations contained in the City's General Plan and Municipal Code. The proposed project would improve the safety of on-site public trails and would allow for continued use access to, and preservation of, natural resources within the project site. As such, the proposed project would be consistent with this policy.
Policy 4	Promote communitywide links to open space and recreation facilities which do not abuse the open space resource or threaten public safety.	See discussion under Open Space Element, Policy 1, above. Additionally, the proposed project would improve the existing Eastern Trail, with reclamation providing a more-level slope from the Calera Creek crossing to the Hilltop area. From there, the improved Eastern Trail would connect to several existing coastal trails that continue to Mori Point. As such, the proposed project would be consistent with this policy's intention to promote communitywide links to open space and recreation facilities.
Historic Preservation Element		
Policy 1	Conserve historic and cultural sites and structurers which define the past and present character of Pacifica.	As discussed in Chapter 4.4, Cultural and Tribal Cultural Resources, of this EIR, the project site does not contain any existing historic buildings or other structures that could be considered historic. However, the project site does contain two known archaeological resources, located near Reina Del Mar Avenue. As noted therein, the project would not include any ground-disturbing activity within the vicinity of either resources, and, thus, would not cause a substantial adverse change in the significance of a known archaeological resource. While unlikely, the potential exists for minor excavation activities associated with the proposed project to uncover unknown archaeological resources, paleontological resources, or tribal cultural resources. Implementation

Table 4.7-2
Applicable Land Use Policies Discussion

Policy		Project Consistency
		of Mitigation Measure 4.4-2 would be sufficient to reduce potential impacts to less-than-significant levels. As such, the proposed project would generally consistent with this policy.
Community Design Element		
Policy 3	Protect the City's irreplaceable scenic and visual amenities.	See discussion under Open Space Element, Policy 1, above.
Community Facilities Element		
Policy 2	Provide recreational activities and facilities consistent with user financial and environmental constraints.	The proposed project would include improvements to the existing trail system within the project site, and would retain the existing CCMP Trail alignment through the project site. Thus, the proposed project would be consistent with this policy.
Land Use Element		
Policy 6	Local access roads and trails may be allowed on visually prominent ridgelines provided they follow contours, minimize grading, and are unobtrusive in their design.	The project would involve earthwork to regrade the over steepened slopes of the former Quarry into a safe condition, installation of new drainage infrastructure, and construction of new unpaved trails. While substantial grading activities would be required, the proposed grading would serve to return the topography of the Quarry Parcel closer to the land's pre-mined site. Upon completion of grading activities, the project would implement several measures to improve the safety, quality, and appearance of the internal hiking trails within the site. For example, the existing Eastern Trail would be improved to provide a new, safer surface for walking and a more level slope from the Calera Creek Crossing to Hilltop. The improved trail would also connect to several existing coastal trails and would continue to Mori Point. Native vegetation and landscaping would also be included. A new trail, known as the Western Trail, would be constructed from the Calera Creek crossing to the west, along the Southern Bluff, and then eventually reach existing trails leading to Mori Point. The trail would be set back from the bluff to avoid potentially erosive areas and to prevent potential hazards. The new trails would be 12 feet wide and constructed with 12 inches of aggregate base and four inches of decomposed granite. Based on the above, the proposed project would be consistent with this policy.
Policy 8	Land use and development shall protect and enhance the individual character of each neighborhood.	As part of the proposed project, the Reclamation Plan would include trails improvements, grading activities, drainage reclamation, and revegetation of the project site. The aforementioned activities would

Table 4.7-2
Applicable Land Use Policies Discussion

Policy		Project Consistency
		enhance the visual quality of the site and would retain the existing visual character of the project area. Based on the above, the proposed project would be consistent with this policy.
Rockaway Beach Specific Plan		
Land Use and Development		
Objective 7	Provide for cultural, social and recreational amenities and activities which enhance future vitality of the area.	See discussion under Community Facilities Element, Policy 2, above.
Objective 8	Encourage public access and recreation activities for visitors consistent with the adopted Coastal Land Use Plan.	See discussions under Open Space Element, Policies 1 and 4, above.
Circulation and Parking		
Objective 3	Achieve automobile and pedestrian connections between the Rockaway Beach community and future development on the quarry site.	See discussion under Circulation Element, Policy 9, above.
Objective 6	Provide for a continuous bikeway and walkway system which will connect this area with adjacent coastal areas.	See discussions under Circulation Element, Policies 9 and 10, above.
Physical Appearance		
Objective 2	Enhance opportunities for views of the ocean and natural coastal formation.	As discussed in Chapter 4.1, Aesthetics, of this EIR, the proposed project would not include development that would result in the obstruction of views of the Pacific Ocean or any visual resources in the project area. Furthermore, the proposed reclamation activities would enhance the visual quality of the project site. Reclamation activities would include grading to respond to the site's geotechnical issues and create safe slopes and safe access. Other components would include trail improvements and revegetation of the site. Trail improvements would allow visitors access to enjoy the visual resources of the area, while revegetation would enhance the overall visual character of the project site. Therefore, the proposed project would be generally consistent with this policy. In addition, see discussions under Conservation Element, Policy 4, and Open Space Element, Policy 1, above.
Local Coastal Land Use Plan		
Policy 1	Maximum access shall be conspicuously posted and recreational opportunities shall be provided for all the	See discussions under Circulation Element, Policies 9 and 10, and Open Space Element, Policies 1 and 4, above.

Table 4.7-2
Applicable Land Use Policies Discussion

Policy		Project Consistency
	people consistent with public safety needs and the need to protect public rights, rights of property owners, and natural resource areas from overuse. (O, SS, CN, OS)	
Policy 5	Lower cost visitor and recreational facilities and housing opportunities for persons of low and moderate income shall be protected, encouraged, and, where feasible, provided. Developments providing public recreational opportunities are preferred. New housing in the Coastal Zone shall be developed in conformity with the standards, policies, and goals of the local housing elements adopted in accordance with the requirements of subdivision (c) of Section 65302 of the Government Code. (H, LU)	See discussions under Open Space Element, Policies 1 and 4, above.
Policy 6	Coastal areas suited for water-oriented recreational activities that cannot readily be provided at inland water areas shall be protected for such uses.	See discussions under Open Space Element, Policies 1 and 4, above.
Policy 7	Oceanfront land suitable for recreational use shall be protected for recreational use and development unless present and foreseeable future demand for public or commercial recreational activities that could be accommodated on the property is already adequately provided for in the area. (LU)	See discussions under Circulation Element, Policies 9 and 10, and Open Space Element, Policies 1 and 4, above.
Policy 8	The use of private lands suitable for visitor-serving commercial recreational facilities designed to enhance public opportunities for coastal recreation shall have priority over private residential, general industrial, or general commercial development, but not over agriculture or coastal-dependent industry. (H, LU)	As discussed in Chapter 4.9, Parks and Recreation, of this EIR, the site includes multiple trails which contain informational signs about the trails, posted at the trailheads and benches located along the trails. Hazard signs warning of steep slopes would be placed along the coastal bluffs. Although the proposed project does not include visitor-oriented commercial and hospitality development, the proposed project would not preclude future development of this type to occur. Thus, the proposed project would be generally consistent with this policy. In addition, see discussions under Circulation Element, Policies 9 and 10, and Open Space Element, Policies 1 and 4, above.
Policy 9	Upland areas necessary to support coastal recreational uses shall be reserved for such uses, where feasible. (LU)	See discussions under Open Space Element, Policies 1 and 4, above.

Table 4.7-2
Applicable Land Use Policies Discussion

Policy		Project Consistency
Policy 11	Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic. significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes. (CN, LU)	As discussed in Chapter 4.6, Hydrology and Water Quality, of this EIR, the proposed Reclamation Plan would comply with all applicable measures set forth by the San Mateo County Municipal Regional Stormwater Permit and the Construction General Permit. Various erosion control measures, revegetation plans, and other measures designed to ensure compliance with State Water Resources Control Board and RWQCB regulations related to water quality are identified in the Reclamation Plan. Measures are included that are designed to protect the surface and groundwater quality, as well as prevent siltation of downslope areas such as Calera Creek. Compliance with the San Mateo County Municipal Regional Stormwater Permit, the Construction General Permit, and proposed Reclamation Plan would require implementation of stormwater BMPs and, consequently, the proposed project would not adversely impact water quality through the disturbance of on-site soils and subsequent runoff. Following project implementation, the Quarry site would continue to serve as a recreational amenity. Therefore, implementation and operation of the proposed project would not result in substantial adverse effects to the biological productivity of coastal waters in the project vicinity.
Policy 12	The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects· of waste water discharge and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial· interference with surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams. (CN, CF, LU)	See the discussions under Conservation Element, Policy 4, and Local Coastal Land Use Plan, Policy 11, above.
Policy 14	a) The diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted in accordance with other applicable provisions of this policy, where there is no feasible less	See the discussion under Conservation Element, Policy 4, above.

Table 4.7-2
Applicable Land Use Policies Discussion

Policy	Project Consistency
environmentally damaging alternative and where feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to the following: 1) New or expanded port, energy, and coastal-dependent industrial facilities, including commercial fishing facilities. 2) Maintaining existing, or restoring previously dredged, depths in existing navigational channels, turning basins, vessel berthing and mooring areas, and boat launching ramps. 3) In wetland areas only, entrance channels for new or expanded boating facilities; and in a degraded wetland, identified by the Department of Fish and Game for boating facilities if, in conjunction with such boating facilities, a substantial portion of degraded wetland is restored and maintained as a biologically productive wetland; provided, however, that in no event shall the size of the wetland area used for such boating facility, including berthing space, turning basins, necessary navigation channels, and any necessary support service facilities, be greater than 25 percent of the total wetland area to be restored. 4) In open coastal waters, other than wetlands, including streams, estuaries, and lakes, new or expanded boating facilities. 5) Incidental public services purposes, including, but not limited to, burying cables and pipes or inspection of piers and maintenance of existing intake and outfall lines.	

Table 4.7-2
Applicable Land Use Policies Discussion

Policy		Project Consistency
	6) Mineral extraction, including sand for restoring beaches, except in environmentally sensitive areas. 7) Restoration purposes. 8) Nature study, aquaculture, or similar resource-dependent activities. b) Dredging and spoils disposal shall be planned and carried out to avoid significant disruption to marine and wildlife habitats and water circulation. Dredge spoils suitable for beach replenishment should be transported for such purposes to appropriate beaches, or into suitable longshore current systems. c) In addition to the other provisions of this section, diking, filling, or dredging in existing estuaries and wetlands shall maintain or enhance the functional capacity of the wetland or estuary. Any alteration of coastal wetlands identified by the Department of·Fish and Game shall be limited to very minor incidental public facilities, restorative measures and nature study. (CN, CF, OS, LU)	
Policy 18	Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on such resources shall be allowed within such areas. Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade such areas, and shall be compatible with the continuance of such habitat areas. (CN, OS, CO, LU)	See the discussion under Conservation Element, Policy 4, above.
Policy 22	Where development would adversely impact archeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required. (OS, HS)	As discussed in Chapter 4.4, Cultural and Tribal Cultural Resources, and Chapter 4.5, Geology and Soils/Mineral Resources, of this EIR, the proposed project would be required to comply with various mitigation measures to ensure potential impacts to unknown archeological and

Table 4.7-2
Applicable Land Use Policies Discussion

Policy		Project Consistency
		paleontological resources do not occur. Mitigation Measures 4.4-2(a) and (b) include requirements addressing the potential discovery of prehistoric or historic artifacts as well as human remains, including the cessation of all work in the vicinity of the discovery until the resource in question is properly evaluated in accordance with the applicable requirements set forth in CEQA Guidelines Section 15064.5. Additionally, the requirements established by Mitigation Measures 4.4-2(a) and (b) must be included via notation on all project improvement plans prior to the issuance of grading permits, to the satisfaction of the Planning Director. Similarly, Mitigation Measure 4.5-5 includes the requirement that all ground-disturbing activities must halt in the event that a paleontological resource is discovered until a qualified paleontologist has evaluated the discovery for the purpose of recording, protecting, or curating the discovery as appropriate. Therefore, the proposed project would be consistent with Local Coastal Land Use Plan Policy 22.
Policy 24	The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public. importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural landforms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas. New development in highly scenic areas -such. as those designated in the California Coastline Preservation and Recreation Plan, prepared by the Department of Parks and Recreation and by local government, shall be subordinate to the character of its setting. (CN, OS, CD, LU)	See discussions under Conservation Element, Policy 4, and Open Space Element, Policy 1, above.
Surface Mining and Reclamation Act		
Section 3706 (a) Surface mining and reclamation activities shall be conducted to protect on-site and downstream beneficial uses of water in accordance with the Porter-Cologne Water Quality Control Act,		As discussed in Chapter 4.6, Hydrology and Water Quality, of this EIR, the proposed project would not result in any significant impacts related to water quality, groundwater recharge, or discharge of sediment to downstream waterways. In addition, as discussed in Chapter 4.5,

Table 4.7-2
Applicable Land Use Policies Discussion

Policy	Project Consistency
Water Code section 13000, et seq., and the Federal Clean Water Act, 33 U.S.C. section 1251, et seq. (b) The quality of water, recharge potential, and storage capacity of ground water aquifers which are the source of water for domestic, agricultural, or other uses dependent on the water, shall not be diminished, except as allowed in the approved reclamation plan. (c) Erosion and sedimentation shall be controlled during all phases of construction, operation, reclamation, and closure of a surface mining operation to minimize siltation of lakes and watercourses, as required by the Regional Water Quality Control Board or the State Water Resources Control Board. (d) Surface runoff and drainage from surface mining activities shall be controlled by berms, silt fences, sediment ponds, revegetation, hay bales, or other erosion control measures, to ensure that surrounding land and water resources are protected from erosion, gullying, sedimentation and contamination. Erosion control methods shall be designed to handle runoff from not less than the 20 year/1 hour intensity storm event. (e) Where natural drainages are covered, restricted, rerouted, or otherwise impacted by surface mining activities, mitigating alternatives shall be proposed and specifically approved in the reclamation plan to assure that runoff shall not cause increased erosion or sedimentation.	Geology and Soils/Mineral Resources of this EIR, the proposed project would not result in substantial erosion. Thus, the project would be consistent with this regulation.
Section 3709 (a) All equipment, supplies and other materials shall be stored in designated areas (as shown in the approved reclamation plan). All waste shall be disposed of in accordance with state and local health and safety ordinances. (b) All buildings, structures, and equipment shall be dismantled and removed prior to final mine closure except those buildings, structures, and equipment approved in the reclamation plan as necessary for the end use.	All equipment and materials would be stored within the site interior during reclamation activities. The project applicant would comply with all applicable regulations related to waste disposal. After reclamation has been completed on the project site, all equipment would be removed from the site. Thus, the proposed project would be consistent with this regulation.
Section 3710 (a) Surface and groundwater shall be protected from siltation and pollutants which may diminish water quality as required by the	See Chapter 4.6, Hydrology and Water Quality. The proposed project would not result in significant impacts related to surface water or

Table 4.7-2
Applicable Land Use Policies Discussion

Policy	Project Consistency
Federal Clean Water Act, sections 301 et seq. (33 U.S.C. section 1311), 404 et seq. (33 U.S.C. section 1344), the Porter-Cologne Act, section 13000 et seq., County anti-siltation ordinances, the Regional Water Quality Control Board or the State Water Resources Control Board.	groundwater quality. Thus, the project would be consistent with this regulation.
California Coastal Commission	
Coastal Resources Planning and Management Policies [PRC 30200-30265.5]	
Section 30210 In carrying out the requirement of Section 4 of Article X of the California Constitution, maximum access, which shall be conspicuously posted, and recreational opportunities shall be provided for all the people consistent with public safety needs and the need to protect public rights, rights of private property owners, and natural resource areas from overuse.	See discussions under Circulation Element, Policies 9 and 10, and Open Space Element, Policies 1 and 4, above.
Section 30211 Development shall not interfere with the public's right of access to the sea where acquired through use or legislative authorization, including, but not limited to, the use of dry sand and rocky coastal beaches to the first line of terrestrial vegetation.	See discussions under Open Space Element, Policies 1 and 4, above.
Section 30212.5 Wherever appropriate and feasible, public facilities, including parking areas or facilities, shall be distributed throughout an area so as to mitigate against the impacts, social and otherwise, of overcrowding or overuse by the public of any single area.	See discussions under Open Space Element, Policies 1 and 4, above.
Section 30223 Upland areas necessary to support coastal recreational uses shall be reserved for such uses, where feasible.	See discussions under Open Space Element, Policies 1 and 4, above.
Section 30240 (a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas. (b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those	See the discussion under Conservation Element, Policy 4, above.

Table 4.7-2
Applicable Land Use Policies Discussion

Policy	Project Consistency
areas, and shall be compatible with the continuance of those habitat and recreation areas.	
Section 30244 Where development would adversely impact archaeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required.	See discussion under Local Coastal Land Use Plan, Policy 22, above.

4.8 Noise

4.8 NOISE

4.8.1 INTRODUCTION

The Noise chapter of the EIR describes the existing noise environment in the project vicinity, and evaluates potential noise and vibration impacts associated with implementation of the proposed project. The method by which the potential impacts are analyzed is discussed, followed by the identification of potential impacts and the recommended mitigation measures designed to reduce significant noise and vibration impacts to less-than-significant levels, if required. The analysis presented herein is primarily based on information sourced from the City of Pacifica General Plan.[1]

4.8.2 EXISTING ENVIRONMENTAL SETTING

The Existing Environmental Setting section provides background information on noise and vibration, a discussion of acoustical terminology and the effects of noise on people, existing sensitive receptors in the project vicinity, existing sources and noise levels in the project vicinity, and groundborne vibration.

Fundamentals of Acoustics

Decibels (dB) are logarithmic units that conveniently compare the wide range of sound intensities to which the human ear is sensitive. To describe noise environments and to assess impacts on noise-sensitive areas, a frequency weighting measure, which simulates human perception, is commonly used. A-weighting of sound levels has been found to best reflect the human ear's reduced sensitivity to low frequencies, and correlates well with human perceptions of the annoying aspects of noise.

Several time-averaged scales represent noise environments and consequences of human activities. The most commonly used noise descriptors are the equivalent A-weighted sound level over a given time period (L_{eq}); average day-night 24-hour average sound level (L_{dn}) with a nighttime increase of 10 dB to account for sensitivity to noise during the nighttime; community noise equivalent level (CNEL), also a 24-hour average that includes both an evening and a nighttime sensitivity weighting; and L_{max}, which refers to the maximum noise level over a given time period.

Stationary sources of noise, including construction equipment, lessen at a rate of 6.0 to 7.5 dB per doubling of distance from the source depending on ground absorption. Soft sites attenuate at 7.5 dB per doubling, as such sites have an absorptive ground surface such as soft dirt, grass, or scattered bushes and trees. Hard sites have reflective surfaces (e.g., parking lots or smooth bodies of water) and therefore have less attenuation (6.0 dB per doubling). A street or roadway with moving vehicles (known as a "line" source), would typically attenuate at a lower rate, approximately 3.0 to 4.5 dB each time the distance doubles from the source, which also depends on ground absorption. Physical barriers located between a noise source and the noise receptor, such as berms or sound walls, will increase the attenuation that occurs by distance alone.

[1] City of Pacifica. *City of Pacifica General Plan.* Adopted 1980.

Existing Sensitive Receptors and Noise Environment

Certain land uses are more sensitive to ambient noise levels than others due to the amount of noise exposure (in terms of both exposure time and shielding from noise sources) and the type of activities typically involved. Noise sensitive land uses typically include residences, schools, child care centers, hospitals, long-term health care facilities, convalescent centers, retirement homes, and recreation areas. Sensitive receptors in the project vicinity include residences located south of the project site, across San Marlo Way, a church (Our Savior's Lutheran Church) located east of the site across State Route (SR) 1, and the single-family residences and the Vallemar Elementary School, located approximately 400 feet and 1,000 feet to the east, respectively, of the SR 1/Reina Del Mar Avenue intersection. The existing noise environment in the project area is defined primarily by vehicle traffic on SR 1 to the east of the site. It should be noted that noise from the project site could be experienced by public visitors to Mori Point, located to the north of the project site, and by users of the Calera Creek Multi-Purpose (CCMP) Trail. However, such users would not be considered sensitive receptors as defined above, as members of the public visiting Mori Point or the CCMP would have the choice of relocating to a different recreational area in the City to avoid noise generated from the project site, whereas a permanent land use, such as a residence or school, would not have such an option.

Vibration

While vibration is similar to noise, both involving a source, a transmission path, and a receiver, vibration differs from noise because noise is generally considered to be pressure waves transmitted through air, whereas vibration usually consists of the excitation of a structure or surface. As with noise, vibration consists of an amplitude and frequency.

A person's perception to the vibration depends on their individual sensitivity to vibration, as well as the amplitude and frequency of the source and the response of the system which is vibrating. Vibration can be measured in terms of acceleration, velocity, or displacement. A common practice is to monitor vibration levels in terms of peak particle velocities (PPV) in inches per second (in/sec). Standards pertaining to perception as well as damage to structures have been developed for vibration levels defined in terms of peak particle velocities.

Table 4.8-1, below, presented the typical effects of various vibration levels on people and buildings.

4.8.3 REGULATORY CONTEXT

Applicable federal laws or regulations pertaining to noise or vibration do not exist. The existing State and local laws and regulations applicable to the proposed project are listed below.

State Regulations

The following are the State environmental laws and policies relevant to noise.

California Vehicle Code

The California Vehicle Code Section 27000(d)(1) provides:

> A construction vehicle with a gross vehicle weight rating (GVWR) in excess of 14,000 pounds that operates at, or transports construction or industrial materials to and from, a mine or construction site, or both, shall be equipped with an automatic backup audible alarm that sounds on backing and is capable of emitting a sound audible under normal conditions from a distance of not less than 200 feet.

Table 4.8-1
Effects of Vibration on People and Buildings

PPV		Human Reaction	Effect on Buildings
mm/sec	in/sec		
0.15 to 0.30	0.006 to 0.019	Threshold of perception; possibility of intrusion	Vibrations unlikely to cause damage of any type
2.0	0.08	Vibrations readily perceptible	Recommended upper level of the vibration to which ruins and ancient monuments should be subjected
2.5	0.10	Level at which continuous vibrations begin to annoy people	Virtually no risk of "architectural" damage to normal buildings
5.0	0.20	Vibrations annoying to people in buildings (this agrees with the levels established for people standing on bridges and subjected to relative short periods of vibrations)	Threshold at which there is a risk of "architectural" damage to normal dwelling - houses with plastered walls and ceilings. Special types of finish such as lining of walls, flexible ceiling treatment, etc., would minimize "architectural" damage
10 to 15	0.4 to 0.6	Vibrations considered unpleasant by people subjected to continuous vibrations and unacceptable to some people walking on bridges	Vibrations at a greater level than normally expected from traffic, but would cause "architectural" damage and possibly minor structural damage

Source: California Department of Transportation, 2002.

Cal/OSHA Regulations

The California Division of Occupational Safety and Health, known as "Cal/OSHA," is a division of the California Department of Industrial Relations (CDIR). The CDIR regulations (Cal. Code Regs., tit. 8, Section 1592.) provide the following requirements for backup warning devices:

a. Every vehicle with a haulage capacity 2 ½ cubic yards or more used to haul dirt, rock, concrete, or other construction material shall be equipped with a warning device that operates automatically while the vehicle is backing. The warning sound shall be of such magnitude that it will normally be audible from a distance of 200 feet and will sound immediately on backing. In congested areas or areas with high ambient noise which obscures the audible alarm, a signaler, in clear view of the operator, shall direct the backing operation.
b. Those vehicles not subject to 1592(a) and operating in areas where their backward movement would constitute a hazard to employees working in the area on foot, and where the operator's vision is obstructed to the rear of the vehicle shall be equipped with an effective device or method to safeguard employees such as:

    1) An automatic back-up audible alarm which would sound immediately on backing, or
    2) An automatic braking device at the rear of the vehicle that will apply the safety brake immediately on contact with any obstruction to the rear, or
    3) In lieu of 1 or 2 above, administrative controls shall be established such as:

        A) A spotter or flagger in clear view of the operator who shall direct the backing operation, or
        B) Other procedures which will require the operator to dismount and circle the vehicle immediately prior to starting a back-up operation, or
        C) Prohibiting all foot traffic in the work area.

4) Other means shall be provided that will furnish safety equivalent to the foregoing for personnel working in the area.

c. All vehicles shall be equipped with a manually operated warning device which can be clearly heard from a distance of 200 feet.
d. The operator of all vehicles shall not leave the controls of the vehicle while it is moving under its own engine power.
e. Hauling or earth moving operations shall be controlled in such a manner that equipment or vehicle operators know of the presence of rootpickers, spotters, lab technicians, surveyors, or other workers on foot in the areas of their operations.

Thus, vehicles with a hauling capacity of 2 ½ cubic yards or more are required to have a backup warning system that is capable of being heard at least 200 feet away. Vehicles not falling into that category have other options for backup warnings, including the use of a spotter.

California State Building Codes

The State Building Code, Title 24, Part 2 of the State of California Code of Regulations, establishes uniform minimum noise insulation performance standards to protect persons within new buildings which house people, including hotels, motels, dormitories, apartment houses, and dwellings other than single-family dwellings.

Title 24 mandates that interior noise levels attributable to exterior sources shall not exceed 45 dB L_{dn} or CNEL in any habitable room. Title 24 also mandates that for structures containing noise-sensitive uses to be located where the L_{dn} or CNEL exceeds 60 dB, an acoustical analysis must be prepared to identify mechanisms for limiting exterior noise to the prescribed allowable interior levels. If the interior allowable noise levels are met by requiring that windows be kept closed, the design for the structure must also specify a ventilation or air conditioning system to provide a habitable interior environment.

Local Regulations

The following are the local environmental goals and policies relevant to noise.

City of Pacifica General Plan

The following policy from the 1980 City of General Plan is applicable to the proposed project:

Noise Element

Policy 2 Establish and enforce noise emission standards for Pacifica which are consistent with the residential character of the City and environmental, health and safety needs of the residents.

It should be noted that while the City of Pacifica General Plan does not explicitly establish a noise threshold for sensitive receptors, City staff have historically used a 60 dB threshold as the test of significance when evaluating projects.

City of Pacifica Municipal Code

Section 5-10.02 of the City's Municipal Code states, "It shall be unlawful for any person to make or continue, or cause to be made or continued, any loud, disturbing, unnecessary, or unusual noise or any noise which annoys, disturbs, injures, or endangers the comfort, health, repose,

peace, or safety of other persons within the City." Noise types subject to the aforementioned regulation include:

- Vehicle horns and signaling devices;
- Radios, photographs, musical instruments, and similar devices;
- Loudspeakers, amplifiers, and similar advertising devices;
- Yelling, shouting, and similar noises;
- Animals and birds;
- Steam whistles;
- Exhausts;
- Defective or loaded vehicles;
- Loading and unloading vehicles and opening boxes;
- Construction or repairing buildings and excavating;
- Adjacent to schools, courts, churches, and hospitals;
- Shouting by hawkers and peddlers;
- Pile drivers, hammers, and similar equipment;
- Blowers, fans, and combustion engines;
- Auto body repairs; and
- Solid waste collection.

In addition, Section 8-1.18(b) of the City's Municipal Code state the following regarding grading, excavating, or filling:

> No grading, excavating or filling shall be conducted between the hours of 6:00 p.m. and 7:00 a.m. of any day, or on Saturday or Sunday at any time, without the prior approval of the Building Official. The Building Official shall notify the Department of Public Safety whenever such approval has been granted.

4.8.4 IMPACTS AND MITIGATION MEASURES

The following section describes the standards of significance and methodology used to analyze and determine the proposed project's potential impacts related to noise and vibration. In addition, a discussion of the project's impacts, as well as mitigation measures where necessary, is also presented.

It should be noted that impacts of the environment on a project (as opposed to impacts of a project on the environment) are beyond the scope of required California Environmental Quality Act (CEQA) review. "[T]he purpose of an EIR is to identify the significant effects of a project on the environment, not the significant effects of the environment on the project." (*Ballona Wetlands Land Trust v. City of Los Angeles,* (2011) 201 Cal.App.4th 455, 473 (*Ballona*).) The California Supreme Court recently held that "CEQA does not generally require an agency to consider the effects of existing environmental conditions on a proposed project's future users or residents. What CEQA does mandate… is an analysis of how a project might exacerbate existing environmental hazards." (*California Building Industry Assn. v. Bay Area Air Quality Management Dist.* (2015) 62 Cal.4th 369, 392; see also *Mission Bay Alliance v. Office of Community Investment & Infrastructure* (2016) 6 Cal.App.5th 160, 197 ["identifying the effects on the project and its users of locating the project in a particular environmental setting is neither consistent with CEQA's legislative purpose nor required by the CEQA statutes"], quoting *Ballona*, *supra*, 201 Cal.App.4th at p. 474.) Therefore, for the purposes of the CEQA analysis, the relevant inquiry is not whether future users of the trails at the reclaimed quarry will be exposed to preexisting environmental

noise-related hazards, but instead whether project-generated noise will exacerbate the pre-existing conditions.

Standards of Significance

Consistent with Appendix G of the CEQA Guidelines, a significant impact related to noise would occur if the proposed project would result in any of the following:

- 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;
- Generation of excessive groundborne vibration or groundborne noise levels; or
- 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 (see Chapter 4.12, Effects Not Found to be Significant).

Summary of Applicable Noise and Vibration Standards

The noise level standards that are applicable to the proposed project are summarized below.

Noise Level Thresholds

As noted above, while the City of Pacifica General Plan does not explicitly establish a noise threshold for sensitive receptors, City staff have historically used a 60 dB threshold as the test of significance when evaluating projects, which is consistent with the 60 dB L_{dn}/CNEL exterior noise level threshold established by Title 24. The 60 dB threshold is generally applied at the lot line of the receiving sensitive receptor, typically interpreted to include residential uses, churches, schools, and other similar uses where excessive noise levels may be considered disruptive. For the purpose of this analysis, the 60 dB threshold is assumed to apply to both construction noise and operational noise sources. In addition, this analysis incorporates the 45 dB L_{dn}/CNEL interior noise level standard established by Title 24 for habitable rooms.

Substantial Increase Criteria

Generally, a project may have a significant effect on the environment if it will substantially increase the ambient noise levels for adjoining areas or expose people to measurably severe noise levels. In practice, a noise impact may be considered significant if it would generate noise that would conflict with local project criteria or ordinances, or substantially increase noise levels at noise sensitive land uses. The potential increase in construction-related transportation noise associated with the proposed project is a factor in determining significance.

The City of Pacifica, like many jurisdictions, does not have an adopted policy regarding significant increases in ambient noise. A common practice in many jurisdictions is to use a 3.0 to 5.0 dB increase as a threshold of significance. However, a limitation of using a single noise level increase value to evaluate noise impacts is that it fails to account for pre-project noise conditions. The thresholds presented in Table 4.8-2 below were developed by the Federal Interagency Committee on Noise (FICON) as a means of developing thresholds for identifying project-related noise level increases.[2] The rationale for the graduated scales is that test subject's reactions to increases in noise levels varied depending on the starting level of noise. Specifically, with lower ambient noise

[2] Federal Interagency Committee on Noise. *Section 4: Assessing Aviation Noise.* Available at: http://airportnoiselaw.org/65dnl.html. Accessed September 2020.

environments, such as those below 60 dB L_{dn}, a larger increase in noise levels was required to achieve a negative reaction than was necessary in environments where noise levels were already elevated. Therefore, because the City does not have defined thresholds for what would be considered a substantial increase in traffic noise levels, information from Table 4.8-2 is used.

Table 4.8-2
Significance of Changes in Cumulative Noise Exposure

Ambient Noise Level Without Project	Increase Required for Significant Impact
<60 dB	+5.0 dB or more
60 to 65 dB	+3.0 dB or more
>65 dB	+1.5 dB or more

Source: FICON, 2000.

Vibration

The City of Pacifica does not have specific policies or standards pertaining to vibration levels. However, vibration levels associated with construction activities and project operations are addressed as potential vibration impacts associated with project implementation. Human and structural response to different vibration levels is influenced by a number of factors, including ground type, distance between source and receptor, duration, and the number of perceived vibration events.

Construction operations have the potential to result in varying degrees of temporary ground vibration depending on the specific construction equipment used and operations involved. Per the California Department of Transportation (Caltrans) standards presented in Table 4.8-1, the threshold for architectural damage to structures is 0.2 in/sec PPV and continuous vibrations of 0.1 in/sec PPV, or greater, would likely cause annoyance to sensitive receptors.

Method of Analysis

Noise associated with construction traffic to and from the project site was evaluated based on the construction trip generation data discussed in 4.10, Transportation, of this EIR. Such data is sourced from the Traffic Analysis prepared for the proposed project by W-Trans.[3] Stationary-source construction noise and vibration was analyzed using data compiled for various pieces of construction equipment at a representative distance of 50 feet. All project noise and vibration sources are evaluated as set forth above.

It should be noted that potential noise impacts associated with the proposed project to biological species were considered as part of the Biological Resources Assessment (BRA) prepared by WRA, Inc. (see Appendix H of this EIR). As discussed in Chapter 4.3, Biological Resources, of this EIR, preconstruction surveys are required for the project to ensure adequate avoidance of special-status species and nesting birds or raptors during implementation of the Reclamation Plan. Adequate setbacks are additionally required to prevent nest abandonment for protected bird and raptor species. For other common wildlife species, potential noise impacts would be temporary in nature and are not anticipated to impact wildlife movement or the long-term function of the project site to accommodate wildlife.

[3] W-Trans. *Traffic Analysis for Rockaway Quarry Reclamation Project.* July 13, 2020.

Project-Specific Impacts and Mitigation Measures

The following discussion of impacts is based on implementation of the proposed project in comparison with the baseline and standards of significance identified above. It should be noted that potential noise impacts to biological species are considered under Impact 4.3-3 in Chapter 4.3, Biological Resources, of this EIR.

4.8-1 Generation of a substantial temporary 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. Based on the analysis below and with implementation of mitigation, the impact is *less than significant.*

Construction activities associated with the proposed project would require the use of numerous pieces of noise-generating equipment, such as excavating machinery (e.g., backhoes, bulldozers, excavators, front loaders) and other construction equipment (e.g., compactors, scrapers, graders). In addition, construction worker traffic and construction-related material haul trips would raise ambient noise levels along local haul routes, depending on the number of haul trips made and types of vehicles used. Furthermore, off-site water pumping necessary as part of implementation of the proposed project's Dust Control Plan would generate noise in the water source vicinity.

Table 4.8-3 shows maximum noise levels (L_{max}) associated with typical construction equipment. Based on the table, activities involved in typical construction would generate maximum noise levels up to 85 dB at a distance of 50 feet. As one increases the distance between equipment, or increases separation of areas with simultaneous construction activity, dispersion and distance attenuation reduce the effects of combining separate noise sources. The noise levels from a source decrease at a rate of approximately 6 dB per every doubling of distance from the noise source.

Table 4.8-3
Construction Equipment Noise

Type of Equipment	Maximum Level, dB at 50 feet
Backhoe	78
Compactor	83
Compressor (air)	78
Dozer	82
Dump Truck	76
Excavator	81
Generator	81
Pneumatic Tools	85

Source: ***Federal Highway Administration, Roadway Construction Noise Model User's Guide, January 2006.***

As noted previously, the nearest existing noise-sensitive receptors are the residences located south of the project site, across from San Marlo Way, and Our Savior's Lutheran Church located southeast of the project site, across SR 1. The nearest on-site construction activities associated with the proposed project would be relatively minor improvements to the existing portion of the Eastern Trail located within the

Eastern Parcel, approximately 190 feet from the property line of the church. In addition, the project would include equipment access and potential minor improvements to the existing CCMP Trail, located approximately 200 feet from the existing residences to the south of the project site. However, the proposed improvements to the two trails would not require any grading activities or paving. As detailed in the proposed Reclamation Plan, the existing trails within the Eastern Parcel would only be maintained, as necessary, to create minimal impact on the surrounding environment. Following completion of reclamation activities, the trails would be returned to their original condition. Thus, trail improvements within the Eastern Parcel would not generate substantial noise at the nearest receptors, as they would not involve any of the above types of equipment.

The primary on-site noise-generating reclamation activities associated with the proposed project would be excavation associated with reclamation of the Quarry Parcel and construction of the proposed California red-legged frog mitigation pond and seasonal wetland mitigation ponds within the Eastern Parcel. The nearest noise-generating activity, excavation of the Quarry Parcel, would occur at a distance of 615 feet or greater from the nearest sensitive receptor, the residences located to the south of San Marlo Way. At such a distance, maximum reclamation noise levels associated with the proposed project (85 dB at 50 feet from the source) would be reduced to approximately 63.2 dB L_{max} or less due to spherical spreading loss.[4] Noise associated with grading, exaction, and/or filling activities would occur intermittently, and would be limited to the hours of 7:00 AM to 6:00 PM, Monday through Friday, and would not occur on Saturdays or Sundays, unless approved by the Building Official, per Section 8-1.18(b) of the City's Municipal Code. Thus, noise levels associated with on-site construction activities are not anticipated to generate substantial noise level increases or conflict with the City's applicable noise thresholds at the nearest sensitive receptors.

With regard to construction traffic, per the Traffic Analysis prepared for the proposed project by W-Trans, the project would generate approximately 161 average daily truck trips and 10 daily employee commute trips to and from the project site over the construction period. Approximately 16 truck trips and five employee commute trips would occur during both the AM and PM peak hours. Such vehicle trips would be limited to the allowable construction hours discussed above, as required per Section 8-1.18(b) of the City's Municipal Code.

Trucks hauling fill to the site would come from the north and access the project site from southbound SR 1 through the Old Quarry Road connection, an existing dirt access road located approximately one-third mile south of Reina Del Mar Avenue. The closest sensitive receptor to the SR 1/Old Quarry Road access point is the Our Savior's Lutheran Church property, located approximately 300 feet to the south. Vehicle egress from the site would be accommodated at the existing traffic signal at the SR 1/Reina Del Mar Avenue intersection. The nearest sensitive receptors to the SR 1/Reina Del Mar Avenue intersection are the single-family residences and the Vallemar Elementary School, located approximately 400 feet and 1,000 feet to the east, respectively.

Per a traffic study prepared for a nearby residential development project (Lots 6-12 Oddstad Way Project), based on vehicle counts conducted in June of 2017, SR 1

[4] Omni Calculator. *Distance Attenuation Calculator*. Available at: https://www.omnicalculator.com/physics/distance-attenuation. Accessed January 2022.

currently experiences approximately 2,454 vehicle trips (1,768 northbound trips + 686 southbound trips) during the AM peak hour and 3,309 vehicle trips (1,201 northbound trips + 2,108 southbound trips) during the PM peak hour at the Rockaway Beach Avenue/Fassler Avenue/SR1 intersection located to the southwest of the project site entrance. Thus, project construction traffic would constitute approximately 6.4 percent of total AM peak hour trips and 4.8 percent of total PM peak hour trips on SR 1 in the site vicinity. Such a relatively modest increase in vehicle traffic would not substantially increase traffic noise levels at existing sensitive receptors along SR 1, noted above.

Finally, with respect to the proposed Dust Control Plan, an off-site water truck is anticipated to be used, which would fill up at an appropriate location in the project vicinity at regularly scheduled intervals and subsequently transport the water to an on-site frac tank situated near the Calera Creek crossing. Off-site water pumping associated with the project could, therefore, increase ambient noise in the vicinity of the water source. According to the Federal Highway Administration (FHWA) Roadway Construction Noise Model, at a distance of 50 feet from the noise source, pumps typically generate a maximum noise level of 77 dB.[5] At a distance of 250 feet from water pumping activities, the pumping would generate 63 dB L_{max} or less due to spherical spreading loss.[6] As previously discussed, Title 24 mandates that interior noise levels attributable to exterior sources not exceed 45 dB L_{dn} or CNEL in any habitable room. Modern construction typically provides a 25 dB exterior-to-interior noise level reduction with windows closed. In addition, when factoring in building setbacks from property lines, noise generated by the off-site water truck would be diminished further. Therefore, a distance of 250 feet separating water-pumping activities from the property lines of the nearest sensitive receptors, including any residence, school, or religious facility, would result in interior noise levels of 38 dB L_{max} or less, ensuring the proposed off-site water refilling complies with Title 24 interior noise level standards. With respect to the 60 dB exterior noise level threshold, outdoor areas meant for the purpose of congregating are typically located either behind buildings, or in the case of parks, further inland within the park property and not immediately adjacent to the park property lines. Thus, a distance of 250 feet from water-pumping activities to the nearest sensitive receptor property line would be reasonably assumed to generate exterior noise levels below the 60 dB threshold at the outdoor congregating areas of residences, schools, parks, or religious facilities, when factoring in noise attenuation provided by setback distances and building facades. Therefore, a 250-foot buffer from off-site water refilling would comply with the applicable 60 dB exterior noise level threshold. However, without requirements to ensure that the refill location for the off-site water truck is located at least 250 feet from the nearest sensitive receptor, including any residence, school, park, or religious facility, a significant impact could occur.

Based on the above, ground-disturbing reclamation activities associated with the proposed project would not result in substantial temporary or periodic noise level increases in ambient noise levels at sensitive receptors in the project vicinity. In addition, the proposed project's required compliance with Section 8-1.18(b) of the City's Municipal Code would ensure noise-generating activities associated with the Reclamation Plan would be limited to the hours allowed for such work by the City.

[5] Bollard Acoustical Consultants, Inc. *Noise and Vibration Analysis: Idaho Maryland Mine, Nevada County, California* [pg. 44]. March 8, 2021.

[6] Omni Calculator. *Distance Attenuation Calculator*. Available at: https://www.omnicalculator.com/physics/distance-attenuation. Accessed January 2022.

However, without requirements to ensure that the refill location for the off-site water truck is located at least 250 feet from the nearest sensitive receptor, noise generated as part of off-site water pumping activities could generate noise in excess of the established 60 dB threshold. Therefore, the proposed project could result in the generation of a substantial temporary increase in ambient noise levels in the vicinity of the project in excess of standards established in the General Plan or noise ordinance, or applicable standards of other agencies, and a ***significant*** impact could occur.

Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the above potential impact to a *less-than-significant* level.

4.8-1 *Prior to the issuance of a grading permit, the Final Dust Control Plan shall include the exact location at which the off-site water truck would refill. Filling of the water truck shall occur only between the hours of 8:00 AM and 5:00 PM. The location of the water source shall not be within 250 feet of any residence, school, park, or religious facility. The Final Dust Control Plan, including the identified water refill location, shall be subject to review and approval by the City Engineer.*

4.8-2 Generation of a substantial 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. Based on the analysis below, the impact is *less than significant.*

Upon completion of the proposed reclamation activities, the proposed project would not include any substantial new operational noise sources. Similar to existing conditions, the project site would generate relatively minimal noise associated with pedestrian and bicycle traffic on trails within the site. In addition, as discussed in Chapter 4.10, Transportation, of this EIR, the proposed project would not generate substantially increased vehicle traffic relative to existing conditions. Given that the project site already contains an extensive network of public trails, any increase in public use of the site as a result of the proposed reclamation activities would be relatively minor. Therefore, during operation, the proposed project would not result in substantial new traffic noise level increases along SR 1 or other local roadways.

Based on the above, the proposed project would not result in the generation of a substantial permanent increase in ambient noise levels at existing sensitive receptors located along local roadways. Therefore, a ***less-than-significant*** impact would occur related to generation of a substantial 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.

Mitigation Measure(s)

None required.

4.8-3 Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels. Based on the analysis below, the impact is *less than significant*.

Reclamation activity associated with the proposed project would have the potential to result in varying degrees of temporary ground vibration depending on the specific construction equipment used and operations involved. Table 4.8-4 below shows the typical vibration levels produced by construction equipment.

Table 4.8-4
Vibration Levels for Various Construction Equipment

Type of Equipment	PPV at 25 feet (in/sec)	PPV at 50 feet (in/sec)
Large Bulldozer	0.089	0.029
Loaded Trucks	0.076	0.025
Small Bulldozer	0.003	0.000
Auger/drill Rigs	0.089	0.029
Jackhammer	0.035	0.011
Vibratory Hammer	0.070	0.023

Source: Federal Transit Administration, Transit Noise and Vibration Impact Assessment Guidelines, May 2006.

As shown in Table 4.8-4, construction vibration levels anticipated for the proposed project are less than the 0.2 in/sec PPV threshold of damage to buildings and less than the 0.1 in/sec threshold of annoyance criteria at distances of 50 feet. On-site vibration-generating activities would occur at a distance of approximately 500 feet or greater from the nearest existing structure, an enclosed City sanitary sewer pump station located in the Rockaway Beach parking lot to the south of the Quarry Parcel. Furthermore, vibration-generating activities would occur at a distance of 615 feet or greater from the nearest single-family residence. Therefore, construction vibrations are not predicted to cause damage to existing buildings or cause annoyance to sensitive receptors, as such vibration levels at 500 feet and 615 feet, respectively, would be well below the foregoing thresholds.

Based on the reclamation equipment to be used and the distance from reclamation activities to the nearest structures, vibration from the project would not be a concern. Therefore, the proposed project would not result in the generation of excessive groundborne vibration or groundborne noise levels, and a ***less-than-significant*** impact would occur.

Mitigation Measure(s)

None required.

Cumulative Impacts and Mitigation Measures

As defined in Section 15355 of the CEQA Guidelines, “cumulative impacts” refers to two or more individual effects which, when considered together, are considerable, compound, or increase other environmental impacts. The individual effects may be changes resulting from a single project or a number of separate projects. The cumulative impact from several projects is the change in the environment that results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. For

further detail related to the cumulative setting of the proposed project, refer to Chapter 5, Statutorily Required Sections, of this EIR.

4.8-4 Cumulative noise impacts. Based on the analysis below, the project's incremental contribution to this significant cumulative impact is *less than significant*.

Cumulative development associated with buildout of the City of Pacifica General Plan would result in increased vehicle traffic along local roadways relative to existing conditions. Such increases in vehicle traffic would result in increased traffic noise levels throughout the City's Planning Area, including within the vicinity of the project site, potentially resulting in new conflicts with the City's 60 dB L_{dn}/CNEL exterior noise level threshold. Thus, a significant cumulative impact could occur related to traffic noise.

As discussed above, upon completion of the proposed reclamation activities, the proposed project would not include any substantial new operational noise sources. Similar to existing conditions, the project site would generate relatively minimal noise associated with pedestrian and bicycle traffic on trails within the site. During operation, the proposed project would not result in substantial new traffic noise level increases along SR 1 or other local roadways. As such, the proposed project's incremental contribution to cumulative traffic noise impacts would be ***less than significant***.

Mitigation Measure(s)

None required.

4.9 Parks and Recreation

4.9 PARKS AND RECREATION

4.9.1 INTRODUCTION

The Parks and Recreation chapter of the EIR summarizes the setting information and identifies potential new demands resulting from the proposed project on parks and recreation facilities. Potential impacts are identified if the proposed project would require the development of new facilities or expansion of existing facilities, the construction of which could have adverse physical effects on the environment. Information for the Parks and Recreation chapter was primarily drawn from the Pacifica General Plan[1] and the City of Pacifica's Local Coastal Land Use Plan.[2]

4.9.2 EXISTING ENVIRONMENTAL SETTING

The following section describes the existing parks and recreation facilities in the City of Pacifica, as well as existing recreation facilities within the project site.

Regional Parks and Recreational Facilities

Approximately half of the City's Planning Area is protected open space or park land. In addition to large areas of preserved open space along ridgelines, Pacifica includes over six miles of coastline and beaches, offering recreation opportunities that include isolated beach experiences, outstanding fishing, surfing, tide-pooling and diving. Trails provide public access along the Planning Area's ridges and coastline. City parks are available in a variety of sizes for local residents, and the City maintains a partnership with local school districts making school play fields available for community use.

Parks and recreation facilities within the City include the following: City parks and playfields; district parks, such as Frontierland Park at the edge of the Park Pacifica neighborhood; neighborhood parks; pocket parks; and various special facilities such as the Pacifica Municipal Pier and the Pacifica Skate Park. Recreational facilities within the City's park spaces include athletic fields and courts, playgrounds, and various other amenities. In addition, residences of the City of Pacifica have access to approximately 2,930 acres of regional parks and beaches owned and managed by various agencies, including the National Park Service, the State of California, the City and County of San Francisco, and the City of Pacifica. Such regional parks and beaches include the Golden Gate Recreation Area, Sharp Park, San Pedro Valley County Park, McNee Ranch State Park, Pacifica State Beach, Rockaway Beach, and Sharp Park Beach and Pacifica Pier.

The Golden Gate Recreation Area extends in segments from Point Reyes, through San Francisco, to the Santa Cruz Mountains. Within the vicinity of the City of Pacifica, the Golden Gate Recreation Area includes Sweeney Ridge, Mori Point, Milagra Ridge, and land of Pacifica's Northern Coastal Bluffs.

Mori Point, located directly north of the project site and south of Sharp Park, is a 106-acre promontory that was added to the Golden Gate Recreation Area in 2002. Mori Point is accessible

[1] City of Pacifica. *City of Pacifica General Plan.* Adopted 1980.
[2] City of Pacifica. *City of Pacifica Local Coastal Land Use Plan.* March 24, 1980.

from the Coastal Trail along Calera Creek, from the Sharp Park berm at Clarendon and Beach Boulevard, or from Mori Point Road in the West Fairway Park neighborhood. The southern boundary of the Mori Point area is roughly contiguous with the northern boundary of the project site.

Sweeney Ridge is located to the northeast of the project site, on the east side of State Route (SR) 1. At 1,470 acres, Sweeney Ridge is the largest public open space tract in Pacifica. The park, reaching an elevation of 1,220 feet, offers views to Mount Tamalpais to the north, Mount Diablo to the east, Montara Mountain to the south, and the Farallon Islands to the west on clear days. Trailheads are at Skyline College, Shelldance Nursery off SR 1, and Sneath Lane off Skyline Boulevard.

To the southwest, the project site is bordered by Rockaway Beach, an approximately five-acre privately owned beach. The south end of the beach is accessible from a seafront plaza at the end of Rockaway Beach Avenue. A parking lot connects the south end of the beach to a segment of the Coastal Trail crossing the Headlands between Rockaway Beach and Pacifica State Beach. The Calera Creek Multi-Purpose (CCMP) Trail, which is a part of the City's Coastal Trail network, can be reached from the north end of Rockaway Beach.

According to the City's General Plan, in addition to the CCMP, a number of pedestrian-bicycle trails are available throughout the City. Sweeney Ridge Trail is located northeast of the project site, consisting of approximately 5.8 miles of trail. Additional existing coastal trails consist of the Crespi Drive to Pedro Point Multi-Purpose Trail, the San Pedro Terrace Multi-Purpose Trail, and New Devil's Slide Multi-Purpose Trail.[3] Additional trails and walkways can be found throughout the City of Pacifica, many of which are included in the Golden Gate National Recreation Area.

Existing On-Site Recreational Facilities

Internal recreational access throughout the Quarry property portion of the project site is comprised of the following three components: the City of Pacifica's CCMP Trail, a network of well-used informal trails, and a number of lesser-used informal trails, as shown in Figure 3-4 of this EIR. The CCMP Trail is a paved, ADA-accessible trail. The length of the CCMP Trail through the property is approximately 0.35 miles. The trail connects a parking lot at the western end of San Marlo Way to a parking lot at the western end of Reina Del Mar Avenue, adjacent to the Calera Creek Water Recycling Plant (CCWRP) parking lot.

The internal Quarry trail system is currently composed of a variety of secondary and minor informal trails that extend to Mori Point on the north end of the site, through the Quarry Pit, up the slopes of the Southern Bluff, and throughout the Eastern Parcel. Access to the Quarry trails is provided by the CCMP Trail. Most of the trail area is relatively narrow and unmaintained.

According to the City's General Plan, the capacity of park and recreation facilities within the area currently meets the needs of local residents.

4.9.3 REGULATORY CONTEXT

The following discussion contains a summary review of regulatory controls pertaining to parks and recreation, including State and local laws and ordinances.

[3] City of Pacifica. *City of Pacifica Coastal Trail Network.* Available at: https://www.cityofpacifica.org/depts/pw/parks/trails_n_walkways/default.asp. Accessed November 2019.

State Regulations

The following State environmental regulations are intended to preserve open space and provide recreational facilities.

California Coastal Act

The California Coastal Commission (CCC) was established by voter initiative in 1972 (Proposition 20) and later made permanent by the Legislature through adoption of the California Coastal Act of 1976. In partnership with coastal cities and counties, the CCC plans and regulates the use of land and water in the Coastal Zone. Development activities, which are broadly defined by the Coastal Act to include (among others) construction of buildings, divisions of land, and activities that change the intensity of use of land or public access to coastal waters, generally require a coastal permit from either the CCC or the local government.

The Coastal Act includes specific policies (see Public Resources Code Division 20) that address issues such as shoreline public access and recreation, lower cost visitor accommodations, terrestrial and marine habitat protection, visual resources, landform alteration, agricultural lands, commercial fisheries, industrial uses, water quality, offshore oil and gas development, transportation, development design, power plants, ports, and public works. The policies of the Coastal Act constitute the statutory standards applied to planning and regulatory decisions made by the CCC and by local governments, pursuant to the Coastal Act.

Local Regulations

The following are the local government's environmental policies that are intended to preserve open space or provide additional recreation facilities.

City of Pacifica General Plan

The relevant policies from the City of Pacifica General Plan related to parks and recreation are presented below.

Open Space Element

Policy 1	Retain open space which preserves natural resources, protects visual amenities, prevents inappropriate development, provides for the managed use of resources, and protects the public health and safety.
Policy 2	Provide outdoor recreation in local parks, open space, and school playgrounds in keeping with the need, scale and character of the City and of each neighborhood.
Policy 3	Encourage development plans which protect or provide generous open space appropriately landscaped. Balance open space, development and public safety, particularly in the hillside areas.
Policy 4	Promote communitywide links to open space and recreation facilities which do not abuse the open space resource or threaten public safety.

Community Facilities Element

Policy 1	Provide recreational activities and facilities consistent with user financial and environmental constraints.

Local Coastal Land Use Plan

The City of Pacifica's Local Coastal Land Use Plan is the basis for the Local Coastal Implementation Program, including a Permit issuing procedure, zoning ordinance revisions, and other implementation programs. The relevant policy within the Local Coastal Land Use Plan that relate to parks and recreation is listed below.

Policy 1 Maximum access shall be conspicuously posted and recreational opportunities shall be provided for all people consistent with public safety needs and the need to protect public rights, rights of property owners, and natural resource areas from overuse.

4.9.4 IMPACTS AND MITIGATION MEASURES

The section below describes the standards of significance and methodology utilized to analyze and determine the proposed project's potential project-specific impacts related to parks and recreation. In addition, a discussion of the project's impacts, as well as mitigation measures where necessary, is also presented.

Standards of Significance

Consistent with Appendix G of the CEQA Guidelines, the proposed project would be considered to result in a significant adverse impact on the environment in relation to parks and recreation if the project would result in any of the following:

- 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; or
- Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

Method of Analysis

Information related to existing parks and recreational facilities in the project area was sourced from the City of Pacifica General Plan, National Parks Service mapping of Mori Point,[4] and the City of Pacifica website.[5] Determination of impacts was based on an evaluation of the proposed project components, including the proposed trail improvements, relative to the standards of significance listed above. Specifically, temporary trail closures associated with the project were evaluated within the context of existing recreation facilities in the project vicinity to determine of the temporary closures would increase the use of nearby facilities. In addition, the long-term effects of the proposed improvements were evaluated within the context of the City's broader park and recreation facilities to determine how the project would affect use of such facilities.

Project-Specific Impacts and Mitigation Measures

The following discussion of impacts is based on the implementation of the proposed project in comparison with the standards of significance identified above.

[4] National Park Service. *Mori Point and Surrounding Area*. Available at: https://www.nps.gov/goga/planyourvisit/upload/Mori-Point-trail-map_2016.pdf. Accessed September 2020.

[5] City of Pacifica. *Trails & Walkways*. Available at: https://www.cityofpacifica.org/depts/pw/parks/trails_n_walkways/default.asp. Accessed November 2019.

4.9-1 Result in an increase in 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. Based on the analysis below, the impact is *less than significant.*

The proposed project would include reclamation of the project site, including both the Quarry and Eastern Parcels. The Reclamation Plan includes several measures to improve the safety, quality, and appearance of the internal hiking trails within the site. For example, the existing Eastern Trail would be improved to provide a more stable, safer surface for walking and a more level slope from the Calera Creek crossing to the Hilltop area within the northwestern portion of the site. The improved Eastern Trail would connect to several existing coastal trails, which continue to Mori Point to the north of the site. Native vegetation and landscaping would also be included. In addition, a new trail, known as the Western Trail, would be constructed from the Calera Creek crossing, running to the west and then climbing along the Southern Bluff, where the trail would eventually reach existing trails leading to Mori Point. The trail would be set back from the bluff to avoid potentially erosive areas and to prevent potential hazards. Both trails would be 17 feet wide and constructed with 12 inches of aggregate and four inches of decomposed granite. Additionally, three hazard signs warning of steep slopes would be placed along the coastal bluffs. The placement of the signs would be determined once the major ground-disturbing activities of the Reclamation Plan are complete.

Throughout reclamation, which has been projected to require four years to complete, the improvements could involve closure of on-site trails for periods of time. Trails within the project's grading footprint would be closed throughout reclamation; however, the Eastern Trail laying outside the grading footprint would remain open. The movement of reclamation equipment and materials would cause temporary closure of the CCMP Trail from the CCWRP parking lot to the Calera Creek crossing. The closure of the CCMP Trail segment would primarily occur during the initial three to four days and the last three to four days of reclamation work in order for reclamation equipment to be transported to and from the Quarry Parcel. Trail closures would be minimized and constrained to low-use times, to the greatest extent feasible. Additionally, for the duration of reclamation activities, trucks would enter and exit the Quarry Parcel at the Calera Creek crossing. A flagperson would be posted at the crossing to ensure pedestrians could cross safely during operations.

As noted previously, Mori Point is accessible from the Sharp Park berm at Clarendon and Beach Boulevard and from Mori Point Road in the West Fairway Park neighborhood. Thus, even during temporary closures of the CCMP Trail, access to Mori Point would not be limited. Similarly, Rockaway Beach to the south of the site would remain accessible by way of the adjacent parking lot at the end of San Marlo Way. Furthermore, given that the CCMP Trail would remain open for substantial portions of the proposed reclamation phase, the temporary trail closures associated with the proposed project would not substantially increase the

use of Mori Point, Rockaway Beach, or other regional recreational facilities such that deterioration of such facilities would occur.

Because the proposed project would not include development of new structures or infrastructure that could directly or indirectly introduce new residents to the project area, upon completion of the proposed reclamation activities, use of on- and off-site recreation facilities would not substantially increase relative to existing conditions. While the proposed trail improvements would enhance the safety and appearance of the internal hiking trails within the site, such improvements would not be anticipated to significantly increase use of the trail networks in the project vicinity, as new trips to the site generated by implementation of the proposed project would not be significantly greater than current trips given that reclamation activities would not change the site's current land use. Rather, the proposed improvements are intended to alleviate existing erosion issues, restore prior physical disturbances resulting from past quarrying activity on the project site, and ensure compliance with State Mining and Reclamation Act (SMARA) standards related to mine reclamation.

Based on the above, the proposed project would not result in an increase in 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. Thus, a ***less-than-significant*** impact would occur.

Mitigation Measure(s)
None required.

4.9-2 Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment. Based on the analysis below, the impact is *less than significant.*

The proposed project would not involve the construction of new facilities. The primary project component involves reclamation of the project site, pursuant to SMARA. As part of reclaiming the project site, the project would consist of grading to portions of the Quarry Parcel to provide a safer surface for the public, upgrades to existing trails, new seasonal wetlands in the Eastern Parcel, and revegetation of disturbed areas. Upon completion of the Reclamation Plan, use of on- and off-site recreation facilities would not substantially increase relative to existing conditions. While the proposed trail improvements would enhance the safety and appearance of the internal hiking trails within the site, such improvements would not be anticipated to significantly increase use of the trail networks, as new trips to the site generated by implementation of the proposed project would not be significantly greater than current trips, given that reclamation activities would not change the site's current land use. As such, the proposed project would not necessitate new or expanded recreational facilities, the construction or operation of which could adversely affect the environment. Furthermore, as demonstrated throughout the various technical chapters of this EIR, the proposed project would not result in any potentially significant environmental impacts that could not be mitigated to less-than-significant levels.

Based on the above, the proposed project would result in a ***less-than-significant*** impact related to construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

Mitigation Measure(s)
None required.

Cumulative Impacts and Mitigation Measures

As defined in Section 15355 of the CEQA Guidelines, "cumulative impacts" refers to two or more individual effects which, when considered together, are considerable, compound, or increase other environmental impacts. The individual effects may be changes resulting from a single project or a number of separate projects. The cumulative impact from several projects is the change in the environment that results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects.

For further detail related to the cumulative setting of the proposed project, refer to Chapter 5, Statutorily Required Sections, of this EIR.

4.9-3 Cumulative impacts to parks and recreation facilities. Based on the analysis below, the cumulative impact is *less than significant*.

As discussed above, the proposed project would not increase the use of existing on-site recreational facilities or existing parks and recreational facilities in the project region. Whereas cumulative residential development associated with buildout of the City's General Plan has the potential to result in population growth, thereby increasing demand for recreational facilities, the project does not include any development of new land uses on the project site. Rather, the project consists of a Reclamation Plan to address erosion and safety issues at the project site. While the proposed trail improvements would enhance the safety and appearance of the internal hiking trails within the site, such improvements would not be anticipated to significantly increase use of the trail networks in the project vicinity, as reclamation activities would not change the site's current land use. Therefore, the proposed project, in combination with future development occurring under buildout of the General Plan, would result in a ***less-than-significant*** cumulative impact related to parks and recreation.

Mitigation Measure(s)
None required.

4.10 TRANSPORTATION

4.10 TRANSPORTATION

4.10.1 INTRODUCTION

The Transportation chapter of the EIR discusses the existing transportation facilities within the project vicinity, as well as applicable policies and guidelines used to evaluate operation of such facilities. The information contained within this chapter is primarily based on the Traffic Memorandum[1] and Queuing Analysis[2] prepared for the proposed project by W-Trans (see Appendix L of this EIR), and the Greenhouse Gas (GHG) Emissions Analysis Study, which includes a discussion of vehicle miles travelled associated with the proposed project, prepared by Rincon Consultants, Inc. (see Appendix G of this EIR),[3] as well as the City of Pacifica General Plan,[4] and the City of Pacifica Local Coastal Land Use Plan.[5]

4.10.2 EXISTING ENVIRONMENTAL SETTING

The section below describes the physical and operational characteristics of the existing transportation system within the study area, including the surrounding roadway network, transit, bicycle and pedestrian facilities.

It should be noted that in 2013, Senate Bill (SB) 743 was passed to amend Sections 65088.1 and 65088.4 of the Government Code, amend Sections 21181, 21183, 21186, 21187, 21189.1, and 21189.3 of the Public Resources Code (PRC), to add Section 21155.4 to the PRC, to add Chapter 2.7 (commencing with Section 21099) to Division 13 of the PRC, to add and repeal Section 21168.6.6 of the PRC, and to repeal and add Section 21185 of the PRC, relating to environmental quality. As a result of SB 743, as discussed in further detail below in the Method of Analysis section, local jurisdictions may no longer rely on vehicle level of service (LOS) and similar measures related to delay as the basis for determining the significance of transportation impacts under CEQA. Thus, consistent with the CEQA Guidelines, vehicle miles travelled (VMT) is the primary metric used to identify transportation impacts to roadway systems within this chapter. VMT is a measure of the total amount of vehicle travel occurring on a given roadway system.

Existing Roadway Facilities

The following sections provide a summary of the existing roadways within the project area.

State Route 1

State Route (SR) 1 runs north-south along the project site frontage as a multi-lane highway in the in the vicinity of the site. SR 1 becomes a freeway approximately 0.5-mile north of the project site, where the freeway connects to Interstate 280 (I-280) north of the City of Pacifica. Along the project site frontage, the road has two, 12-foot travel lanes in each direction with a concreate median barrier. The posted speed limit along the project site is 45 miles per hour (mph).

---

1 W-Trans. *Traffic Analysis for Rockaway Quarry Reclamation Project*. July 13, 2020.
2 W-Trans. *Response to Comments on the Draft Traffic Analysis for the Rockaway Quarry Reclamation Project*. October 28, 2021.
3 Rincon Consultants, Inc. *Rockaway Quarry Reclamation Project, Greenhouse Gas Emissions Analysis Study*. November 2021.
4 City of Pacifica. *City of Pacifica General Plan.* Adopted 1980.
5 City of Pacifica. *City of Pacifica Local Coastal Land Use Plan.* March 24, 1980.

San Marlo Way
San Marlo Way is a narrow roadway that parallels the western edge of the project site boundaries, connecting SR 1 to Pacifica Beach View Park. The roadway does not have a posted speed limit.

Reina Del Mar Avenue
Reina Del Mar Avenue is a two-lane, east-west roadway that extends eastward from SR 1 to provide access to a residential neighborhood and school. The SR 1/Reina Del Mar Avenue intersection is located just north of the project site, across from the Calera Creek Water Recycling Plant (CCWRP), and is the main point of egress from the project site.

Existing Vehicle Miles Travelled
The main source of VMT associated with the proposed project is associated with soil hauling. Based on the results of the VMT analysis, total daily VMT associated with existing soil hauling activity in the project region is approximately 8,721 miles. The methodology used to calculate the existing VMT is described in further detail in the Method of Analysis section below.

Pedestrian, Bicycle and Transit Facilities
The sections below describe the existing pedestrian, bicycle and transit facilities located within the vicinity of the project site.

Pedestrian and Bicycle Facilities
Current internal access throughout the Quarry site is comprised of the following three components: the City of Pacifica's Calera Creek Multi-Purpose (CCMP) Trail, a network of well-used informal trails, and a number of lesser-used informal trails. The CCMP Trail is a paved, Americans with Disabilities Act (ADA)-accessible trail that is a part of the City's Coastal Trail Network and runs along the north and west boundaries of the Eastern parcel. The length of the CCMP Trail through the Quarry site is approximately 0.35 miles. The trail connects a parking lot at the western end of San Marlo Way to a parking lot at the western end of Reina Del Mar Avenue, adjacent to the CCWRP parking lot.

The Quarry site's internal trail system is currently composed of a variety of secondary and minor informal trails that extend through the Quarry Parcel to Mori Point on the north end of the site, through the Quarry Pit, up the slopes of the Southern Bluff, and throughout the Eastern parcel. Access to the internal trails is provided by the CCMP Trail. Most of the trail area is relatively narrow and unmaintained.

Dedicated bike lanes are not provided at any of the roadways in the project vicinity. However, the network of roadways immediately south of the site, west of SR 1, experience relatively low vehicle speeds and, thus, provide a relatively safe biking environment. Similarly, while the area to the south of the site does not include continuous sidewalks, pedestrian travel between the project site and the various residences and commercial uses within the area is relatively unimpeded.

Transit System
The San Mateo County Transit District (SamTrans) provides bus service throughout San Mateo County and into San Francisco and Palo Alto. SamTrans provides local service in Pacifica, as well as service to and from the Bay Area Rapid Transit (BART) and Caltrain stations. The nearest bus stops relative to the project site are located adjacent to the Reina Del Mar Avenue/SR 1 intersection to the northeast of the site.

4.10.3 REGULATORY CONTEXT

Applicable federal laws or regulations pertaining to the transportation impacts of the project area do not exist. State and local laws and regulations applicable to the proposed project are listed below.

State Regulations

The following are the State environmental laws and policies relevant to transportation.

California Department of Transportation

The California Department of Transportation (Caltrans) is responsible for planning, designing, constructing, operating, and maintaining all State-owned roadways in the City of Pacifica. Federal highway standards are implemented in California by Caltrans. Any improvements or modifications to the State highway system within the City needs to be approved by Caltrans. The City does not have the ability to unilaterally make improvements to the State highway system. Caltrans' Guide for the Preparation of Traffic Impact Studies (December 2002) provides guidance on the evaluation of traffic impacts to State highway facilities. The document outlines when a traffic impact study is needed and what should be included in the scope of the study.

Senate Bill 743

SB 743 (Stats. 2013, ch. 386) requires the Governor's Office of Planning and Research (OPR) to establish new metrics for determining the significance of transportation impacts of projects within transit priority areas (TPAs) and allows OPR to extend use of the metric beyond TPAs. In response, OPR released the *Technical Advisory on Evaluating Transportation Impacts in CEQA*, which identified VMT as the preferred transportation impact metric. OPR applied their discretion to require the use of VMT statewide. SB 743 requires that as of April 27, 2019, vehicle LOS and similar measures related to delay shall not be used as the sole basis for determining the significance of transportation impacts. Determination of impacts based on VMT is required Statewide as of July 1, 2020.

CEQA Guidelines Section 15064.3

Section 15064.3 of the CEQA Guidelines was added in 2018 to address the requirements of SB 743 and the OPR Technical Advisory on Evaluating Transportation Impacts in CEQA. Section 15064.3 states the following:

> (a) Purpose.
>
> This section describes specific considerations for evaluating a project's transportation impacts. Generally, vehicle miles traveled is the most appropriate measure of transportation impacts. For the purposes of this section, "vehicle miles traveled" refers to the amount and distance of automobile travel attributable to a project. Other relevant considerations may include the effects of the project on transit and non-motorized travel. Except as provided in subdivision (b)(2) below (regarding roadway capacity), a project's effect on automobile delay shall not constitute a significant environmental impact.
>
> (b) Criteria for Analyzing Transportation Impacts.
>
> (1) Land Use Projects. Vehicle miles traveled exceeding an applicable threshold of significance may indicate a significant impact. Generally, projects within one-half mile of either an existing major transit stop or a stop along an existing high quality

transit corridor should be presumed to cause a less than significant transportation impact. Projects that decrease vehicle miles traveled in the project area compared to existing conditions should be presumed to have a less than significant transportation impact.

(2) Transportation Projects. Transportation projects that reduce, or have no impact on, vehicle miles traveled should be presumed to cause a less than significant transportation impact. For roadway capacity projects, agencies have discretion to determine the appropriate measure of transportation impact consistent with CEQA and other applicable requirements. To the extent that such impacts have already been adequately addressed at a programmatic level, such as in a regional transportation plan EIR, a lead agency may tier from that analysis as provided in Section 15152.

(3) Qualitative Analysis. If existing models or methods are not available to estimate the vehicle miles traveled for the particular project being considered, a lead agency may analyze the project's vehicle miles traveled qualitatively. Such a qualitative analysis would evaluate factors such as the availability of transit, proximity to other destinations, etc. For many projects, a qualitative analysis of construction traffic may be appropriate.

(4) Methodology. A lead agency has discretion to choose the most appropriate methodology to evaluate a project's vehicle miles traveled, including whether to express the change in absolute terms, per capita, per household or in any other measure. A lead agency may use models to estimate a project's vehicle miles traveled, and may revise those estimates to reflect professional judgment based on substantial evidence. Any assumptions used to estimate vehicle miles traveled and any revisions to model outputs should be documented and explained in the environmental document prepared for the project. The standard of adequacy in Section 15151 shall apply to the analysis described in this section.

(c) Applicability.

The provisions of this section shall apply prospectively as described in section 15007. A lead agency may elect to be governed by the provisions of this section immediately. Beginning on July 1, 2020, the provisions of this section shall apply statewide.

Technical Advisory on Evaluating Transportation Impacts in CEQA

The OPR's Technical Advisory on Evaluating Transportation Impacts in CEQA includes potential significance thresholds for different types of land use projects and transportation projects. Distinct threshold recommendations are provided for residential, office, and retail projects. Such uses tend to have the greatest influence on VMT. Lead agencies, using more location-specific information, may develop their own more specific thresholds, which may include other land use types. In developing thresholds for other project types, the Technical Advisory directs lead agencies to consider the purposes described in Section 21099 of the PRC and regulations in the CEQA Guidelines on the development of thresholds of significance (e.g., CEQA Guidelines Section 15064.7).

The Technical Advisory suggests that lead agencies may screen out VMT impacts using project size, map-based approaches to low-VMT areas, transit availability, and provision of affordable housing. However, none of the screening criteria included in the Technical Advisory would apply to the proposed project.

Local Regulations

The following are the local environmental policies relevant to transportation.

City of Pacifica General Plan

The following policies from the 1980 City of Pacifica General Plan are applicable to the proposed project:

Circulation Element

Policy 4	Provide access which is safe and consistent with the level of development.
Policy 9	Develop safe and efficient bicycle, hiking, equestrian, and pedestrian access within Pacifica and to local points of interest.
Policy 10	Provide recreational access in keeping with the recreational area's natural environment and the quality of the recreational experience offered.
Policy 15	Promote orderly growth in land uses and circulation.

4.10.4 IMPACTS AND MITIGATION MEASURES

This section describes the standards of significance and methodology utilized to analyze and determine the proposed project's potential impacts related to transportation and circulation.

Standards of Significance

Consistent with Appendix G of the CEQA Guidelines, the proposed project would be considered to result in a significant adverse impact on the environment in relation to transportation and circulation if the project would result in any of the following:

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

VMT Thresholds

The OPR *Technical Advisory On Evaluating Transportation Impacts in CEQA* recommends that lead agencies establish project-level thresholds for VMT analysis. Per Section 15064.3(b)(3) of the CEQA Guidelines, a lead agency has discretion to choose the most appropriate methodology to evaluate a project's VMT, including whether to express the change in absolute terms, per capita, per household or in any other measure. Where appropriate, a lead agency may analyze a project's VMT qualitatively based on the availability of transit, proximity to destinations, etc. Existing guidance available in the *Technical Advisory On Evaluating Transportation Impacts in CEQA* includes recommended numeric thresholds for residential, office, and retail projects. The OPR Technical Advisory states that lead agencies may develop their own specific thresholds, which may include other land use types, using more location-specific information. Therefore, the City has considerable discretion in choosing a suitable VMT impact analysis approach for the purposes of the proposed project.

The City does not currently have established VMT significance thresholds for environmental review purposes. Furthermore, the project is unique in that the sole source of VMT would be employee and haul truck trips occurring during project reclamation activities. Upon completion of

reclamation activities, the project would not involve any increase in VMT relative to existing conditions. For the purposes of this EIR analysis and in accordance with the CEQA Guidelines, a VMT-related impact would be considered significant if implementation of the proposed project would trigger the following condition:

- VMT associated with construction, employee trips, and soil haul truck trips for the proposed reclamation activities is increased relative to soil haul truck trips occurring without the proposed project.

Method of Analysis

The information contained within this chapter is primarily based on the Traffic Memorandum prepared for the proposed project by W-Trans (see Appendix L of this EIR), which includes trip generation and distribution estimates for the proposed project, and the Greenhouse Gas Emissions Analysis Study prepared for the proposed project by Rincon Consultants, Inc. (see Appendix G of this EIR), which includes an analysis of VMT. The methodologies employed for both technical studies are summarized below.

Vehicle Trip Generation

The Traffic Memorandum includes an estimate of vehicle trip generation associated with the proposed reclamation activities. Due to the nature of the project, the size of haul trucks required for the proposed soil hauling activities, and the hours of operation, W-Trans made the assumption that truck trips would be evenly spaced over the course of the work day during project implementation. Trucks used for soil hauling operations have a capacity ranging from 10 cubic yards (CY) to 14 CY. The Traffic Memorandum assumed trucks used for the proposed project would haul an average of 12 CY of soil per trip.

The proposed project would include import of approximately 970,000 CY of soil to the project site over the course of the proposed reclamation activities. Soil hauling would be split between four subphases, that would occur over four years, resulting in a maximum of approximately 250,000 CY of soil imported per year. The total quantity of soil to be moved per year was divided by 12 CY per truck to calculate the total number of trucks per year. The total number of trucks was then multiplied by two to account for each truck arriving at the site, unloading the soil, and then leaving (i.e., one inbound trip and one outbound trip). Next, the total number of truck trips per year were divided by 250 operational days per year to calculate the number of truck trips per day.

The proposed reclamation activities are anticipated to occur between 7:00 AM and 5:00 PM. Therefore, the truck trips per day were divided by ten hours of operation per day to get truck trips per hour.

Approximately five workers would be temporarily employed on-site during reclamation activities. For the Traffic Memorandum, W-Trans conservatively assumed that all five employees would arrive during the AM peak hour and leave during the PM peak hour, despite the 7:00 AM start time, which precedes the AM peak hour. The truck trips per hour plus the employee trips were then added to calculate the total number of peak hour vehicle trips.

The calculated trip generation potential for the proposed project is summarized in Table 4.10-1. Because the amount of imported soil is relatively similar for each subphase, project trips for each subphase are assumed to be the same. As shown in the table, the proposed project would

generate an average of 161 truck trips per day plus 10 employee trips per day, including 16 truck trips during both the AM and PM peak hours.

Table 4.10-1
Project Trip Generation

	Daily Trips		AM Peak Hour Trips						PM Peak Hour Trips					
Subphase	Truck	PCE	Truck	PCE	Employee	Total	In	Out	Truck	PCE	Employee	Total	In	Out
1	161	483	16	48	5	53	29	24	16	48	5	53	24	29
2	161	483	16	48	5	53	29	24	16	48	5	53	24	29
3	161	483	16	48	5	53	29	24	16	48	5	53	24	29
4	161	483	16	48	5	53	29	24	16	48	5	53	24	29

Source: W-Trans, 2020.

Vehicle Miles Travelled

CEQA Guidelines Section 15064.3 provides that generally, VMT is the most appropriate measure of transportation impacts. VMT refers to the amount and distance of automobile travel attributable to a project. The proposed project would involve the use of heavy trucks to transport fill to the Quarry site by way of SR 1. However, an analysis of VMT from heavy truck trips is not required pursuant to SB 743 and the CEQA Guidelines. Section 1(b) of SB 375, enacted in 2008, states that:

> "[i]n 2006, the Legislature passed and the Governor signed Assembly Bill 32 (Chapter 488 of the Statutes of 2006; hereafter AB 32), which requires the State of California to reduce its greenhouse gas emissions to 1990 levels no later than 2020. According to the State Air Resources Board, in 1990 greenhouse gas emissions from automobiles and light trucks were 108 million metric tons, but by 2004 these emissions had increased to 135 million metric tons."

Likewise, Section 1(c) of SB 375 states that:

> "[g]reenhouse gas emissions from automobiles and light trucks can be substantially reduced by new vehicle technology and by the increased use of low carbon fuel. However, even taking these measures into account, it will be necessary to achieve significant additional greenhouse gas reductions from changed land use patterns and improved transportation. Without improved land use and transportation policy, California will not be able to achieve the goals of AB 32."

As such, SB 375 was focused on reducing GHG emissions through changing land use patterns and transportation policy in a way that reduces automobile and light truck use, rather than by reducing the use of heavy trucks for the movement of goods. Furthermore, SB 743, which precipitated the requirement that local jurisdictions can no longer rely on vehicle LOS and similar measures related to delay as the basis for determining the significance of transportation impacts under CEQA, directly states that the analysis of VMT is required to achieve the goals established in SB 375. Section 1 of SB 743 reads:

> "[w]ith the adoption of Chapter 728 of the Statutes of 2008, popularly known as the Sustainable Communities and Climate Protection Act of 2008 [SB 375], the Legislature signaled its commitment to encouraging land use and transportation planning decisions and investments that reduce vehicle miles traveled and contribute to the reductions in

> greenhouse gas emissions required in the California Global Warming Solutions Act of 2006 [AB 32]"

As demonstrated in the excerpt above, SB 743 re-affirms the GHG emissions goals set forth in AB 32. Based on the above, the legislative intent of SB 743 and the associated CEQA Guidelines Section 15064.3 is to ensure that lead agencies analyze VMT for passenger car and light truck trips related to land use projects.

In December 2018, OPR issued guidance ("OPR Guidance") on implementation of SB 743 and the related CEQA Guideline Section 14 California Code of Regulations (CCR) Section 15064.3.[6] The OPR Guidance clearly acknowledges the purpose of the VMT methodology is to reduce emission of GHG pursuant to the strategies set forth in SB 375:

> "employing VMT as the metric of transportation impact statewide will help to ensure GHG reductions planned under SB 375 will be achieved through on-the-ground development, and will also play an important role in creating the additional GHG reductions needed beyond SB 375 across the State. Implementation of this change will rely, in part, on local land use decisions to reduce GHG emissions associated with the transportation sector, both at the project level, and in long-term plans (including general plans, climate action plans, specific plans, and transportation plans) and supporting sustainable community strategies developed under SB 375." (OPR Guidance, p. 3.)

The new CEQA Guidelines Section 15064.3 does not specifically state what type of vehicles are to be include or excluded from the VMT analysis, and merely states "*[f]or the purposes of this section, 'vehicle miles traveled' refers to the amount and distance of automobile travel attributable to a project.*" (14 CCR Section 15064.3[a]). On the question of what types of vehicles are to be included in the VMT analysis, OPR stated in its 2018 Guidance that:

> "[p]roposed Section 15064.3, subdivision (a), states, "For the purposes of this section, 'vehicle miles traveled' refers to the amount and distance of automobile travel attributable to a project.' **Here, the term 'automobile' refers to on-road passenger vehicles, specifically cars and light trucks.** Heavy-duty truck VMT **could** be included for modeling convenience and ease of calculation (for example, where models or data provide combined auto and heavy truck VMT)." (OPR Guidance, p. 4; Emphasis added.)

Accordingly, OPR advises that the term "automobile" was not meant to include heavy trucks, but lead agencies **could** include heavy trucks where doing so was convenient under the applicable traffic model. Additionally, the OPR Guidance addresses numerical transportation impact thresholds for a "land use project," but then only specifically describes residential, office, and retail projects, providing further evidence that movement of goods/materials in heavy trucks was meant to be excluded from the VMT requirement (OPR Guidance, pgs. 11-16). Based on the above, the legislative intent of SB 743 and the associated CEQA Guidelines Section 15064.3 is primarily to ensure that lead agencies analyze VMT for passenger car and light truck trips related to land use projects. Therefore, the proposed project's transport of soil as part of the Reclamation Plan would not fall under such activities intended to be analyzed for VMT-related impacts under CEQA. However, to address any potential concerns related to VMT, an analysis of the VMT associated with the proposed project is included in this chapter.

---

[6] Governor's Office of Planning and Research. *Technical Advisory: On Evaluation Transportation Impacts in CEQA*. December 2018.

Implementation of the proposed Reclamation Plan would involve VMT from employees and soil haul truck trips accessing the project site; however, such trips would be redirected from existing soil disposal destinations in the project region. Thus, the haul trips would not be net new trips resulting from the project. In order to calculate existing VMT associated with soil hauling trips, three possible sources of soil were considered from sites in San Francisco, San Mateo, and Santa Clara counties. Because the quantity of source material available at each site was not known, the three sites were assumed to ensure sufficient quantity of material for the project. The most distant source location in each County from the project site was also assumed to be conservative. The location coordinates for the three sources of soil are shown in Table 4.10-2 below.

Table 4.10-2
Locations of Soil Source Sites

Location	Latitude	Longitude
San Francisco	37°48'30.61" N	122°24'35.49" W
San Mateo	37°6'40.65" N	122°17'46.44" W
Santa Clara	37°3'54.70" N	121°12'48.36" W

Source: Rincon Consultants, Inc., 2020.

Trucks currently take or deliver soil to six sites across the Bay Area region – Ox Mountain in San Mateo County, Altamont in Alameda County, Pittsburg Keller Canyon in Contra Costa County, Novato Redwood in Marin County, Suisun City Potrero Hills in Solano County, and Hollister John Smith in San Benito County. The existing length of trips to the disposal sites from the three potential soil source sites were estimated, as shown in Table 4.10-3 below.

Table 4.10-3
Haul Truck Trip Distances: Existing Conditions (miles)

Origin	Ox Mountain	Altamont	Pittsburg Keller Canyon	Novato Redwood	Suisun City Potrero Hills	Hollister John Smith
San Francisco	27	52	38	32	53	99
San Mateo	10	48	55	51	70	81
Santa Clara	35	43	62	77	84	58

Source: Rincon Consultants, Inc., 2020.

Existing VMT was calculated based on the number of daily truck trips with the assumption that trips would be split between the three origin points and six destination sites for a total of 8.9 truck trips per day between each origin and destination site. A distribution for the estimated truck trips was assumed as follows: 45 percent from San Francisco County; 45 percent from San Mateo County; and 10 percent from Santa Clara County. The distribution is based on the assumption that it would be less economically viable to send trucks from the farthest point in Santa Clara County to the project site, given that closer locations are available. As shown in Table 4.10-4 below, total daily VMT associated with existing soil hauling activity is approximately 8,721 miles.

Throughout the duration of the proposed soil hauling activities, the proposed project would re-direct approximately 161 daily soil haul truck trips from their existing destinations to the project site, thereby altering trip distances for such truck trip compared to what occurs under existing conditions. As shown in Table 4.10-5, total daily haul truck VMT during project implementation would be approximately 6,046.

Table 4.10-4
Daily Haul Truck VMT under Existing Conditions

Origin	Ox Mountain	Altamont	Pittsburg Keller Canyon	Novato Redwood	Suisun City Potrero Hills	Hollister John Smith	Total
San Francisco	242	465	340	286	474	886	2,692
San Mateo	89	429	492	456	626	725	2,818
Santa Clara	313	385	555	689	751	519	3,211
						Total:	**8,721**

Source: Rincon Consultants, Inc., 2020.

Table 4.10-5
Haul Truck Daily VMT During Reclamation

Origin	Destination (Project Site)
San Francisco	1,377
San Mateo	3,043
Santa Clara	1,626
Total	**6,046**

Source: Rincon Consultants, Inc., 2020.

According to the Traffic Analysis prepared for the proposed project, it is anticipated that implementation of the Reclamation Plan would require five employees on-site, which would result in 10 daily employee commute trips during peak hours when factoring in that each employee would result in two peak hour trips per day, as all employees are expected to arrive during the AM peak hour and depart during the PM peak hour. Of the 10 daily employee commute trips occurring during the peak hours of project implementation, only four trips would be net new trips, because only two of the five employees would be net new employees as compared to existing conditions. Total VMT from the four net new one-way employee commute trips was calculated using the default one-way home-work trip distance for San Mateo County of 10.8 miles, from the California Emissions Estimator Model. As shown in Table 4.10-6, the four net new one-way employee commute trips would generate approximately 43.2 daily VMT.

Table 4.10-6
Employee Commute Daily VMT During Reclamation

Home-Work Trip Distance (miles)	Number of Daily One-Way Trips	Total Daily Employee VMT
10.8	4	43.2

Source: Rincon Consultants, Inc., 2020.

Project-Specific Impacts and Mitigation Measures

The following discussion of impacts related to transportation is based on implementation of the proposed project in comparison to existing conditions and the standards of significance presented above.

4.10-1 Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. Based on the analysis below, the impact is *less than significant*.

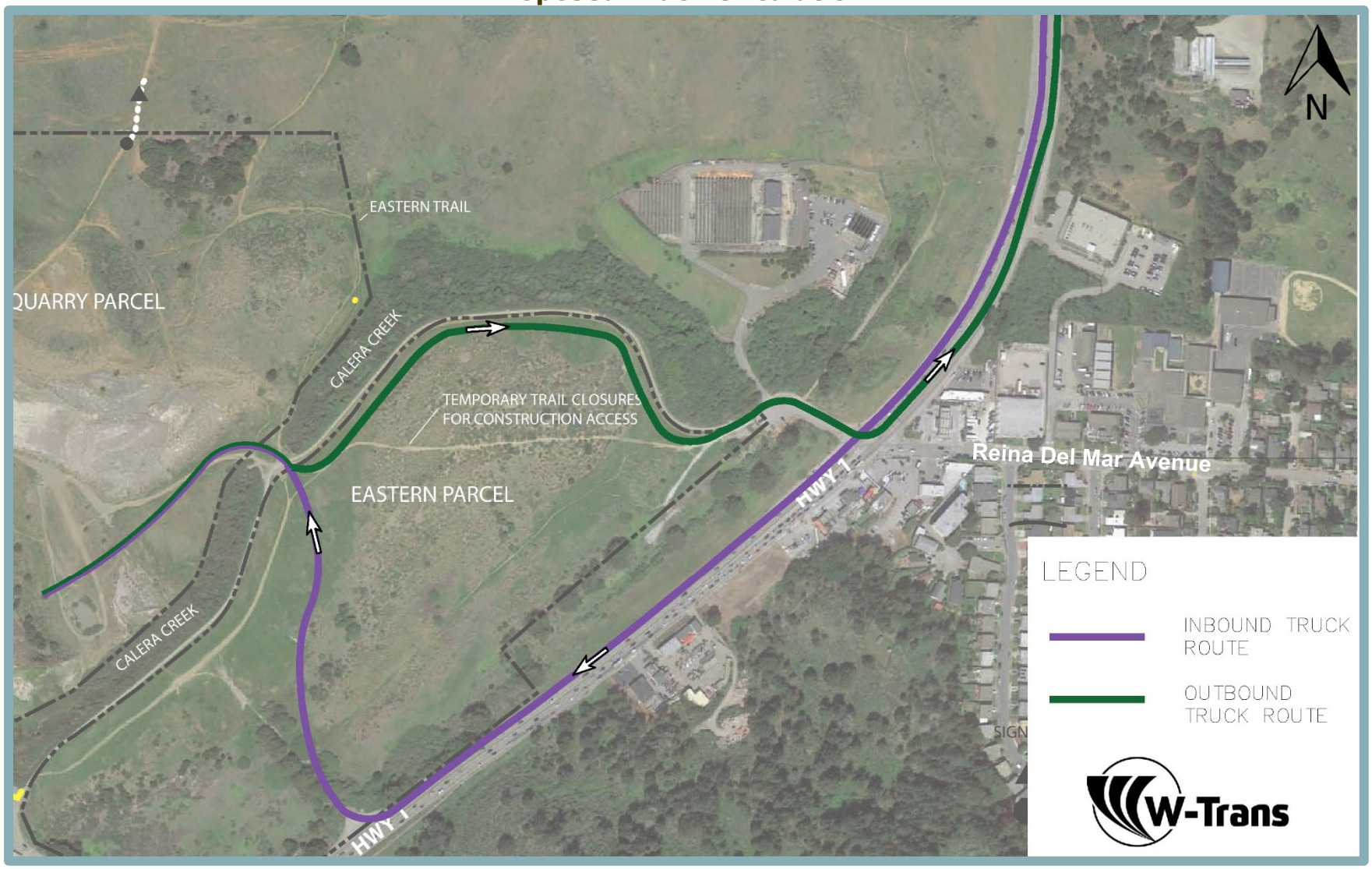
The proposed project would include reclamation of the Quarry site. The majority of the reclamation activity would occur on the Quarry Parcel, with minor site improvements such as grading for access roads and through truck traffic occurring on the Eastern Parcel. The project would involve earthwork to regrade the over steepened slopes of the former Quarry into a safe condition, installation of new drainage infrastructure, and construction of new unpaved trails. The Eastern Parcel would be reclaimed to include a complex of four tiered seasonal wetlands totaling 1.55 acres and a 0.20-acre California red-legged frog bentonite clay-lined pond.

During reclamation activities, the project would generate vehicle trips associated with soil haul truck activity and construction employee commutes. Trucks hauling fill to the site would come from the north and access the project site from southbound SR 1 through the Old Quarry Road connection, an existing dirt access road located approximately one-third mile south of Reina Del Mar Avenue (see Figure 4.10-1).

Vehicle egress from the site would be accommodated at the existing traffic signal at SR 1/Reina Del Mar Avenue. Trucks would turn left onto SR 1 and return to the north via I-280. Trucks would not use City streets at any time. A discussion of VMT associated with soil hauling and employee commutes is provided under Impact 4.10-2 below. Potential issues related to circulation and access hazards are discussed under Impact 4.10-3.

Upon completion of the proposed improvements, the project site would continue to serve as a recreational amenity for local residents, similar to existing conditions. The proposed trail improvements would serve primarily to improve the safety of the on-site trail network and alleviate existing erosion issues. Existing trails within the Eastern Parcel would only be maintained, as necessary, to create minimal impact on the trails and surrounding environment. Following project implementation, the existing trails within the Eastern Parcel would be returned to their original condition. Access from Rockaway Beach would be accommodated by way of the existing CCMP Trail. Overall, the proposed improvements would not be anticipated to substantially increase pedestrian and bicycle traffic within, or to and from the site, relative to existing conditions. Because the proposed project would not substantially increase the number of visitors to the site, the project would not affect long-term traffic patterns in the project vicinity.

Figure 4.10-1
Proposed Truck Circulation



Consistent with General Plan Circulation Element Policy 4, the proposed project would maintain safe access to the project site throughout reclamation. For example, as required as part of the Reclamation Plan's Access Plan (see Appendix H of the Reclamation Plan), a flagperson would be utilized to maintain public access and safety during periods of the Reclamation Plan that would involve movement of equipment and materials on- and off-site by way of the lateral trail from the CCWRP parking lot to the Calera Creek crossing of the CCMP Trail. The proposed trail improvements would be consistent with Circulation Element Policy 9 related to developing safe and efficient access to local points of interest within the City, as well as Policy 10 related to providing recreational access in keeping with the recreational area's natural environment and the quality of the recreational experience offered. Throughout reclamation, the improvements would involve closure of trails for periods of time. The CCMP Trail and parts of the Eastern Trail would have occasional closures to provide construction equipment access, but both would be left generally undisturbed. The internal trails through the Quarry parcel would be intermittently or permanently closed for improvements. Thus, obstruction of pedestrian and bicycle access through the project site would be temporary and would cease upon completion of improvements. The proposed improvements would not affect access to the existing bus stops located to the northeast of the site along SR 1. Furthermore, given that the project would not alter access to the project site relative to existing conditions, the project would not conflict with Policy 15 related to promoting orderly circulation.

Based on the above, the project would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities, and a ***less-than-significant*** impact would occur.

Mitigation Measure(s)

None required.

4.10-2 Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b). Based on the analysis below, the impact is *less than significant*.

Section 15064.3 of the CEQA Guidelines states that generally, VMT is the most appropriate measure for evaluating the transportation impacts of a project. Per Section 15064.3(b), VMT exceeding an applicable threshold of significance may indicate a significant impact. For the purposes of this analysis, a significant VMT impact would occur if VMT associated with employee trips and soil haul truck trips for the proposed reclamation activities is increased relative to soil haul truck trips occurring without the proposed project.

As discussed previously and shown in Table 4.10-5, total daily VMT associated with soil hauling and employee commutes during project implementation would be approximately 6,046; however, such trips would be redirected from existing soil disposal destinations in the project region. Thus, the haul trips would not be net new trips resulting from the project. To determine the net change in VMT associated with the proposed project, total VMT under proposed project conditions was subtracted from total VMT associated with existing soil hauling activity in the project region under existing conditions. As shown in Table 4.10-7 below, the net change in haul truck daily

VMT associated with the proposed project would be approximately 2,675 fewer miles. Accounting for 43.2 net new daily VMT associated with employee commutes to and from the site, the proposed project would decrease daily VMT by 2,631.8 miles during reclamation.

Table 4.10-7
Change in Daily Haul Truck VMT During Reclamation

Existing	With Project	Net Change
8,721	6,046	-2,675

Source: Rincon Consultants, Inc., 2020.

Given that the proposed project would result in a net reduction of VMT during implementation of the Reclamation Plan and would not alter regional VMT upon completion of the proposed improvements, the project would not conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b). Thus, a ***less-than-significant*** impact would occur.

Mitigation Measure(s)

None required.

4.10-3 Substantially increase hazards to vehicle safety due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment), or result in inadequate emergency access. Based on the analysis below and with implementation of mitigation, the impact is *less than significant*.

The primary project components that have the potential to substantially increase hazards or result in inadequate emergency access are associated with the trucks hauling fill to the project site and the off-site water truck that would be used as part of the proposed Dust Control Plan. Discussions on each are provided below.

Potential Haul Truck Hazards

Trucks hauling fill to the site would come from the north and access the project site from southbound SR 1 through the Old Quarry Road connection, an existing dirt access road located approximately one-third mile south of Reina Del Mar Avenue (see Figure 4.10-1 above). Vehicle egress from the project site would be accommodated at the existing traffic signal at the SR 1/Reina Del Mar Avenue intersection. Trucks would turn left onto SR 1 and return to the north by way of I-280. Haul trucks would not use City streets at any time. Within the project site, trucks would have the opportunity to queue within the Eastern Parcel prior to passing through the existing Calera Creek overcrossing and accessing the Quarry Parcel within the western portion of the site.

The proposed project would not include any changes to the existing project site access points. As part of the Traffic Analysis prepared for the proposed project by W-Trans, the existing truck access at SR 1 and Old Quarry Road was reviewed for adequacy in terms of sight distance, turning radii, and overall vehicle maneuverability. The ingress point was found to be acceptable for truck turning radii and approximately 1,300 feet

of truck queuing space would be available between the Calera Creek crossing within the site and SR 1 to the east of the site. The queuing area could accommodate approximately 26 trucks, with buffer distance between each truck. Based on a review of the sight distance as Old Quarry Road enters the parking lot near the CCWRP and the queue space approaching Reina Del Mar Avenue, the Traffic Analysis concluded truck circulation on Old Quarry Road is expected to operate acceptably within the project site.

The Traffic Analysis also included an analysis of right-turn storage length for southbound vehicles entering the project site at Old Quarry Road. At unsignalized intersections, such as the SR 1/Old Quarry Road intersection, storage length is based on the number of turning vehicles likely to arrive in an average two-minute period during a peak hour. The proposed project is expected to generate a maximum of 29 inbound trips during the peak hour, or approximately one trip during an average two-minute period. Of the 29 maximum inbound trips during the peak hour, most trips are anticipated to be made by trucks. Because right turns can be made without stopping, substantial queuing would not be expected; thus, queuing storage would not be necessary. However, adequate length to decelerate would be required.

The posted speed limit on SR 1 near the project site is 45 mph. Under Caltrans guidelines, the speed at which drivers would enter the turn lane can be up to 20 mph lower than the design speed, resulting in vehicles decelerating to 25 mph before entering the turn lane. For such a speed reduction, the deceleration length required is 195 feet. Currently, the existing SR 1 shoulder in the southbound direction has a width of 10 feet for approximately 245 feet in advance of Old Quarry Road. The existing shoulder may be used in lieu of a dedicated right-turn lane, and would allow deceleration from a speed greater than 25 mph. Thus, per the Traffic Analysis, adequate deceleration distance would be provided for both employee commute vehicles and soil haul trucks accessing the project site.

With respect to the project egress at the SR 1/Reina Del Mar Avenue intersection, project-related vehicle safety hazards would not occur at the CCWRP parking lot due to excessive queuing by haul trucks with the inclusion of a flagperson at the location. According to the Queuing Analysis prepared by W-Trans that examines the project's effects on the SR 1/Reina Del Mar Avenue intersection, the proposed project would generate 16 truck trips during each of the ten hours of daily reclamation activities, resulting in one truck trip generated, on average, every three minutes and 45 seconds. With the addition of project-generated traffic, the effective green time at the SR 1/Reina Del Mar Avenue intersection would be 10 seconds during an AM peak hour signal cycle and 5.5 seconds during the PM peak hour. Based on a conservative start-up loss time of two seconds and a value of two seconds of green time per vehicle, the Queuing Analysis determined that two haul trucks would exit during an AM peak hour signal cycle and one truck would exit during a PM peak hour signal cycle.

Using a conservative assumption of 55 feet per truck, the Queuing Analysis determined that the anticipated queue at any time would be three trucks during the AM peak hour and two trucks during the PM peak hour. The roadway between the intersection limit line and parking lot is 140 feet and could accommodate two trucks. Queuing is expected throughout the day during reclamation activities; however, a flagperson could manage the queues. The flagperson would direct all trucks to queue

on the Easter Parcel egress route to avoid any traffic backup in the intersection and/or CCWRP parking lot and would control the movement of trucks through the parking area. The positioning of the flagperson at the project egress would allow for full, unobstructed public use of the parking lot. In addition, based on the number of trucks exiting the site each day, the reclamation timeline would not be delayed. Therefore, through the addition of a flagperson to manage truck queues at the project egress, project-related vehicle safety hazards would not occur at the SR 1/Reina Del Mar Avenue intersection and/or CCWRP parking lot. However, as the Reclamation Plan does not currently require a flagperson at the foregoing location, the project could result in a significant impact.

With respect to public safety impacts due to interior vehicle circulation during project implementation, vehicles and employees would access the Quarry Parcel from the Eastern Parcel by way of the existing Calera Creek crossing. The movement of reclamation equipment and materials would cause temporary closure of the CCMP Trail from the CCWRP parking lot to the Calera Creek crossing. The closure would mostly occur during the initial three to four days and the last three to four days of reclamation work. The closure would be done in order to transport equipment to the Quarry Parcel as workers enter and exit the site during the morning and evening hours. Closures would be minimized and constrained to low-use times to the greatest extent feasible; however, for the duration of reclamation activities, trucks would require passage over the Calera Creek crossing between the Eastern Parcel and Quarry Parcel, which could affect public safety for the remainder of project implementation when the CCMP Trail would be open to the public from the CCWRP parking lot to the Calera Creek crossing. Nonetheless, as discussed under Impact 4.10-1, the Reclamation Plan's Access Plan requires that a flagperson be posted at the crossing to ensure pedestrians can cross safely during the duration of reclamation, thereby minimizing safety hazards to the public during project implementation. Additionally, it should be noted that Mitigation Measure 4.3-2(c) (detailed under Impact 4.3-2 in Chapter 4.3, Biological Resources, of this EIR), requires that exclusionary fencing be placed around the project's proposed areas of disturbance to prevent California red-legged frog and San Francisco garter snake from entering such locations. The exclusionary fencing would stand at least 36 inches above the ground surface, which would serve to apprise and deter members of the public from entering areas of the project site undergoing reclamation.

Throughout reclamation and upon completion of the improvements, adequate emergency access to the project site would be maintained. Emergency vehicles would be able to access the project site at either the SR 1/Old Quarry Road intersection or the SR 1/Reina Del Mar Avenue intersection, similar to existing conditions. Given that both access points have been determined to provide adequate sight distance and roadway width for soil haul trucks, the access points would also be able to accommodate emergency vehicles.

Based on the above, without the inclusion of a flagperson to manage haul truck queues at the SR 1/Reina Del Mar Avenue intersection, the proposed project could substantially increase hazards to vehicle safety due to a geometric design feature or incompatible uses, or result in inadequate emergency access. Therefore, a significant impact could occur.

Off-Site Water Truck Hazards

The proposed Dust Control Plan is anticipated to use an off-site water truck, which would fill up at an appropriate location in the project vicinity at regularly scheduled intervals. The water truck would then refill a high-volume frac tank, which would be situated near the Calera Creek crossing, between the Eastern Parcel and Quarry Parcel. The off-site water truck would access the Eastern Parcel by way of the project ingress from southbound SR 1 (see Figure 4.10-1). The ingress would proceed through the Eastern Parcel along Old Quarry Road until reaching the Calera Creek crossing. The off-site water truck would exit the Eastern Parcel, as needed, through the project egress, at the existing traffic signal at the SR 1/Reina Del Mar Avenue intersection. As such, with respect to the off-site water truck's potential to substantially increase hazards or incompatible uses associated with the project ingress/egress, the water truck would, at most, have a similar impact level as the potential impacts associated with the project haul trucks, discussed above.

With respect to potential hazards associated with the water truck's off-site refilling, the water truck is reasonably anticipated to be at risk of generating circulation hazards typical of similarly sized trucks. Common transportation accidents associated with water truck-sized vehicles involve large blind spots and narrow turn radii, both of which occur due to the size of the truck. Depending on the traffic and pedestrian volumes at the water source location, as well as the available space in which the water truck would be allowed to maneuver, the water truck could result injuries to pedestrians or bicyclists or damage to vehicles or structures. In addition, Vallemar Elementary School is located approximately 1,000 feet to the east of the SR 1/Reina Del Mar Avenue intersection. Considering that vehicle, bicyclist, and pedestrian volumes would increase in the school vicinity during the AM and PM peak hours when students are either attending or leaving the school, off-site water truck trips could potentially result in hazardous conditions, should the water truck refill in close proximity to the school. Thus, without specific standards in place to ensure the time and location in which the off-site water truck can refill as well as requirements establishing an appropriate distance that the water source must be from the Vallemar Elementary School, the proposed project could substantially increase hazards due to a geometric design feature or incompatible uses, and a significant impact could occur.

Conclusion

Based on the above, without the inclusion of a flagperson to manage haul truck queues at the SR 1/Reina Del Mar Avenue intersection or specific standards detailing the time and location in which the off-site water truck can refill, the proposed project could substantially increase hazards to vehicle safety due to a geometric design feature or incompatible uses, or result in inadequate emergency access. Therefore, a ***significant*** impact could occur.

Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the above potential impact to a *less-than-significant* level.

4.10-3(a) *During soil hauling activities conducted as part of the proposed Reclamation Plan, including the off-site water truck refilling conducted as part of the Dust Control Plan, the project applicant shall have a*

flagperson stationed at the project egress to manage haul truck queues in order to ensure full, unobstructed public use of the public parking lot located west of the SR 1/Reina Del Mar Avenue intersection is maintained and project haul truck queues do not exceed the 140-foot storage limit for eastbound traffic at the SR 1/Reina Del Mar Avenue intersection. The inclusion of a flagperson to manage truck queues at the foregoing location shall be included in the Final Reclamation Plan, subject to review and verification by the City of Pacifica Planning Director.

4.10-3(b) *Prior to the issuance of a grading permit, the Final Dust Control Plan shall be revised as required by Mitigation Measure 4.8-1 to include the exact location at which the off-site water truck would refill and to establish a time limitation of 8:00 AM to 5:00 PM for water truck refilling. The City Engineer shall further restrict the time period and location for water truck refilling, as necessary, to abide by the following standards:*

- *The project applicant shall submit to the City Engineer the truck turning template for the specific model of water truck to be used;*
- *The project applicant shall submit to the City Engineer a plan of the streets that would be located within 500 feet of the approved water refill location, which shall include street widths and grades;*
- *The final water refill location shall provide sufficient space to accommodate the water truck's movements, including turns and reverses, based on the truck turning template for the specific model of water truck to be used; and*
- *Temporary parking restrictions shall be put in place near the final water refill location, as necessary, to ensure that adequate width is available to enable the water truck's movements based on the truck turning template for the specific model of water truck to be used.*

Proof of compliance with the foregoing standards, which shall be documented in the Final Dust Control Plan, shall be subject to review and approval by the City Engineer.

4.10-3(c) *Implement Mitigation Measure 4.8-1.*

Cumulative Impacts and Mitigation Measures

As defined in Section 15355 of the CEQA Guidelines, "cumulative impacts" refers to two or more individual effects which, when considered together, are considerable, compound, or increase other environmental impacts. The individual effects may be changes resulting from a single project or a number of separate projects. The cumulative impact from several projects is the change in the environment that results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects.

4.10-4 Cumulative impacts to transportation. Based on the analysis below, the project's incremental contribution to the significant cumulative impact would be *less than significant*.

As cumulative development occurs within the City of Pacifica pursuant to the City's General Plan, traffic volumes along local roadways will increase relative to existing conditions, potentially resulting in impacts to roadway facilities along SR 1 and other City intersections. However, as discussed above, upon completion of the proposed reclamation, the proposed project would not generate net new vehicle traffic relative to existing conditions. In addition, the project would not modify the existing project access points along SR 1 and would not include any changes to existing roadway infrastructure in the project vicinity. Existing trails within the Eastern Parcel would only be maintained, as necessary, to create minimal impact on the trails and surrounding environment. Following project implementation, the existing trails within the Eastern Parcel, including Old Quarry Road, would be returned to their original condition. Access from Rockaway Beach would be accommodated by way of the existing CCMP Trail. Access from SR 1, by way of Old Quarry Road, would be closed to vehicles following completion of the Reclamation Plan. Thus, the proposed project would not affect long-term traffic patterns or traffic safety in the project vicinity.

Based on the above, the proposed project's incremental contribution to cumulative traffic impacts would be ***less than significant***.

Mitigation Measure(s)

None required.

4.11 Utilities and Service Systems

4.11. UTILITIES AND SERVICE SYSTEMS

4.11.1 INTRODUCTION

The Utilities and Service Systems chapter of the EIR summarizes the setting information and evaluates the potential for the proposed project to result in new demands related to water supply, wastewater systems, and solid waste disposal, as well as electrical, natural gas, and telecommunications utilities. Information for the Utilities and Service Systems chapter was primarily drawn from the City of Pacifica General Plan,[1] and a C.3 and C.6 Development Review Checklist (see Appendix J of the Reclamation Plan).

4.11.2 EXISTING ENVIRONMENTAL SETTING

The following section describes the existing utilities and service systems in the project area, including water supply, sewer services, stormwater systems, gas and electricity infrastructure, and solid waste.

Water Supply Infrastructure

Water supply for the City of Pacifica, including the project area, is provided by the North Coast County Water District (NCCWD). The NCCWD does not currently rely on groundwater wells for water supply. According to the 2020 Urban Water Management Plan (UWMP), the NCCWD is estimated to have sufficient water supplies to serve the City in normal years through the year 2045 to accommodate buildout of the General Plan.[2] Further analysis of NCCWD's projected water supplies in normal, single dry, and multiple dry years is discussed below. Existing water lines in the project area are located within San Marlo Way to the south and within State Route (SR) 1 to the east. The project site does not currently require connection to existing water infrastructure or the use of any water services.

Sewer Services

Sewer service for the project area is provided by the City of Pacifica. The City's wastewater is treated at the Calera Creek Water Recycling Plant (CCWRP), located directly north of the project site. The plant's average discharge is 1.9 million gallons per day (mgd) to Calera Creek, which flows about one-half mile through constructed wetlands to the Pacific Ocean.[3] The CCWRP was designed to handle an annual average daily wastewater flow of 4.0 million gallons per second (mgs), and is anticipated to have enough capacity to accommodate buildout of the General Plan. Existing wastewater conveyance infrastructure in the project area includes a 12-inch sanitary sewer force main located within the parking lot to the south, a 20-inch force main within Dondee Way, a 12-inch force main within San Marlo Way, as well as an additional sanitary sewer line that runs along the southern border of the site to the south within San Marlo Way. Bathrooms are not currently provided at the project site, and, thus, sewer service is not currently required at the site.

---

1 City of Pacifica. *City of Pacifica General Plan.* Adopted 1980.
2 North Coast County Water District. *2020 Urban Water Management Plan.* June 16, 2021.
3 Regional Water Quality Control Board San Francisco Bay Region. *City of Pacifica, Calera Creek Water Recycling Plant and Wastewater Collection System, Pacifica, San Mateo County.* Available at: https://www.waterboards.ca.gov/sanfranciscobay/board_info/agendas/2017/April/7_ssr.pdf. April 12, 2017.

Stormwater Systems

Surface water control standards for projects required to comply with Provision C.3 of the Regional Water Quality Control Board (RWQCB) Municipal Regional Stormwater National Pollutant Discharge Elimination System (NPDES) Permit order No. R2-2015-0049 are discussed in Chapter 4.6, Hydrology and Water Quality, of this EIR. The San Mateo Countywide Water Pollution Prevention Program developed a C.3 Stormwater Technical Guidance document for implementing the RWQCB Municipal Regional Stormwater NPDES Permit C.3 requirements, known as the C.3 Standards.[4] The City of Pacifica has adopted the County C.3 Standards as part of the City's NPDES General Permit requirements.

Currently, three different drainage line connections are provided at the eastern portion of the project site, along SR 1. The southernmost storm drain line provides connection to an existing storm drain inlet within SR 1. The two northernmost storm drain lines connect to the existing City storm drain infrastructure, across SR 1. In addition, three existing culverts are located within the project site. One 24-inch polyvinyl chloride (PVC) culvert is located within the southern portion of the project site, near the existing parking lot to the south. Another 24-inch corrugated metal pipe (CMP) culvert is located within the quarry pit and extends from an existing wetland to Calera Creek. A third, 72-inch high-density polyethylene (HDPE) culvert, is located within the central portion of the project site and conveys water underneath the existing trail. It should be noted that the project site also contains natural drainage features, such as wetlands and a small ephemeral ditch running through the southern portion of the project site.

Gas and Electricity Infrastructure

Electricity and natural gas service in the project area are provided by Pacific Gas & Electric (PG&E). PG&E is one of the largest providers of electricity and natural gas throughout the Bay Area. PG&E is a San Francisco based, private company, publicly regulated by the California Public Utilities Commission (CPUC) and provides electricity and natural gas to the majority of Northern California. PG&E has ample resources to meet a wide range of projected growth; however, when the time comes, additional improvements to the facilities may be required to meet future growth demands. It should be noted that on January 29, 2019, PG&E announced that the company would file for bankruptcy. The CPUC, in coordination with the Governor's office and other agencies, is currently monitoring developments regarding the bankruptcy filing to ensure that all customers continue to receive electric and natural gas service.[5] PG&E has not indicated that any disruptions to service will occur as a result of the bankruptcy filing.

Solid Waste

Solid waste collection services in the project area are provided by Recology of the Coast, a Division of Recology. Recology provides curbside collection of mixed waste (garbage and recyclables), green waste, and some universal and household hazardous wastes by appointment. Solid waste is disposed of at the Ox Mountain Landfill. The 173-acre disposal area is permitted to accept a maximum of 3,598 tons per day.[6] The Ox Mountain Landfill has a permitted design capacity of 60,500,000 cubic yards and, as of December 2015, has a remaining capacity of

---

4 City/County Association of Governments of San Mateo County, San Mateo Countywide Water Pollution Prevention Program. *C.3 Stormwater Technical Guidance.* June 2016.

5 California Public Utilities Commission. *PG&E Bankruptcy.* Available at: https://www.cpuc.ca.gov/pgechapter11/. Accessed October 2019.

6 California Department of Resources Recycling and Recovery (CalRecycle). *SWIS Facility Detail, Corinda Los Trancos Landfill (Ox Mtn) (41-AA-0002)*. Available at: https://www2.calrecycle.ca.gov/swfacilities/Directory/41-AA-0002/. Accessed February 2020.

22,180,000 cubic yards. Under current land use and development conditions, the landfill has a permitted lifespan extending to 2034.

Existing trash receptacles are located at the beginning of three different trails on the project site. One trash receptacle is located at the corner of the parking lot and Rockaway Beach to the south of the site. Three additional trash receptacles are located near the existing Calera Creek Multi-Purpose (CCMP) Trail at the southern parking lot. Two additional trash receptacles are located near the existing CCMP Trail at the parking lot near the CCWRP.

4.11.3 REGULATORY CONTEXT

The following sections provide a summary of the federal, State, and local regulations pertaining to utilities and service systems that are applicable to the proposed project.

Federal Regulations

The federal environmental laws and policies relevant to utilities and service systems are primarily related to water quality, which is addressed in Chapter 4.6, Hydrology and Water Quality, of this EIR.

State Regulations

The following are the State environmental laws and policies regarding utilities and service systems that are relevant to the proposed project.

Assembly Bill (AB) 1881

AB 1881, the Water Conservation in Landscaping Act of 2006, required the Department of Water Resources (DWR) to update the Model Efficient Landscape Ordinance. Furthermore, AB 1881 required local agencies to adopt the updated model ordinance or an equivalent ordinance by January 1, 2010. If local jurisdictions failed to adopt the updated model ordinance or an equivalent by January 1, 2010, the DWR's updated model ordinance would automatically be adopted by statute. On July 15, 2015, the DWR approved revisions to the Model Water Efficient Landscape Ordinance (MWELO). As of December 1, 2015, the County of San Mateo adopted the ordinance and began enforcement of the MWELO. In addition, Chapter 7 of the Pacifica Municipal Code adopts the California Green Building Code, which includes the MWELO.

Urban Water Management Planning Act

In 1983, the California Legislature enacted the Urban Water Management Planning Act (Water Code Sections 10610 – 10656). The Act requires that every urban water supplier that provides water to 3,000 or more customers, or that provides over 3,000 acre-feet of water annually shall prepare and adopt an UWMP within a year of becoming an urban water supplier and update the plan at least once every five years. The Act specifies the content that is to be included in an UWMP, and states that urban water suppliers should make every effort to ensure the appropriate level of reliability in its water service sufficient to meet the needs of its various categories of customers during normal, dry, and multiple-dry years. The Act also states that the management of urban water demands and the efficient use of water shall be actively pursued to protect both the people of the State and their water resources. The NCCWD prepared an UWMP in 2020.[7]

[7] North Coast County Water District. *2020 Urban Water Management Plan*. June 16, 2021.

California Integrated Waste Management Act - Assembly Bill 939

AB 939, the California Integrated Waste Management Act of 1989 contains requirements affecting solid waste disposal in California. According to AB 939, all cities and counties are required to divert 25 percent of all solid waste from landfill facilities by January 1, 1995, and 50 percent by January 1, 2000. Solid waste plans are required to explain how each city's AB 939 plan will be integrated within the respective county plan. The plans must promote (in order of priority) source reduction, recycling and composting, and environmentally safe transformation and land disposal. Cities and counties that do not meet this mandate are subject to $10,000-per-day fines.

Local Regulations

The following local goals and policies are applicable to the proposed project.

City of Pacifica General Plan

The following applicable goals and policies related to utilities and service systems are from the City of Pacifica General Plan.

Community Facilities Element

Policy 1 Maintain and improve the present level of City services.

Policy 3 Encourage San Mateo County and other agencies to expand, upgrade, and evaluate the quality of the services they provide in Pacifica, particularly public transportation.

Land Use Element

Policy 4 Continue to cooperate with other public agencies and utilities in applying compatible uses for their lands, rights-of-way and easements.

Local Coastal Land Use Plan

The City of Pacifica's Local Coastal Land Use Plan is the basis for the Local Coastal Implementation Program, including a permit issuing procedure, zoning ordinance revisions, and other implementation programs. The relevant policies within the Local Coastal Land Use Plan that relate to utilities and service systems are listed below.

Coastal Act Policies

Policy 12 The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface waterflow, encouraging wastewater reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration spills that do occur.

4.11.4 IMPACTS AND MITIGATION MEASURES

The following section describes the standards of significance and methodology used to analyze and determine the proposed project's potential impacts related to utilities and service systems. In addition, a discussion of the project's impacts, as well as mitigation measures where necessary, is also presented.

Standards of Significance

Consistent with Appendix G of the CEQA Guidelines, determination of significant impacts is based on whether the proposed project would result in the following:

- 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;
- Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years;
- Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments;
- 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; or
- Comply with federal, State, and local management and reduction statutes and regulations related to solid waste.

Method of Analysis

Determinations of the significance of the proposed project's impacts were made based on the project's modifications to existing or planned utilities, and the ability of the existing utilities to accommodate the proposed project, using the above significance criteria.

Project-Specific Impacts and Mitigation Measures

The following discussion of impacts is based on the implementation of the proposed project in comparison with the standards of significance identified above.

4.11-1 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. Based on the analysis below, the impact is *less than significant*.

The following sections describe the water, wastewater treatment, stormwater drainage, electric power, natural gas, and telecommunications facilities improvements that would be necessary to serve the proposed project.

Water Supply Infrastructure

As discussed above, water supply for the project area is provided by the NCCWD. Water supply infrastructure in the project area consists of an existing 12-inch water line that starts within the southern portion of the site, and extends across SR 1 to the southeast. The proposed project would include reclamation activities such as trail improvements, grading, and revegetation of the project site. Because the proposed project would not include development of structures to be inhabited by residents or visitors, connection to existing water supply infrastructure would not be necessary. Furthermore, the proposed project would not include a permanent irrigation system related to revegetation of the project site. Per the proposed Revegetation Plan,

hydroseeding would occur between October 15 and November 15, which would be directly prior to the annual wet season. Irrigation would not be necessary for seed germination and proliferation, as rains during the wet season would provide ample hydrology. Irrigation would be avoided in order to avoid facilitating the invasion of nonnative species. In the event the wet season does not provide enough rainfall, a water truck could be utilized for supplemental hydrology. Additionally, vegetation of the mitigation wetlands in the Eastern Parcel would be conducted by way of broadcasting seed. Planting would occur directly above and below the waterline, as the mitigation wetlands have been designed to be supported under natural conditions and would not require an irrigation system.

Based on the above, the proposed project would not require water services, and, thus, would not require or result in the relocation or construction of new or expanded water facilities, and a less-than-significant impact would occur.

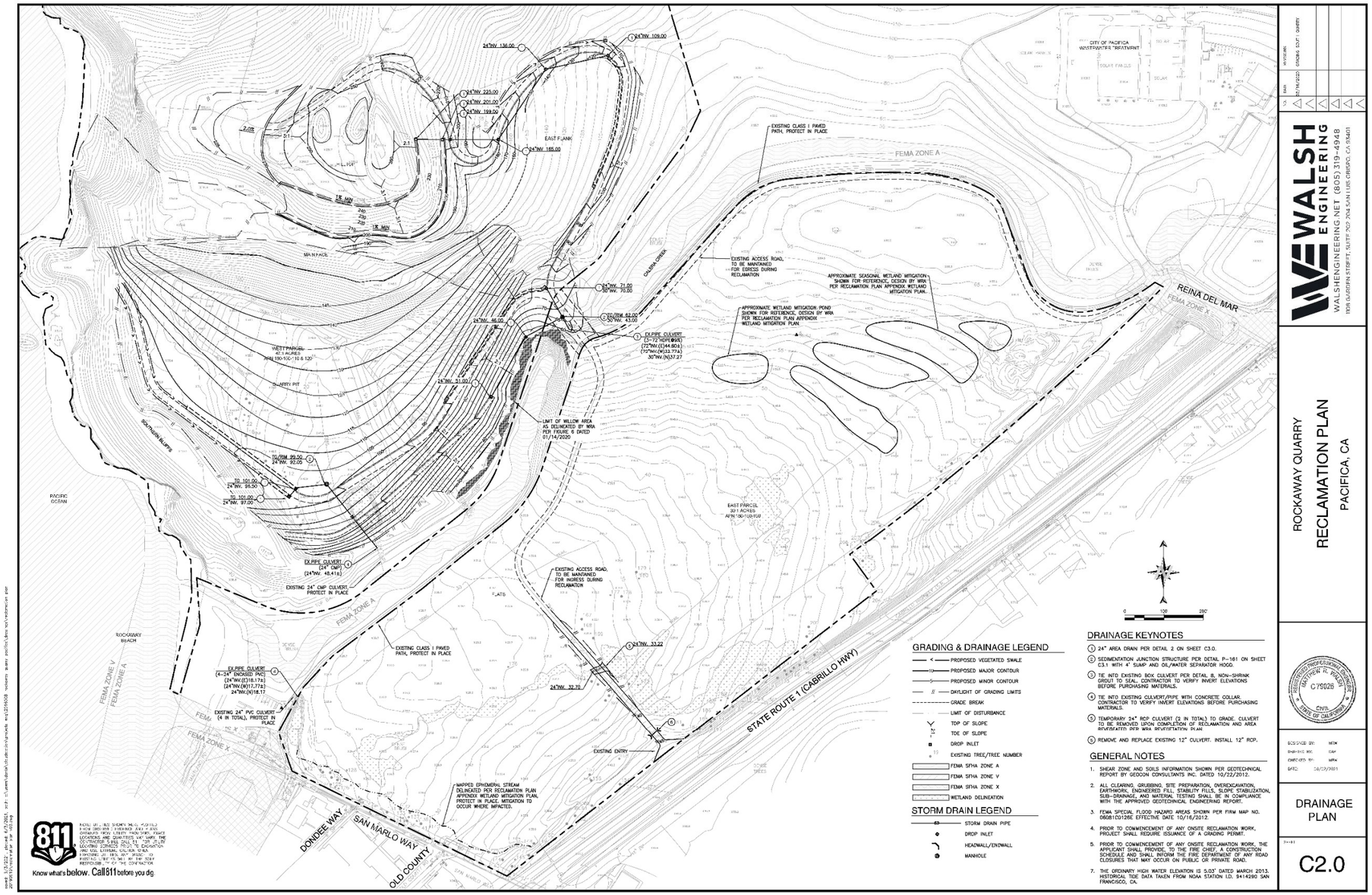
Wastewater Conveyance Infrastructure

Sewer services are provided to the project area by the City of Pacifica. Wastewater is ultimately treated at the CCWRP, located directly north of the project site, which ultimately discharges treated water in Calera Creek. As noted above, sanitary sewer infrastructure in the project area consists of sewer lines within Dondee Way, San Marlo Way, and SR 1. The proposed project would include various mining reclamation activities, such as upgrading and construction new trails and grading to improve slope stability. None of the proposed improvements would result in the construction of restrooms or other land uses which could generate wastewater. As such, the proposed project would not include the use or construction of any restrooms or generate any wastewater. Therefore, the proposed project would not include development that would require connection to the City's existing wastewater infrastructure or the construction of new wastewater infrastructure and there would be no impact.

Stormwater Systems

As discussed in Chapter 4.6, Hydrology and Water Quality, the proposed project would include grading and softening of the site's slopes, and, thus, would not result in increased peak flow rates. Nonetheless a brief discussion of the proposed stormwater system is provided. As shown in Figure 4.11-1, the proposed project would include grading of the Hilltop to allow stormwater to drain in the southerly direction. Two drainage terraces with a concrete ditch would be built along the graded slope on the southern face of the Hilltop to collect treated runoff. The two terraces would run parallel to each other with the lower terrace approximately 30 feet below the upper terrace. A concrete ditch located along the multi-use trail would capture runoff from the hillside below the Hilltop. The three ditches would then flow into a subsurface storm drain system that follows the multi-use trail down into the sedimentation junction structure. The east flank would not be altered except for the multi-use trail. A concrete ditch would be built within the East Flank, along the new trail. The ditch would have inflows to the storm drain system at varying intervals. The stormwater would flow down the access road and into the sedimentation junction structure for treatment.

Figure 4.11-1
Drainage Plan



The Quarry Face and Quarry Pit would be filled in to create a slope that mimics what would be the natural condition before mining activities occurred. Stormwater would sheet flow along the hillside to the concrete ditch located along the proposed multi-use trail. Additionally, a graded terrace with a concrete ditch would be constructed to prevent direct runoff into Calera Creek. Both the runoff from the hillside and runoff collected in the terrace would be directed to the sedimentation junction structure.

The western portion of the Southern Bluff would be preserved; however, the interior slope would be softly graded towards the proposed trail. Runoff would sheet flow to the vegetated swale located along the base of the bluff. From the base, the stormwater would be directed through a separate sedimentation junction structure and then to Calera Creek. The Eastern Parcel would continue to drain to the culverts located at the southwest corner of the property, where it ultimately discharges into Calera Creek. To avoid an impact the existing site drainage, two temporary 24-inch culverts would be installed to convey drainage from one side of the existing access road to the other. Also, the existing culverts near the site entrance along SR 1, would be replaced.

As discussed in Chapter 4.6, the permanent and temporary culverts would not result in significant impacts. Additionally, erosion and sediment control measures would be implemented to ensure that water quality is not affected by construction of the proposed project. Sediment and erosion control measures include silt fences, fiber rolls, drop inlet protection, gravel bags, traffic control, concrete washout area, revegetation with seeding, and jute netting. Therefore, the proposed project would not require or result in relocation or construction of new or expanded stormwater infrastructure, the construction or relocation of which could cause significant environmental effects, and a less-than-significant impact would occur.

Electricity, Natural Gas, and Telecommunications Infrastructure

As noted previously, PG&E maintains existing electrical and natural gas lines in the project vicinity. The proposed project would not include improvements to existing electrical, natural gas, and telecommunications infrastructure at the project site or in the project vicinity. Therefore, the proposed project would not require or result in relocation or construction of new or expanded electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects, and no impact would occur.

Conclusion

Based on the above, the proposed project would not 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. Thus, a ***less-than-significant*** impact would occur.

Mitigation Measure(s)

None required.

4.11-2 Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years. Based on the analysis below, *no impact* would occur.

As discussed in Chapter 4.6, Hydrology and Water Quality, the proposed project would not include development that would result in increased water usage. Water could be used during grading, revegetation, and reclamation activities; however, the amount of water would be minimal and operation of the proposed project would not require water infrastructure, irrigation, or any other permanent water usage. During grading activities, the proposed project would include the use of on-site and off-site water trucks to provide water to the Quarry Parcel for the purposes of dust control. However, the proposed Dust Control Plan would be temporary and water use would be at only the necessary level to complete such activities.

As discussed above under Impact 4.11-1, per the proposed Revegetation Plan, hydroseeding would occur between October 15 and November 15, which would be directly prior to the annual wet season. Irrigation would not be necessary for seed germination and proliferation, as rains during the wet season would provide ample hydrology. The revegetation activities would include native and non-native species, which would not require installation of any permanent irrigation measures. The Revegetation Plan indicates that different rates of hydroseeding would be implemented throughout the project site. Requirements for establishing water efficient landscaping include the use of compost and mulch, installation of climate adapted plants, restrictions on turf areas, and requirements for irrigation systems. Compliance with the City of Pacifica's MWELO, as required under Chapter 7 of the Municipal Code, would be ensured during the reclamation plan review process through submission of a landscape package to the City for review and approval. The landscape package would include a soil management report, landscape design plan, and other documents related to the proposed landscaping, and grading plans. With respect to the preliminary landscape plans provided at this time, the proposed project would include landscaping along internal trails and along the project frontages. Preliminary landscaping designs for the internal trails have been drafted in compliance with the MWELO.

Conclusion

Based on the above, the amount of water required during grading, revegetation, and reclamation activities would be minimal and the proposed project would not result in water infrastructure, irrigation, or any other permanent water usage. Therefore, potential impacts related to available water supplies during normal, dry, and multiple dry years are not relevant to the proposed project, and ***no impact*** would occur.

Mitigation Measure(s)

None required.

4.11-3 Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments. Based on the analysis below, the impact is *less than significant*.

As discussed above, the proposed project would not require services from any wastewater treatment providers. Therefore, construction of new wastewater treatment facilities or expansion of existing facilities would not occur. Because the proposed project would not require wastewater services, the project would not result in a determination by the wastewater treatment provider which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments. Thus, a ***less-than-significant*** impact would occur.

Mitigation Measure(s)
None required.

4.11-4 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, or conflict with federal, State, and local management and reduction statutes and regulations related to solid waste. Based on the analysis below, the impact is *less than significant*.

The project site currently consists of various trails and the remains of previous mining activities. Trash receptacles are located at the ends of the trails and are collected by the local service provider, Recology of the Coast. Modifications associated with the Reclamation Plan such as improving trails, modifying slopes, and revegetation are not anticipated to result in an increase in the number of visitors using trails on the site. Therefore, waste generated during operations of the proposed project would result in similar amounts of solid waste as is currently being generated. Construction debris would be disposed of in accordance with applicable federal, State, and local regulations and standards. All material exported during constriction and reclamation activities, which could potentially include raw construction materials, litter, food-contaminated wastes, fences, barriers, and/or flagging, would be off-hauled to Ox Mountain Landfill. Following completion of project construction, all raw construction materials and wastes from the project site would be removed and properly disposed. Given the remaining capacity available at the Ox Mountain Landfill, construction activities would not be anticipated to result in debris that would significantly deplete the available capacity.

Based on the above, the proposed project would be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs and would comply with federal, State, and local statutes and regulations related to solid waste. Thus, a ***less-than-significant*** impact would occur.

Mitigation Measure(s)

None required.

Cumulative Impacts and Mitigation Measures

As defined in Section 15355 of the CEQA Guidelines, "cumulative impacts" refers to two or more individual effects which, when considered together, are considerable, compound, or increase other environmental impacts. The individual effects may be changes resulting from a single project or a number of separate projects. The cumulative impact from several projects is the change in the environment that results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects.

For further detail related to the cumulative setting of the proposed project, refer to Chapter 5, Statutorily Required Sections, of this EIR.

4.11-5 Increase in demand for utilities and service systems associated with the proposed project, in combination with future buildout of the City. Based on the analysis below, the cumulative impact is *less than significant*.

As discussed above, while the proposed project could contribute incrementally to demand for utilities in the City of Pacifica, such contributions would not be substantial to any individual utility service provided within the region. The impacts of such demand are discussed in further detail below.

Water Supply

As noted above under Impact 4.11-1, the proposed project would not include development that would substantially deplete water supplies for the City. As discussed above under Impact 4.11-1, per the proposed Revegetation Plan, hydroseeding would occur between October 15 and November 15, which would be directly prior to the annual wet season. Irrigation would not be necessary for seed germination and proliferation, as rains during the wet season would provide ample hydrology. The revegetation activities would include native and non-native species, which would not require installation of any permanent irrigation measures. Therefore, the proposed project's contribution to the significant cumulative impact related to water supply infrastructure would be less than significant.

Wastewater Conveyance and Treatment

As noted under Impact 4.11-3 above, the project site is not currently supported by a wastewater treatment infrastructure nor would the proposed project require connection to the City's existing infrastructure. Therefore, the proposed project would result in no impact related to wastewater conveyance and treatment facilities.

Electricity, Natural Gas, and Telecommunications Facilities

Environmental effects associated with the construction of new or expanded electricity, natural gas, and telecommunications facilities would primarily be project-specific, rather than cumulative. As noted under Impact 4.11-1 above, the proposed project would not include improvements to the existing electrical, natural gas, and telecommunications infrastructure at the project site or in the project vicinity.

Therefore, the proposed project would result in no impact related to construction of new or expanded electricity, natural gas, and telecommunications facilities.

Solid Waste

As noted under Impact 4.11-4 above, solid waste collection services for the proposed project would be provided by Recology of the Coast, a Division of Recology. With the current space available, the Ox Mountain Landfill is anticipated to operate through 2034.[8] Reclamation of the project site would not result in the generation of solid waste that substantially differs than what currently exists.

Additionally, the proposed project would not be anticipated to result in significantly more intense waste generation than anticipated for the project site in the General Plan and, thus, regional solid waste planning efforts. As such, the limited increase in solid waste during construction and operation of the proposed project has generally been anticipated by regional solid waste providers and the City of Pacifica General Plan. Therefore, the proposed project's impact to solid waste would be considered less than significant.

Conclusion

Based on the above, the proposed project would not require water or wastewater infrastructure, electrical, natural gas, or telecommunications infrastructure, and, thus, would result in a less-than-significant impact related to such. In addition, the proposed project is not anticipated to result in significant waste generation greater than what was previously anticipated for the project site prior to the proposed project. Furthermore, the proposed project would not result in any significant cumulative impacts related to water, wastewater, electrical, natural gas, and telecommunications infrastructure. Thus, the project's impact would be minimal such that the project's cumulative impact would be ***less than significant***.

Mitigation Measure(s)

None required.

[8] California Department of Resources Recycling and Recovery (CalRecycle). *Facility/Site Summary Details: Corinda Los Trancos Landfill (Ox Mtn) (41-AA-0002)*. Available at https://www2.calrecycle.ca.gov/swfacilities/Directory/41-AA-0002/. Accessed April 2020.

4.12 Effects Not Found to be Significant

4.12 EFFECTS NOT FOUND TO BE SIGNIFICANT

4.12.1 INTRODUCTION

Section 15128 of the California Environmental Quality Act (CEQA) Guidelines requires that an EIR briefly describe why various environmental effects were determined not to be significant and therefore were not discussed in detail in the EIR. The Effects Not Found to Be Significant chapter of this EIR summarizes environmental issues that were determined not to be significant with implementation of the proposed project. The reasons for the conclusion of non-significance are provided for each issue area.

4.12.2 AGRICULTURE AND FORESTRY RESOURCES

Consistent with Appendix G of the CEQA Guidelines the proposed project was determined to have no impact with regard to the following issue areas:

- 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;
- Conflict with existing zoning for agricultural use, or a Williamson Act contract;
- 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]);
- Result in the loss of forest land or conversion of forest land to non-forest use; or
- 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.

The proposed project would implement the proposed Reclamation Plan. The project site is designated Special Area by the General Plan and zoned Service Commercial with voter approval required to rezone to residential (C-3X) with a Hillside Preservation District (HPD) overlay. The project site is not zoned for agricultural use, 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]). Based on the above, the project would not involve the conversion of Farmland to non-agricultural use; conflict with existing zoning or a Williamson Act contract; conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timberland Production; or result in the loss of forest land or conversion of forest land to non-forest use.

4.12.3 ENERGY

Consistent with Appendix G of the CEQA Guidelines the proposed project was determined to have no impact with regard to the following issue areas:

- Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation; or
- Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

Reclamation-related activities associated with the proposed project would involve various types of diesel- and gasoline-powered equipment and vehicles temporarily operating on the project site. However, reclamation activities would be required to comply with all applicable regulations spelled out under the California Clean Air Act and applicable air quality standards established by the California Air Resources Board. Compliance would ensure reclamation-related activities consume energy resources only in an efficient and necessary manner. Once the Reclamation Plan has been completed, there would be no operational energy use other than visitors driving to the site. The level of visitors is not anticipated to increase beyond the pre-project levels. As such, the proposed project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

4.12.4 GEOLOGY AND SOILS/MINERAL RESOURCES

Consistent with Appendix G of the CEQA Guidelines the proposed project was determined to have no impact with regard to the following issue areas:

- Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater.

The proposed project would not include use of septic tanks or alternative wastewater disposal systems. During implementation of the proposed Reclamation Plan, temporary port-a-potties would be provided on-site for workers. Upon completion of project implementation, long-term wastewater disposal facilities would not be provided on the project site.

4.12.5 HAZARDS AND HAZARDOUS MATERIALS

Consistent with Appendix G of the CEQA Guidelines the proposed project was determined to have no impact with regard to the following issue areas:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
- 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;
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school;
- 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;
- 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 are;
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; or

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

The Reclamation Plan would serve to improve the safety of and access to the project site primarily through alterations to the site's slopes, trails, drainage, and vegetation and would not involve routine transport of hazardous materials. Projects that involve the routine transport, use, or disposal of hazardous materials are typically industrial in nature. The proposed project would not be industrial in nature. During reclamation, the project could involve regular refueling of on-site equipment by way of a fuel truck periodically visiting the project site. However, proper handling and usage of such materials in accordance with the printed instructions on such equipment would ensure that adverse impacts to human health or the environment would not result. Furthermore, while reclamation activities would involve the use of heavy equipment, which would contain fuels and oils, and various other products such as concrete, paints, and adhesives, the project contractor is required to comply with all California Health and Safety Codes and local County ordinances regulating the handling, storage, and transportation of hazardous and toxic materials. Pursuant to California Health and Safety Code Section 25510(a), except as provided in subdivision (b),[1] the handler or an employee, authorized representative, agent, or designee of a handler, shall, upon discovery, immediately report any release or threatened release of a hazardous material to the unified program agency (in the case of the proposed project, the San Mateo County Environmental Health Services Division [SMCEHSD]) in accordance with the regulations adopted pursuant to Section 25510(a). The handler or an employee, authorized representative, agent, or designee of the handler shall provide all State, city, or county fire or public health or safety personnel and emergency response personnel with access to the handler's facilities. In the case of the proposed project, the contractors are required to notify the SMCEHSD in the event of an accidental release of a hazardous material, who would then monitor the conditions and recommend appropriate remediation measures.

Similarly, the proposed project would not involve the release of hazardous materials into the environment, particularly as the project would adhere to State regulations related to construction activities. Although the project site's Eastern Parcel is within one-quarter mile of Vallemar Elementary School, emissions associated with construction of the proposed project would be in compliance with the aforementioned regulations. The project site is not listed on the California Department of Toxic Substances Control (DTSC) CORTESE List. The project site is not located within an airport land use plan, and the nearest airport, San Francisco International Airport, is located more than two miles from the project site. The proposed project would not interfere with local emergency response and emergency evacuation plans. Finally, as the proposed project would reclaim the project site from the site's current condition to an area with improved safety and access, the project would not expose people or structures to a significant risk of wildland fires.

4.12.6 NOISE

Consistent with Appendix G of the CEQA Guidelines the proposed project was determined to have no impact with regard to the following issue areas:

- 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

[1] Subdivision (a) does not apply to a person engaged in the transportation of a hazardous material on a highway that is subject to, and in compliance with, the requirements of Sections 2453 and 23112.5 of the Vehicle Code.

airport, would the project expose people residing or working in the project area to excessive noise levels.

The project site is not located within an airport land use plan, within two miles of a public airport, or within the vicinity of a private airstrip. Therefore, the proposed project would not expose people working in the project area to excessive noise levels related to air traffic.

4.12.7 POPULATION AND HOUSING

Consistent with Appendix G of the CEQA Guidelines the proposed project was determined to have no impact with regard to the following issue areas:

- 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); or
- Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.

As the proposed project involves reclaiming the project site, the project would not induce substantial unplanned population growth, because the project would not involve construction of new structures or extensions of roads or other infrastructure. Similarly, because the project site does not include existing residential structures, the proposed project would not displace people or housing.

4.12.8 PUBLIC SERVICES

Consistent with Appendix G of the CEQA Guidelines the proposed project was determined to have no impact with regard to the following issue areas:

- 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:
    - Fire protection;
    - Police protection;
    - Schools;
    - Parks; or
    - Other public facilities.

The proposed Reclamation Plan would involve reclaiming the project site and includes various alterations to the site's slopes, trails, drainage, and vegetation. The proposed project would also install new wetlands. As such, the project would not result in substantial adverse physical impacts with the provision of new or physically altered governmental facilities or the need for new or physically altered governmental facilities.

4.12.9 WILDFIRE

Consistent with Appendix G of the CEQA Guidelines the proposed project was determined to have no impact with regard to the following issue areas:

If located in or near state responsibility areas or lands classified as very high hazard severity zones, would the project:

- Substantially impair an adopted emergency response plan or emergency evacuation plan;
- 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;
- 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; or
- 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.

The project site is not located in a Very High Fire Hazard Severity Zone or a High Fire Hazard Severity Zone as assessed by the California Department of Forestry and Fire Protection (Cal Fire) Fire and Resource Assessment Program. As such, there would be no impact with respect to wildfires.

5. Statutorily Required Sections

5. STATUTORILY REQUIRED SECTIONS

5.1 INTRODUCTION

The Statutorily Required Sections chapter of the Draft EIR includes discussions regarding those topics that are required to be included in an EIR, pursuant to CEQA Guidelines, Section 15126.2. The chapter includes a discussion of the proposed project's potential to result in growth-inducing impacts; the cumulative setting analyzed in this EIR; energy conservation; significant irreversible environmental changes; and significant and unavoidable impacts caused by the proposed project.

5.2 GROWTH-INDUCING IMPACTS

State CEQA Guidelines Section 15126.2(e) requires an EIR to evaluate the potential growth-inducing impacts of a proposed project. Specifically, an EIR must discuss the ways in which a proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Growth can be induced in a number of ways, including the elimination of obstacles to growth, or by encouraging and/or facilitating other activities that could induce growth. Examples of projects likely to have growth-inducing impacts include extensions or expansions of infrastructure systems beyond what is needed to serve project-specific demand, and development of new residential subdivisions or office complexes in areas that are currently only sparsely developed or are undeveloped.

The CEQA Guidelines are clear that while an analysis of growth-inducing effects is required, it should not be assumed that induced growth is necessarily significant or adverse. This analysis examines the following potential growth-inducing impacts related to implementation of the proposed project and assesses whether these effects are significant and adverse (see *CEQA Guidelines*, Section 15126.2[e]):

1. Foster population and economic growth and construction of housing.
2. Eliminate obstacles to population growth.
3. Affect service levels, facility capacity, or infrastructure demand.
4. Encourage or facilitate other activities that could significantly affect the environment.

Foster Population and Economic Growth and Construction of Housing

As discussed in Chapter 4.12, Effects Not Found to be Significant, of this EIR, the proposed project involves reclaiming the project site to an end use, pursuant to the Reclamation Plan, as an open-space area. As such, the project would not induce substantial unplanned growth, because the project would not involve construction of new structures or extensions of roads or other infrastructure. Similarly, as discussed in Chapter 4.9, Parks and Recreation, of this EIR, the proposed project would not include any new development that would introduce new residents to the project area or include any new on-site amenities that would be anticipated to increase use of the trail networks in the project vicinity; rather, the proposed improvements are intended to alleviate existing erosion issues, restore prior physical disturbances resulting from past quarrying activity on the project site, and ensure compliance with State Mining and Reclamation Act (SMARA) standards related to mine reclamation.

Reclamation of the site would result in a limited increase in employment for workers who could implement the Reclamation Plan's grading of slopes, new trails, new hazard signs, filling of the Quarry Pit, regrading of loose soil, and installation of new wetlands. However, such employment opportunities would not result in a substantial increase in the permanent population and demand for housing in the vicinity of the project site, as employment associated with the aforementioned work would involve only five workers temporarily employed on-site during reclamation activities. Therefore, although the project would provide short-term employment opportunities, likely filled by the local employee base, no permanent jobs would be created by the project. As a result, the project would not result in long-term employment growth in the area.

In addition, it should be noted that following implementation of the Reclamation Plan, Pacifica Ordinance No. 391-C.S., which requires a public vote in order to rezone the project site to allow for residential development, would remain in effect. Therefore, any future residential development proposal associated with the project site would require public approval.

Based on the above information, the proposed project would not be anticipated to foster population and economic growth and construction of housing.

Eliminate Obstacles to Population Growth

The elimination of either physical or regulatory obstacles to growth is considered to be a growth-inducing effect. A physical obstacle to growth typically involves the lack of public service infrastructure. The extension of public service infrastructure, including roadways, water mains, and sewer lines, into areas that are not currently provided with these services, would be expected to support new development. Similarly, the elimination or change to a regulatory obstacle, including existing growth and development policies, could result in new growth.

As noted above, the proposed project would not involve extensions of roads or other infrastructure, because the proposed improvements are intended to alleviate existing erosion issues, restore prior physical disturbances from past quarrying activity on the site, and ensure compliance with SMARA standards related to mine reclamation. For example, as discussed in Chapter 4.11, Utilities and Service Systems, of this EIR, the proposed project would not include development of structures to be inhabited by residents or visitors; therefore, connection to existing water supply infrastructure in the project site's vicinity would not be necessary. The project would also not include a permanent irrigation system related to revegetation of the site. Per the proposed Revegetation Plan, hydroseeding would occur between October 15 and November 15, which would be directly prior to the annual wet season. Irrigation would not be necessary for seed germination and proliferation, as rains during the wet season would provide ample hydrology. The revegetation activities would include native and non-native species, which would not require installation of any permanent irrigation measures. As such, the project would not require water services or require or result in the relocation or implementation of new or expanded water facilities. The project would not result in the construction of restrooms or other land uses that generate wastewater. As a result, the project would not include development requiring connection to the City's existing wastewater infrastructure or construction of new wastewater infrastructure. Finally, the project would not include improvements to existing electrical, natural gas, or telecommunications infrastructure, and would, therefore, not require or result in relocation or construction of new or expanded electric power, natural gas, or telecommunications facilities.

The project is not without any infrastructure-related improvements. For example, the project would require installation of two temporary 24-inch culverts to convey drainage from one side of the

access route near the site entrance to the other. The project would also replace a 12-inch culvert along the same access route with a 12-inch reinforced concrete pipe culvert to improve the functionality of the existing drainage ditch in the area. However, such improvements would be considered relatively minor in scale and would merely serve to improve the drainage of a specific portion of the project site. The improvements would not be so large in scale as to precipitate more construction in surrounding service areas, unlike, as a comparison, a major expansion of a wastewater treatment plant. The latter serves as a hypothetical example of the type of project that would allow for more construction in service areas. Therefore, the culvert improvements would not carry the potential to eliminate obstacles to population growth.

In regards to the possibility of the project eliminating or changing a regulatory obstacle that would pave the way for new growth, the project would not include such discretionary actions or approvals. The project would require various permits, such as a Quarry Use Permit from the City as well as permits and approvals from various State and federal regulatory entities to allow the reclamation to occur. However, such discretionary actions and approvals would be pursuant to established regulatory processes. As such, the discretionary actions and approvals required by the project would abide by existing regulations, and not eliminate or change regulations.

As discussed previously, Pacifica Ordinance No. 391-C.S., which requires a public vote in order to rezone the project site to allow residential development, would remain in effect. Even in the event of such a public vote, any change in the land use regulations would need to be further approved by the California Coastal Commission as a coastal development permit, or else certified as an amendment to the City's Local Coastal Land Use Plan. The public vote, as well as subsequent actions by the California Coastal Commission, are discretionary actions. None of these actions are proposed by the project which makes their consideration speculative and not reasonably foreseeable.

Based on the above information, the proposed project would not eliminate a physical or regulatory obstacle that would as a result, create a growth-inducing effect.

Affect Service Levels, Facility Capacity, or Infrastructure Demand

There would be no increases in population that would occur as a result of a project that could significantly strain existing community service facilities, requiring construction of new facilities that could cause significant environmental impacts. As mentioned above as well as discussed in Chapter 4.9, Parks and Recreation, of this EIR, the proposed project would not include any new development that would introduce new residents to the project area or include any new on-site amenities that would be anticipated to increase use of the trail networks in the project vicinity. Rather, the proposed on-site improvements would alleviate existing erosion issues, restore prior physical disturbances from past quarrying activity, and ensure compliance with SMARA standards related to mine reclamation. Furthermore, during reclamation activities, implementation of the Best Management Practices (BMPs) required by the Reclamation Plan would ensure the proposed project would not create or contribute runoff water that would exceed the capacity of the City's stormwater drainage systems. Additionally, as detailed above, the project would not necessitate the extension of public service infrastructure.

Thus, because the project would not be anticipated to directly or indirectly introduce new residents or visitors to the area or significantly impact existing public service infrastructure, the project would not increase population such that service levels, facility capacity, or infrastructure demand would require construction of new facilities that could cause significant environmental impacts.

Encourage or Facilitate other Activities That Could Significantly Affect the Environment

This EIR provides a comprehensive assessment of the potential for environmental impact associated with implementation of the proposed project. Please refer to Chapters 4.1 to 4.12 of this EIR, which comprehensively address the potential for impacts from reclamation of the project site.

5.3 CUMULATIVE IMPACTS

CEQA Guidelines, Section 15130 requires that an EIR discuss the cumulative and long-term effects of the proposed project that would adversely affect the environment. "Cumulative impacts" are defined as "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts" (CEQA Guidelines, Section 15355). "[I]ndividual effects may be changes resulting from a single project or a number of separate projects" (CEQA Guidelines, Section 15355, subd. [a]). "The cumulative impact from several projects is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time" (CEQA Guidelines, Section 15355, subd. [b]).

The need for cumulative impact assessment reflects the fact that, although a project may cause an "individually limited" or "individually minor" incremental impact that, by itself, is not significant, the increment may be "cumulatively considerable," and, thus, significant, when viewed together with environmental changes anticipated from past, present, and probable future projects (CEQA Guidelines, Section 15064, subd. [h(1)], Section 15065, subd. [c], and Section 15355, subd. [b]). Accordingly, particular impacts may be less than significant on a project-specific basis but significant on a cumulative basis if their small incremental contribution, viewed against the larger backdrop, is cumulatively considerable. However, it should be noted that CEQA Guidelines, Section 15064, Subdivision (h)(5) states, "[…]the mere existence of significant cumulative impacts caused by other projects alone shall not constitute substantial evidence that the proposed project's incremental effects are cumulatively considerable." Therefore, even where cumulative impacts are significant, any level of incremental contribution is not necessarily deemed cumulatively considerable.

Section 15130(b) of CEQA Guidelines indicates that the level of detail of the cumulative analysis need not be as great as for the project impact analyses, but that analysis should reflect the severity of the impacts and their likelihood of occurrence, and that the analysis should be focused, practical, and reasonable. To be adequate, a discussion of cumulative effects must include the following elements:

> (1) Either (a) a list of past, present and probable future projects, including, if necessary, those outside the agency's control, or (b) a summary of projections contained in an adopted general plan or related planning document, or in a prior certified EIR, which described or evaluated regional or area-wide conditions contributing to the cumulative impact, provide that such documents are reference and made available for public inspection at a specified location;
>
> (2) A summary of the individual projects' environmental effects, with specific reference to additional information and stating where such information is available; and

(3) A reasonable analysis of all of the relevant projects' cumulative impacts, with an examination of reasonable, feasible options for mitigating or avoiding the project's contribution to such effects (Section 15130[b]).

For some projects, the only feasible mitigation measures will involve the adoption of ordinances or regulations, rather than the imposition of conditions on a project-by-project basis (Section 15130[c]). Section 15130(a)(3) states that an EIR may determine that a project's contribution to a significant cumulative impact will be rendered less than cumulatively considerable, and thus not significant, if a project is required to implement or fund the project's fair share of a mitigation measure or measures designed to alleviate the cumulative impact.

A discussion of cumulative impacts is provided within each of the technical chapters of this EIR pursuant to CEQA Guidelines Section 15130.

Cumulative Setting

The lead agency should define the relevant geographic area of inquiry for each impact category (id., Section 15130, subd. [b][3]), and should then identify the universe of "past, present, and probable future projects producing related or cumulative impacts" relevant to the various categories, either through the preparation of a "list" of such projects or through the use of "a summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or area wide conditions contributing to the cumulative impact" (id., subd. [b][1]). The majority of the cumulative analysis in this section is based upon the analysis of cumulative impacts contained within the Impacts and Mitigation Measures section of each technical chapter of this EIR. Each chapter's analysis of cumulative impacts factors into its evaluation the fact that implementation of the Reclamation Plan would serve to reclaim the project site to an end use as an open-space area. As such, the project would not involve construction of new structures or extensions of roads or other infrastructure, and reclamation would not induce substantial unplanned growth.

Buildout of the General Plan represents the planned development within the project area. Therefore, for nine of the 11 technical chapters included in this EIR, the cumulative setting was considered to be buildout of the adopted General Plan. However, for Chapter 4.2, Air Quality and Greenhouse Gas Emissions, and Chapter 4.10, Transportation, the analysis considers regional development as the cumulative setting. For instance, in the evaluation of vehicle miles travelled associated with the proposed project, traffic projections from planned development throughout the Bay Area were considered.

Summary of Cumulative Impacts

As discussed in Chapter 4.1, Aesthetics, of this EIR, cumulative development occurring within the City pursuant to the General Plan has the potential to result in significant impacts related to degradation of visual character. However, the proposed project would not include new development and would not contribute towards urbanization of the project area. Rather, the project would serve to improve an important natural resource within the City. By improving the visual quality of the site and fixing unsafe trail conditions on the site's Quarry parcel, the project would provide a net benefit to the visual character of the City. Therefore, the project's incremental contribution towards cumulative aesthetic impacts associated with buildout of the City of Pacifica General Plan would be less than significant.

As discussed in Chapter 4.2, Air Quality and Greenhouse Gas Emissions, of this EIR, the proposed project is expected to result in emissions of criteria pollutants that would fall below the Bay Area Air Quality Management District's (BAAQMD's) thresholds of significance. Therefore, emissions resulting from project operations would not result in a cumulatively considerable net increase in criteria pollutant emissions, for which the region is in nonattainment for federal and state ozone standards. In addition, the project would not result in the generation of substantial GHG emissions from haul trucks, employee commutes, off-road equipment, or operations. Therefore, the proposed project would not be considered to generate greenhouse gas (GHG) emissions, either directly or indirectly, that would have a significant impact on the environment, or conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs. Consequently, the project would not result in a cumulatively considerable incremental contribution to impacts related to GHG emissions or climate change and the project's impact would be less than significant.

As discussed in Chapter 4.3, Biological Resources, of this EIR, cumulative impacts on the biological resources that could be affected by the proposed project could result from a number of past, current, and reasonably foreseeable future projects that occur in the area. Although such projects could result in impacts on these sensitive habitats and species, most current and future projects that impact these species and their habitats would be expected to be required to mitigate these impacts through the CEQA, Section 1602, or Section 404/401 permitting process, as well as through the Endangered Species Act (ESA) Section 7 consultation process. As a result, most projects in the region would mitigate impacts on biological resources, minimizing cumulative impacts on species. Additionally, with implementation of Mitigation Measures 4.3-1, 4.3-2(a) through 4.3-2(k), 4.3-4(a) and (b), and 4.3-6, the project's incremental contribution to cumulative impacts would be less than significant.

As discussed in Chapter 4.4, Cultural and Tribal Cultural Resources, of this EIR, while some cultural resources may have regional significance, the resources themselves are site-specific, and impacts to them are project-specific. For example, impacts to a subsurface archeological find at one project site would not generally be made worse by impacts to a cultural resource at another site due to development of another project. Rather, the resources and the effects upon them are generally independent. The project site does not contain known historical resources that would be eligible for inclusion on the National Register of Historic Places or considered significant pursuant to CEQA. Furthermore, implementation of project-specific Mitigation Measures 4.4-2(a) and (b) would ensure any impacts to previously unknown, subsurface resources discovered on the project site during construction activities would be reduced to less than significant. Similar to the proposed project, future development projects within the City would be required to implement project-specific mitigation to ensure any potential impacts to identified cultural resources are reduced to a less-than-significant level, where possible. Therefore, given that cultural resource impacts are generally site-specific and each future project within the City would be required to mitigate such impacts, any potential impacts associated with cumulative buildout of the City's General Plan would not combine to result in a significant cumulative impact.

As discussed in Chapter 4.5, Geology, Soils, and Mineral Resources, of this EIR, all recommendations in the Geotechnical Investigation prepared for the proposed project would be incorporated to mitigate any potential impacts related to geologic hazards. While some geologic characteristics could affect regional construction practices, impacts and mitigation measures would be primarily site-specific and project-specific. For example, impacts resulting from undocumented fill at one project site are not worsened by impacts related to undocumented fill at another project site. Rather, the soil conditions, and the implications of such conditions for each

project, are independent. Therefore, the proposed project's incremental contribution to potential cumulative impacts related to geology, soils, and mineral resources, would be less than significant.

As discussed in Chapter 4.6, Hydrology and Water Quality, of this EIR, while the Calera Creek Watershed is largely built-out, the potential exists for new development to occur within the watershed. Runoff from new construction sites within the watershed could carry sediment from erosion of graded or excavated surface materials, leaks or spills from equipment, or inadvertent releases of building products, which could result in water quality degradation if runoff containing such sediment or contaminants should enter receiving waters in sufficient quantities. Additionally, cumulative development within the watershed has the potential to create new impervious surfaces, thereby increasing the stormwater runoff rates and volumes within Calera Creek. However, the project would actually decrease the amount of impervious surface on the project site and reduce the peak volume flow of stormwater leaving the site. Also, similar to the proposed project, cumulative development would be subject to the San Mateo County Municipal Regional Stormwater Permit requirements and, thus, would be required to implement construction Best Management Practices to limit discharge of pollutants to downstream waterways. Cumulative development would also be required to comply with the County's C.3. Standards and include appropriate site design measures, source controls, and hydraulically-sized stormwater treatment and flow control measures to limit post-development runoff rates and amounts to below pre-development levels. Because all project-specific impacts related to hydrology and water quality could be reduced to less-than-significant levels with implementation of mitigation measures and compliance with applicable stormwater regulations, the project's incremental contribution to cumulative impacts to hydrology and water quality would be less than significant.

As discussed in Chapter 4.7, Land Use and Planning, of this EIR, land use plans or policies and zoning generally do not combine to result in cumulative impacts. The determination of significance for impacts related to such issues is whether the project would cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. Such a conflict is site-specific, and, thus, is typically only addressed on a project-by-project basis. The proposed project would be generally consistent with relevant policies in the City of Pacifica General Plan and the Local Coastal Land Use Plan for the purpose of avoiding or mitigating an environmental effect. Additionally, the General Plan inherently serves as a cumulative analysis. As such, because future development of sites in the project vicinity would occur in accordance with the General Plan, such projects would not result in cumulative impacts. Any changes from the General Plan requested by future development proposals would be separately reviewed for potential impacts related to all environmental issue areas as required under CEQA. Because the proposed project would not change land use designations established by the General Plan or the current use of the site, the proposed project would result in a less-than-significant cumulative impact.

As discussed in Chapter 4.8, Noise, of this EIR, cumulative development associated with buildout of the General Plan would result in increased vehicle traffic along local roadways relative to existing conditions. Such increases in vehicle traffic would result in increased traffic noise levels throughout the City's Planning Area, including within the vicinity of the project site, potentially resulting in new conflicts with the City's 60 dB L_{dn}/CNEL exterior noise level threshold. Therefore, a significant cumulative impact could occur related to traffic noise. However, the project's reclamation activities would occur within a four-year period. The project activities would be substantially completed before anticipated buildout under the General Plan would occur, and thus, would not contribute noise to the increased noise scenario considered under cumulative impacts.

Upon completion of the proposed reclamation activities, the proposed project would not include any substantial new operation noise sources. Similar to existing conditions, the project site would serve as a recreation amenity for local residents, generating relatively minimal noise associated with pedestrian and bicycle traffic on trails within the site. During operation, the proposed project would not result in substantial new traffic noise level increases along SR 1 or other local roadways. Therefore, the project's incremental contribution to cumulative traffic noise impacts would be less than significant.

As discussed in Chapter 4.9, Parks and Recreation, of this EIR, although cumulative residential development associated with buildout of the City's General Plan has the potential to result in population growth, thereby increasing demand for recreational facilities, the project would not include development of new land uses on the project site. Rather, the project through the Reclamation Plan would address erosion and safety issues at the project site. Therefore, the proposed project's contribution to cumulative parks and recreation impacts would be less than significant.

As discussed in Chapter 4.10, Transportation, of this EIR, as cumulative development occurs pursuant to the City's General Plan, traffic volumes along local roadways would increase relative to existing conditions, potentially resulting in impacts related to vehicle miles traveled. However, upon completion of the proposed improvements at the project site, the proposed project would not generate net new vehicle traffic relative to existing conditions. In addition, the project would not modify the existing project access points along SR 1 and would not include any changes to existing roadway infrastructure in the project vicinity. Thus, the proposed project would not affect long-term traffic patterns or traffic safety in the project vicinity. Based on the above, the proposed project's incremental contribution to cumulative traffic impacts would be less than significant.

As discussed in Chapter 4.11, Utilities and Service Systems, of this EIR, the proposed project would not require water or wastewater infrastructure, and would result in a less-than-significant impact related to such. In addition, the proposed project would not be anticipated to result in significant waste generation greater than what was previously anticipated for the project site. Furthermore, the proposed project would not result in any significant cumulative impacts related to electrical, natural gas, and telecommunications infrastructure. Thus, the project's impact would be minimal such that the project's cumulative impact would be less than significant.

Per CEQA Guidelines Section 15128, the remaining environmental issue areas identified by Appendix G of the CEQA Guidelines were addressed in Chapter 4.12, Effects Not Found to be Significant, of this EIR. The chapter summarizes why the environmental issues were determined not to be significant with implementation of the proposed project, with the reasons for the conclusion of non-significance provided for each issue area. Thus, the proposed project's contribution to cumulative impacts concerning the issue areas have been determined not to be significant.

5.4 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

Per CEQA Guidelines Section 15126.2(c), this EIR is required to include consideration of significant irreversible environmental changes that would be caused by the proposed project, should the project be implemented. An impact would be determined to be a significant and irreversible change in the environment if:

- Buildout of the project area could involve a large commitment of nonrenewable resources;
- The primary and secondary impacts of development could generally commit future generations to similar uses (e.g., a highway provides access to a previously remote area);
- Development of the proposed project could involve uses in which irreversible damage could result from any potential environmental accidents associated with the project; or
- The phasing and eventual development of the project could result in an unjustified consumption of resources (e.g., the wasteful use of energy).

Because implementation of the proposed project's Reclamation Plan would reclaim the project site and allowed its continued use as a recreational amenity, the proposed project would likely not result in significant irreversible environmental changes.

5.5 SIGNIFICANT AND UNAVOIDABLE IMPACTS

According to CEQA Guidelines, an EIR must include a description of those impacts identified as significant and unavoidable should the proposed action be implemented (CEQA Guidelines Section 15126.2[b]). Such impacts would be considered unavoidable when the determination is made that either mitigation is not feasible or only partial mitigation is feasible such that the impact is not reduced to a level that is less than significant. This section identifies significant impacts that could not be eliminated or reduced to a less-than-significant level by mitigations imposed by the City. The final determination of the significance of impacts and the feasibility of mitigation measures would be made by the City as part of the City's certification action. Based on the analysis of potential impacts that would occur as part of implementing the Reclamation Plan, the proposed project would not result in any significant and unavoidable impacts.

6. Alternatives Analysis

6. ALTERNATIVES ANALYSIS

6.1 INTRODUCTION

The Alternatives Analysis chapter of the EIR includes consideration and discussion of a range of reasonable alternatives to the proposed project, as required per CEQA Guidelines Section 15126.6. Generally, the chapter includes discussions of the following: the purpose of an alternatives analysis; alternatives considered but dismissed; a reasonable range of project alternatives and their associated impacts in comparison to the proposed project's impacts; and the environmentally superior alternative.

6.2 CEQA REQUIREMENTS FOR ALTERNATIVE ANALYSIS

The primary intent of the alternatives evaluation in an EIR, as stated in Section 15126.6(a) of the CEQA Guidelines, is to "[…] describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives." In the context of CEQA Guidelines Section 21061.1, "feasible" is defined as:

> ...capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social and technological factors.

Section 15126.6(f) of CEQA Guidelines states, "The range of alternatives required in an EIR is governed by a "rule of reason" that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice." Section 15126.6(f) of CEQA Guidelines further states:

> The alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of the project. Of those alternatives, the EIR need examine in detail only the ones that the lead agency determined could feasibly attain most of the basic objectives of the project.

In addition, an EIR is not required to analyze alternatives when the effects of the alternative "cannot be reasonably ascertained and whose implementation is remote and speculative."

The CEQA Guidelines provide the following guidance for discussing alternatives to a proposed project:

- An EIR shall describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project, but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives (CEQA Guidelines Section 15126.6[a]).
- Because an EIR must identify ways to mitigate or avoid the significant effects that a project may have on the environment (Public Resources Code Section 21002.1), the discussion of alternatives shall focus on alternatives to the project or its location which are capable

of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly (CEQA Guidelines Section 15126.6[b]).

- The EIR should briefly describe the rationale for selecting the alternatives to be discussed. The EIR should also identify any alternatives that were considered by the lead agency but were rejected as infeasible during the scoping process and briefly explain the reasons underlying the lead agency's determination […] Among the factors that may be used to eliminate alternatives from detailed consideration in an EIR are: (i) failure to meet most of the basic project objectives, (ii) infeasibility, or (iii) inability to avoid significant environmental impacts (CEQA Guidelines Section 15126.6[c]).
- The EIR shall include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the proposed project. A matrix displaying the major characteristics and significant environmental effects of each alternative may be used to summarize the comparison (CEQA Guidelines Section 15126.6[d]).
- If an alternative would cause one or more significant effects in addition to those that would be caused by the project as proposed, the significant effects of the alternative shall be discussed, but in less detail than the significant effects of the project as proposed (CEQA Guidelines Section 15126.6[d]).
- The specific alternative of "no project" shall also be evaluated along with its impact. The purpose of describing and analyzing a no project alternative is to allow decision-makers to compare the impacts of approving the proposed project with the impacts of not approving the proposed project. The no project alternative analysis is not the baseline for determining whether the proposed project's environmental impacts may be significant, unless it is identical to the existing environmental setting analysis which does establish that baseline (CEQA Guidelines Section 15126.6[e][1]).
- If the environmentally superior alternative is the "no project" alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives (CEQA Guidelines Section 15126.6[e][2]).

Project Objectives

Based on the above, reasonable alternatives to the project must be capable of feasibly attaining most of the basic objectives of the project. The following objectives have been submitted by the project applicant:

1. Protect Public Health and Safety: Create safe slopes in place of existing unsafe conditions in order to minimize potential danger to public health and safety.
2. Minimize Grading: Minimize grading to the maximum extent practicable in a manner that is consistent with the other objectives and maintains an average 2:1 slope on project site.
3. Safe Pedestrian and Emergency Vehicle Access: Provide for safe pedestrian and emergency vehicle access to the project site based on Reclamation Plan elevations.
4. Provide Dedicated Public Trails to Provide Safe Pedestrian Access: Establish dedicated trails that allow safe public access through the project site between the Rockaway Beach commercial district and the Mori Point segment of the Golden Gate National Recreation Area in accordance with the Coastal Act.
5. Restoration: Mitigate and restore prior physical disturbances resulting from past quarrying activity on the project site.
6. Improved Water Quality: Provide for erosion control measures, land stewardship and maintenance to reduce sediment transport from the project site into Calera Creek (which drains into the Pacific Ocean) in order to improve the creek's water quality.

7. Discourage Illegal Trespassing: Reclaim the project site in a manner that provides secure and safe public access and use in lieu of the existing homeless encampments, vagrancy and threats to the potential public use which characterize the existing conditions on the project site due to the cessation of quarrying activities.
8. Improved Scenic Corridor and Aesthetics: Restore the project site to pre-quarry conditions so that views of the Pacific Ocean are maintained in a manner supporting a future alternate use in accordance with the Surface Mining and Reclamation Act (SMARA) and the Pacifica General Plan.
9. Self-sustaining: Reclaim the property such that additional maintenance or other management activities are not required.
10. Meet All SMARA Standards: Reclaim the project site such that it meets all applicable SMARA standards after reclamation.

6.3 SELECTION OF ALTERNATIVES

The requirement that an EIR evaluate alternatives to the proposed project or alternatives to the location of the proposed project is a broad one; the primary intent of the alternatives analysis is to disclose other ways that the objectives of the project could be attained, while reducing the magnitude of, or avoiding, one or more of the significant environmental impacts of the proposed project. Alternatives that are included and evaluated in the EIR must be feasible alternatives. However, the CEQA Guidelines require the EIR to "set forth only those alternatives necessary to permit a reasoned choice." As stated in Section 15126.6(a), an EIR need not consider every conceivable alternative to a project. Rather it must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation. The CEQA Guidelines provide a definition for "a range of reasonable alternatives" and thus limit the number and type of alternatives that may need to be evaluated in a given EIR. According to the CEQA Guidelines Section 15126.6(f):

> The alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of the project. Of those alternatives, the EIR need examine in detail only the ones that the lead agency determined could feasibly attain most of the basic objectives of the project.

The analysis within this EIR has not identified any impacts that are significant and unavoidable. Another consideration for alternatives in an EIR must be feasible. In the context of CEQA Guidelines Section 21061.1, "feasible" is defined as:

> ...capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social and technological factors.

Finally, an EIR is not required to analyze alternatives when the effects of the alternative "cannot be reasonably ascertained and whose implementation is remote and speculative."

Alternatives Considered in the EIR

In light of the requirements of CEQA, the following alternatives to the proposed project were identified and considered:

- No Project Alternative
- Alternative Location Alternative
- Single Access Alternative
- Reduced Fill Alternative

- Nighttime Operations Alternative
- No Soil Hauling Alternative
- Open Trails Alternative

Alternatives Dismissed From Further Analysis

Consistent with CEQA, primary consideration was given to alternatives that could reduce significant impacts, while still meeting most of the basic project objectives.

As stated in Guidelines Section 15126.6(c), among the factors that may be used to eliminate alternatives from detailed consideration in an EIR are:

(i) failure to meet most of the basic project objectives,
(ii) infeasibility, or
(iii) inability to avoid significant environmental impacts.

Regarding item (ii), infeasibility, among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries (projects with a regionally significant impact should consider the regional context), and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site (or the site is already owned by the proponent). No one of these factors establishes a fixed limit on the scope of reasonable alternatives.

The Alternative Location Alternative, Nighttime Operations Alternative, and No Soil Hauling Alternative were considered but dismissed from detailed analysis in this EIR. The reason(s) for dismissal, within the context of CEQA Guidelines Section 15126.6(c), are provided below.

Alternative Location Alternative

The Alternative Location Alternative would implement the proposed project at a different location. However, in accordance with CEQA Guidelines Section 15126.6(f)(2)(B), an alternative location would not be feasible for the proposed project, as the project applicant has indicated that the purpose of the proposed project is to restore the project site's mined lands to a condition that is readily adaptable to alternate land uses in accordance with the City's General Plan. As such, the majority of the proposed project's objectives are site-specific objectives that pertain directly to the project site and do not serve as general goals that could be easily adapted to a different site, as an alternate site would likely not involve previously mined lands. For example, Objective #4 pertains to the establishment of dedicated trails that allow for safe public access between Rockaway Beach and Mori Point. Objective #5 relates specifically to the restoration of prior physical disturbances on the project site from past quarrying activity. Objective #6 calls for the implementation of measures on the project site that would lead to the improvement of water quality of Calera Creek, and Objectives #7, #8, #9, and #10 all refer to reclamation of the project site due to site-specific issues that have occurred as a result of the site's previous quarrying activities. Therefore, if the project applicant relocated the Reclamation Plan to an alternate location, the majority of the objectives would most likely no longer apply.

Additionally, in the event the project applicant could implement the Reclamation Plan at an alternative location involving previously mined lands, implementation of the Reclamation Plan would not reduce impacts to less than those anticipated for the proposed project. Any alternative

location for the proposed project would also be unlikely to improve the range of amenities available to the public beyond what would be available at the proposed project site.

Given these reasons, the Alternative Location Alternative would fail to meet most of the basic project objectives and would be infeasible. Thus, the alternative is hereby dismissed from further review.

Nighttime Operations Alternative

The Nighttime Operations Alternative would include the implementation of the Reclamation Plan during nighttime hours, so as to take advantage of the reduction in potential conflicts related to traffic and Calera Creek Multi-Purpose (CCMP) Trail closures from reclamation-related activities due to the operations taking place during off-peak hours.

Under the Nighttime Operations Alternative, the project objectives would still be met, as each component of the proposed project would still be implemented. However, this alternative would lack the ability to avoid significant environmental impacts, particularly relating to noise and aesthetics. As detailed in the Noise chapter of this EIR, average day-night 24-hour average sound level (L_{dn}) carries a nighttime increase of 10 dB to account for sensitivity to noise during the nighttime. As such, the proposed project's reclamation activities, if conducted during nighttime hours, would represent an increase in noise to sensitive receptors in the area as compared to the proposed project. Additionally, the lighting required to complete reclamation of the proposed project during nighttime hours would produce a significant impact with respect to light pollution. As noted in the Aesthetics chapter of this EIR, light pollution refers to all forms of unwanted light in the night sky, including glare, light trespass, sky glow, and over-lighting. Views of the night sky can be an important part of the natural environment, particularly in communities surrounded by extensive open space such as the City of Pacifica. Excessive light and glare can also be visually disruptive to humans and nocturnal animal species. In order to complete the various aspects of the proposed project during nighttime hours, such as the proposed grading of slopes, development of new trails, addition of hazard signs, filling of the Quarry Pit, regrading of loose soil, installation of new wetlands, and revegetation, a substantial amount of lighting would be required so as to ensure reclamation activities were implemented efficiently and safely. Therefore, the light required to implement the Reclamation Plan during nighttime hours would result in a significant impact.

Given these reasons, in attempting to still meet the objectives of the proposed project, the Nighttime Operations Alternative would likely result in an increase in significant environmental impacts and is hereby dismissed from further review.

No Soil Hauling Alternative

Under the No Soil Hauling Alternative, the proposed project would use the on-site soil collected from the project's cut slopes, rather than using imported fill soils. The Reclamation Plan, as currently proposed, includes cuts to the south slope of the Hilltop area, where the greenstone layer at the shear zone and above is being cut to a 2:1 slope, and a small area at the south end of the Southern Bluff where an area of unstable dumped fill would be removed. In this alternative, the project applicant would then use the fill collected from the aforementioned cut slopes to fill the inside of the Southern Bluff and the Quarry Pit, which would in turn, diminish the hauling of imported fill to the project site. However, cuts to the Hilltop area and Southern Bluff would not provide enough soil to completely replace the 970,000 cubic yards (CY) of imported fill as called for by the proposed project. As such, this alternative would require additional cuts to areas within

the project site, which would occur to the slopes in the East Flank and Quarry Face as well as to the Southern Bluff.

The No Soil Hauling Alternative would nullify the trips needed to import soil to the project site. The project's grading of slopes, installation of new trails, improvements to existing trails, addition of hazard signs, filling of the Quarry Pit, regrading of loose soil, installation of new wetlands, installation of temporary and permanent culverts, and revegetation plan would all still occur under this alternative. However, cuts to the East Flank would remove the remnant native-dominated vegetation, which was set to be preserved as part of the proposed project. Additionally, cuts to the Southern Bluff would not allow the existing elevation of the Southern Bluff to be preserved at 90 to 110 feet, altering the ocean views afforded by the area. As such, the alternative would fail to meet Objectives #2 and #8. The alternative, due to the significantly increased amount of ground disturbance, would result in greater impacts related to aesthetics, air quality, greenhouse gas (GHG) emissions, biological resources, cultural and tribal cultural resources, geology and soils, hydrology and water quality, and noise.

Given these reasons, in attempting to still meet the objectives of the proposed project, the No Soil Hauling Alternative would lack the ability to avoid significant environmental impacts and is hereby dismissed from further review.

Alternatives Evaluated in this EIR

The following alternatives are evaluated in this section:

1. No Project Alternative
2. Single Access Alternative
3. Reduced Fill Alternative
4. Open Trails Alternative

Each of the project alternatives is described in detail below, with a corresponding analysis of each alternative's consistency with the project objectives and evaluation of impacts to the existing environment in comparison to the proposed project's identified impacts. While an effort has been made to include quantitative data for certain analytical topics, where possible, qualitative comparisons of the various alternatives to the project are primarily provided. Such an approach to the analysis is appropriate as evidenced by CEQA Guidelines Section 15126.6(d), which states that the significant effects of the alternative shall be discussed, but in less detail than the significant effects of the project as proposed. The analysis evaluates impacts that would occur with the alternatives relative to the significant impacts identified for the proposed project. When comparing the potential impacts resulting from implementation of the foregoing alternatives, the following terminology is used:

- "Fewer" = Less than Proposed Project;
- "Similar" = Similar to Proposed Project; and
- "Greater" = Greater than Proposed Project.

When the term "fewer" is used, the reader should not necessarily equate this to elimination of significant impacts identified for the proposed project. For example, in many cases, an alternative would reduce the relative intensity of a significant impact identified for the proposed project, but the impact would still be expected to remain significant under the alternative, thereby requiring mitigation. In other cases, the use of the term "fewer" may mean the actual elimination of an

impact identified for the proposed project altogether. Similarly, use of the term "greater" does not necessarily imply that an alternative would require additional mitigation beyond what has been required for the proposed project. To the extent possible, this analysis will distinguish between the two implications of the comparative words "fewer" and "greater".

See Table 6-1 at the end of this chapter for a comparison of the environmental impacts resulting from the considered alternatives and the proposed project.

1. No Project Alternative

The following section includes an overview providing background related to this alternative, a description of this alternative, an evaluation of the alternative's consistency with project objectives, and an impact comparison analysis.

Overview

CEQA requires the evaluation of the comparative impacts of the "No Project" alternative (CEQA Guidelines Section 15126.6[e]). Analysis of the no project alternative shall:

> "… discuss […] existing conditions […] as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services." (*Id.*, subd. [e][2]) "If the project is other than a land use or regulatory plan, for example a development project on identifiable property, the 'no project' alternative is the circumstance under which the project does not proceed. Here the discussion would compare the environmental effects of the property remaining in the property's existing state versus environmental effects that would occur if the project were approved. If disapproval of the project under consideration would result in predictable actions by others, such as the proposal of some other project, this 'no project' consequence should be discussed. In certain instances, the no project alternative means 'no build,' wherein the existing environmental setting is maintained. However, where failure to proceed with the project would not result in preservation of existing environmental conditions, the analysis should identify the practical result of the project's non-approval and not create and analyze a set of artificial assumptions that would be required to preserve the existing physical environment." (*Id.*, subd. [e][3][B]).

Description of Alternative

For the purposes of this analysis, the No Project Alternative assumes the project site would remain in its current condition in the interim; however, the project site would eventually be reclaimed, per the requirements established under SMARA and in the City's Municipal Code.

As described in this EIR, the Quarry is a side hill, open pit mine, from which limestone, greenstone, shale, and chert were previously harvested, crushed, screened, and sold for construction purposes. The project site consists of slightly more than 86 acres across two separated parcels along the coast. The two adjacent parcels are separated by Calera Creek. The 47.13-acre Quarry Parcel on the western side of Calera Creek consists of the former Rockaway Quarry and is dominated by often steep slopes, non-native plant species and informal accessways. The Quarry Parcel can be separated into five sections: the Hilltop, the East Flank, the Quarry Face, the Quarry Pit, and the Southern Bluff. The topography of the 39.09-acre Eastern Parcel is relatively flat. The parcel contains features such as wetlands and a small ephemeral ditch running through the southern portion of the site. The parcel has been partially reclaimed by the City as part of construction of the Calera Creek Water Recycling Plant (CCWRP) to the north.

Because the No Project Alternative would result in the continuance of current on-site conditions in the interim, it would be reasonably assumed that the public, as they currently do, would continue to use the site for recreational hiking and pedestrian access to Mori Point and Rockaway Beach. However, without the improvements to the site's safety and access implemented as part of the Reclamation Plan, under the No Project Alternative, the current on-site conditions would present a higher degree of risk to public health and safety, with a lower degree of accessibility. For example, as constituted, internal access throughout the site is afforded by the CCMP Trail as well as the Quarry trail system. While the CCMP Trail, which is located on City-owned property, is a paved, ADA-accessible trail along Calera Creek that connects to a parking lot at the western end of San Marlo Way and a parking lot at the western end of Reina Del Mar Avenue, the Quarry trail system is a network of secondary and minor informal trails located on the project site that are relatively narrow and unmaintained. These conditions would remain (see Figure 6-1). As such, the site's existing Eastern Trail would not be improved to provide a safer surface for walking, a more-level slope, connection to Mori Point, or improved drainage to reduce erosion-related rills and gullies on the hillsides. The new Western Trail would not be constructed. Additionally, new hazard signs warning of steep slopes would not be implemented along the coastal bluffs.

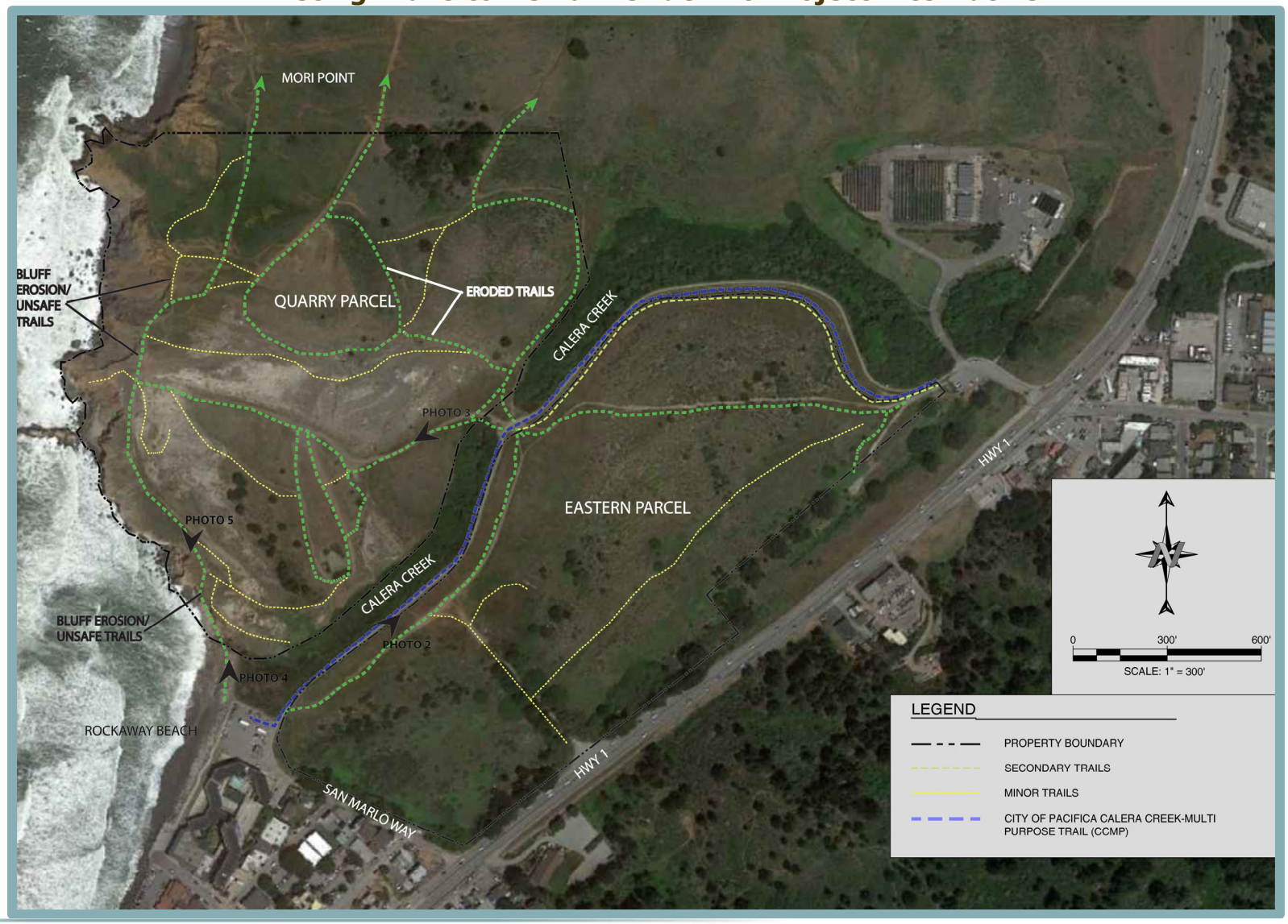
Conditions in the interim under this alternative would also represent a higher degree of risk to public health and safety through the maintaining of the site's steep slopes. The south slope of the Hilltop area would remain steeper than a 2:1 slope, posing a higher degree of risk to pedestrian access, and a small area at the south end of the Southern Bluff would continue to house an area of unstable dumped fill. These conditions would similarly prevent erosion-related problems at the site. Finally, under the alternative, the project site would continue to be dominated by invasive upland species and would not involve reseeding with native species.

However, as mentioned above, eventually, under the No Project Alternative, the project applicant would be reasonably assumed to apply for a new project to reclaim the project site, as SMARA legally requires that the mine be reclaimed. In addition, per Section 9-2.12(c) of the City's Municipal Code, reclamation activities must be initiated at the earliest possible time on portions of mined land that are not subject to further disturbance. Therefore, reclamation of the project site would be assumed to eventually occur.

Consistency with Project Objectives

The No Project Alternative would not meet the objectives of the project applicant in that the alternative would not result in safe slopes in place of existing unsafe conditions; minimize grading to the maximum extent practicable in a manner that is consistent with the other objectives; provide for safe pedestrian and emergency vehicle access to the project site; establish dedicated trails that allow safe public access through the project site; mitigate and restore prior physical disturbances resulting from past quarrying activity; provide for erosion control measures, land stewardship, and maintenance to reduce sediment transport from the site into Calera Creek; provide secure and safe public access and use in lieu of the existing homeless encampments, vagrancy, and threats to the potential public use which characterize the existing conditions; restore the project site to pre-quarry conditions; reclaim the property such that additional maintenance or other management activities are not required; or reclaim the site such that it meets all applicable SMARA standards after reclamation.

Figure 6-1
Existing Trails to Remain Under No Project Alternative



Impacts of Alternative

The following provides a discussion evaluating the impacts of this alternative on baseline conditions as compared to the impacts of the proposed project on baseline conditions for each impact area addressed within this EIR.

Aesthetics

Under the No Project Alternative, the current uses for the project site, namely pedestrian access, recreation, and habitat, would remain. The proposed grading of slopes, development of new trails, addition of hazard signs, filling of the Quarry Pit, regrading of loose soil, installation of new wetlands, and revegetation would not occur. Thus, the visual character of the Quarry would remain unchanged from the current condition. However, because the proposed project would reclaim the Quarry site to an end use as open land, pursuant to the Reclamation Plan, and would not add new development, the proposed project's aesthetics impacts on the existing setting would be less than significant. Therefore, this alternative would result in similar impacts compared to the proposed project.

Air Quality and Greenhouse Gas Emissions

Under the No Project Alternative, the current uses for the project site, namely pedestrian access, recreation, and habitat, would remain. The proposed grading of slopes, development of new trails, addition of hazard signs, filling of the Quarry Pit, regrading of loose soil, installation of new wetlands, and revegetation would not occur. While air quality and greenhouse gas emissions would still occur in the area as a result of members of the public continuing to travel to the site to access the existing trails, reclamation-related emissions associated with implementing the proposed project's site improvements would not occur. Thus, Mitigation Measure 4.2-1 would not be required. Therefore, this alternative would result in fewer impacts on the project site as compared to the proposed project.

Biological Resources

Under the No Project Alternative, the current uses for the project site, namely pedestrian access, recreation, and habitat, would remain. The proposed grading of slopes, development of new trails, addition of hazard signs, filling of the Quarry Pit, regrading of loose soil, installation of new wetlands, and revegetation would not occur. As such, impacts would not occur to the existing habitats of special-status plant and wildlife species. Nor would impacts occur to the site's existing wetlands or trees. Thus, Mitigation Measures 4.3-1(a) through (c), 4.3-2(a) through 4.3-2(g), 4.3-3(a) and (b), 4.3-5(a) and (b), and 4.3-7(a) and (b) would not be required. Therefore, this alternative would result in fewer impacts on the project site as compared to the proposed project.

Cultural and Tribal Cultural Resources

Under the No Project Alternative, the current uses for the project site, namely pedestrian access, recreation, and habitat, would remain. The proposed grading of slopes, development of new trails, addition of hazard signs, filling of the Quarry Pit, regrading of loose soil, installation of new wetlands, and revegetation would not occur. As a result, disturbance of the site and any unknown cultural, archeological, or tribal cultural resource would not occur. Thus, Mitigation Measures 4.4-2(a), 4.4-2(b), and 4.4-3 would not be required. Therefore, this alternative would result in fewer impacts on the project site as compared to the proposed project.

Geology and Soils/Mineral Resources

Under the No Project Alternative, the current uses for the project site, namely pedestrian access, recreation, and habitat, would remain. The proposed grading of slopes, development of new trails,

addition of hazard signs, filling of the Quarry Pit, regrading of loose soil, installation of new wetlands, and revegetation would not occur. Without the aforementioned activities, the risks of erosion and destruction of unique paleontological resources or sites or unique geologic features from reclamation activities would not occur. Thus, Mitigation Measures 4.5-2, 4.5-3, and 4.5-5 would not be required. However, the current geologic conditions associated with continued erosion, landslides, and sheer slopes would remain. Therefore, this alternative would result in greater impacts on the project site as compared to the proposed project.

Hydrology and Water Quality

Under the No Project Alternative, the current uses for the project site, namely pedestrian access, recreation, and habitat, would remain. The proposed grading of slopes, development of new trails, addition of hazard signs, filling of the Quarry Pit, regrading of loose soil, installation of new wetlands, and revegetation would not occur. As such, Mitigation Measure 4.6-1 would not be required, and the No Project Alternative would not result in any level of impacts on the project site, as reclamation activities would not be initiated on-site. Therefore, this alternative would result in fewer impacts on the project site as compared to the proposed project.

Land Use and Planning

Under the No Project Alternative, the current uses for the project site, namely pedestrian access, recreation, and habitat, would remain. The proposed grading of slopes, development of new trails, addition of hazard signs, filling of the Quarry Pit, regrading of loose soil, installation of new wetlands, and revegetation would not occur. However, because the existing setting does not include development and the proposed project would not add new structures to be inhabited by residents through the reclamation of the project site, the proposed project's land use and planning impacts on the existing setting would be less than significant. As such, this alternative would result in similar impacts compared to the proposed project.

Noise

Under the No Project Alternative, the current uses for the project site, namely pedestrian access, recreation, and habitat, would remain. The proposed grading of slopes, development of new trails, addition of hazard signs, filling of the Quarry Pit, regrading of loose soil, installation of new wetlands, and revegetation would not occur. As such, Mitigation Measure 4.8-1 would not be required, and the No Project Alternative would not result in any level of impacts on the project site, as reclamation activities would not be initiated on-site. Therefore, this alternative would result in fewer impacts on the project site as compared to the proposed project.

Parks and Recreation

Under the No Project Alternative, the current uses for the Quarry site, namely pedestrian access, recreation, and habitat, would remain. The proposed grading of slopes, development of new trails, addition of hazard signs, filling of the Quarry Pit, regrading of loose soil, installation of new wetlands, and revegetation would not occur. Therefore, the current trails would not be temporarily closed during reclamation activities. However, as the proposed project's trail improvements, slope modifications, and revegetation would not occur, the improved safety and trail access associated with the proposed project would not occur. Thus, this alternative would result in greater impacts on the project site as compared to the proposed project.

Transportation

Under the No Project Alternative, the current uses for the project site, namely pedestrian access, recreation, and habitat, would remain. The proposed grading of slopes, development of new trails,

addition of hazard signs, filling of the Quarry Pit, regrading of loose soil, installation of new wetlands, and revegetation would not occur. As a result, Mitigation Measures 4.10-3(a) through (c) would not be required. In addition, the increase in vehicle trips generated by reclamation-related activities associated with implementing the proposed project would not occur. Therefore, this alternative would result in fewer impacts on the project site as compared to the proposed project.

Utilities and Service Systems

Under the No Project Alternative, the current uses for the project site, namely pedestrian access, recreation, and habitat, would remain. The proposed grading of slopes, development of new trails, addition of hazard signs, filling of the Quarry Pit, regrading of loose soil, installation of new wetlands, and revegetation would not occur. However, as the proposed project involves reclaiming the project site to an end use as open land, pursuant to the Reclamation Plan, and would not include development of structures, the proposed project would not require or result in new or upgraded utilities infrastructure, aside from temporary and permanent culverts to improve drainage within the project site's Eastern Parcel. The proposed project would not involve connection to service systems for water or wastewater conveyance and treatment. The proposed project would not include improvements to existing electrical, natural gas, or telecommunications infrastructure, and of the solid waste generated by the proposed project through implementation of the Reclamation Plan, solid waste would not be generated at such a level to significantly deplete capacity at the Ox Mountain Landfill. Therefore, the proposed project utilities and service systems impacts on the existing setting would be less than significant. Consequently, this alternative would result in similar impacts on the project site as compared to the proposed project.

2. Single Access Alternative

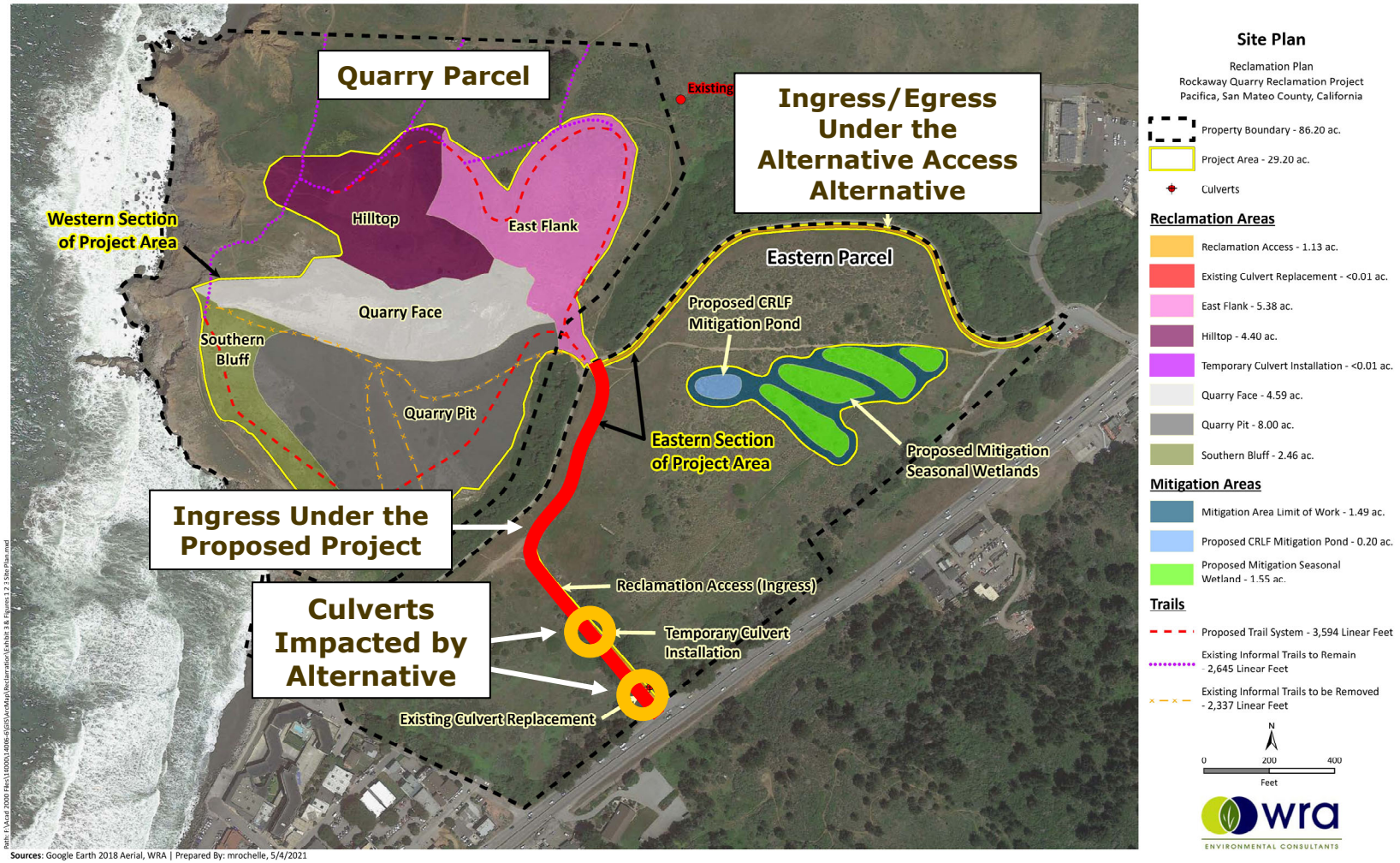
The following section includes a description of this alternative, an evaluation of the alternative's consistency with project objectives, and an impact comparison analysis.

Description of Alternative

Under this alternative, the ingress and egress to the project site would not be provided through a route that loops through the proposed project's Eastern Parcel, but instead, through a single access point at the State Route (SR) 1/Reina Del Mar Avenue intersection. As currently proposed, the project calls for ingress to the project site to be taken from the Old Quarry Road situated along SR 1, on the southbound side of SR 1, approximately one-third mile south of Reina Del Mar Avenue. Access to the project area from the ingress point then proceeds along a northerly route, looping through the Eastern Parcel in a semicircular direction. The route eventually curves back toward SR 1, following the path of the Eastern Parcel's perimeter, before reaching the project area's egress located at the SR 1/Reina Del Mar Avenue intersection. The proposed project's access loop necessitates the installation of two temporary 24-inch culverts under the project site's loop, near the ingress point, in order to convey drainage from one side of the loop to the other side.

Under the Single Access Alternative, because a single access point at the SR 1/Reina Del Mar Avenue intersection would serve as both ingress and egress to the project site, the project would no longer require the installation of the two temporary culverts (see 2). Without the installation of the culverts, the alternative would result in a reduction in ground disturbance.

Figure 6-2
Alternative Access Alternative Culvert Impacts



The project may also affect traffic safety by confining truck movements into the project site to an established intersection at the SR 1/Reina Del Mar Avenue intersection rather than requiring trucks to decelerate while partially in the southbound travel lane and partially in a narrow shoulder to access the Old Quarry Road.

The alternative would still be assumed to complete the project's grading of slopes, installation of new trails, improvements to existing trails, addition of hazard signs, filling of the Quarry Pit, regrading of loose soil, installation of new wetlands, and revegetation. However, the alternative would be assumed not to include the project's replacement of a 12-inch culvert located near SR 1 along the access loop. The 12-inch culvert is not currently functional. By not replacing it with a 12-inch reinforced concrete pipe culvert, as called for in the proposed project, the functionality of the existing drainage ditch flowing beneath the access loop near SR 1 would remain compromised.

Consistency with Project Objectives

Because the functionality of the existing drainage ditch flowing beneath the access loop near SR 1 would remain compromised, the Single Access Alternative would be partially inconsistent with the project objectives related to site safety, access, and erosion control. As a result, the alternative would only partially meet Objectives #1, #3, #6, #9, and #10. The alternative would meet Objectives #2, #4, #5, #7, and #8, as the alternative's single ingress/egress would not affect the ability for the project to minimize grading, establish safe trails between Rockaway Beach and Mori Point, restore physical disturbances from past quarrying activity, discourage illegal trespassing, or improve scenic corridors.

Impacts of Alternative

The following provides a discussion evaluating the impacts of this alternative on baseline conditions as compared to the impacts of the proposed project on baseline conditions for each impact area addressed within this EIR.

Aesthetics

The Single Access Alternative would constrain reclamation-related access to the site to a single ingress/egress point at the SR 1/Reina Del Mar Avenue intersection. As a result, the installation of two temporary culverts and a permanent 12-inch reinforced concrete pipe culvert along the access loop near SR 1 would no longer be required, as this area would no longer serve as ingress to the site. However, the alternative would still complete the project's remaining reclamation activities, including the grading of slopes, installation of new trails, improvements to existing trails, addition of hazard signs, filling of the Quarry Pit, regrading of loose soil, installation of new wetlands, and revegetation plan. As such, the alternative's area of impact would remain largely similar to that of the proposed project. Therefore, the aesthetics impacts associated with the Quarry site under the alternative would be generally similar to that of the proposed project.

Air Quality and Greenhouse Gas Emissions

The Single Access Alternative would constrain reclamation-related access to the site to a single ingress/egress point at the SR 1/Reina Del Mar Avenue intersection. As a result, the installation of two temporary culverts and a permanent 12-inch reinforced concrete pipe culvert along the access loop near SR 1 would no longer be required, as this area would no longer serve as ingress to the site. However, the alternative would still complete the project's remaining reclamation activities, including the grading of slopes, installation of new trails, improvements to existing trails, addition of hazard signs, filling of the Quarry Pit, regrading of loose soil, installation of new

wetlands, and revegetation plan. Because the alternative would only alter the manner in which trucks access and exit the site, but would not significantly alter the number of trucks and equipment needed to implement the Reclamation Plan, Mitigation Measure 4.2-1 related to the use of higher-tier off-road equipment would still be required for this alternative. Therefore, the alternative's impacts related to air quality and GHGs would be similar to or slightly fewer than the proposed project.

Biological Resources

The Single Access Alternative would constrain reclamation-related access to the site to a single ingress/egress point at the SR 1/Reina Del Mar Avenue intersection. As a result, the installation of two temporary culverts and a permanent 12-inch reinforced concrete pipe culvert along the access loop near SR 1 would no longer be required, as this area would no longer serve as ingress to the site. However, the alternative would still complete the project's remaining reclamation activities, including the grading of slopes, installation of new trails, improvements to existing trails, addition of hazard signs, filling of the Quarry Pit, regrading of loose soil, installation of new wetlands, and revegetation plan. While the single access would slightly reduce the alternative's area of impact in comparison to the proposed project, the primary area of impact would remain. As such, Mitigation Measures 4.3-1(a) through (c), 4.3-2(a) through 4.3-2(g), 4.3-3(a) and (b), 4.3-5(a) and (b), and 4.3-7(a) and (b) related to biological resources identified within the project site would still be required for this alternative. Therefore, biological resource impacts under the alternative would be similar to or slightly fewer than the proposed project.

Cultural and Tribal Cultural Resources

The Single Access Alternative would constrain reclamation-related access to the site to a single ingress/egress point at the SR 1/Reina Del Mar Avenue intersection. As a result, the installation of two temporary culverts and a permanent 12-inch reinforced concrete pipe culvert along the access loop near SR 1 would no longer be required, as this area would no longer serve as ingress to the site. However, the alternative would still complete the project's remaining reclamation activities, including the grading of slopes, installation of new trails, improvements to existing trails, addition of hazard signs, filling of the Quarry Pit, regrading of loose soil, installation of new wetlands, and revegetation plan. While the alternative's single access point would eliminate the ground-disturbing activities related to the culverts, the alternative would still require ground disturbance to create the wetlands on the Eastern Parcel. Thus, the area of impact would largely remain the same under the alternative. Therefore, Mitigation Measures 4.4-2(a) and 4.4-2(b) related to the discovery of resources during ground disturbance would still be required under the alternative, and impacts would be similar to or slightly fewer than the proposed project.

Geology and Soils/Mineral Resources

The Single Access Alternative would constrain reclamation-related access to the site to a single ingress/egress point at the SR 1/Reina Del Mar Avenue intersection. As a result, the installation of two temporary culverts and a permanent 12-inch reinforced concrete pipe culvert along the access loop near SR 1 would no longer be required, as this area would no longer serve as ingress to the site. However, the alternative would still complete the project's remaining reclamation activities, including the grading of slopes, installation of new trails, improvements to existing trails, addition of hazard signs, filling of the Quarry Pit, regrading of loose soil, installation of new wetlands, and revegetation plan. While the alternative's single access point would eliminate the ground-disturbing activities related to the culverts, the alternative would still require a substantial amount of fill material and slope grading to implement the remaining components of the Reclamation Plan. The area of impact would largely remain the same under the alternative.

Therefore, Mitigation Measures 4.5-2, 4.5-3, and 4.5-5, which pertain to soil erosion, loss of topsoil, subsidence, and paleontological resources would still be required under the alternative. Impacts under the alternative to geology and soils and minerals resources would be similar to the proposed project.

Hydrology and Water Quality

The Single Access Alternative would constrain reclamation-related access to the site to a single ingress/egress point at the SR 1/Reina Del Mar Avenue intersection. As a result, the installation of two temporary culverts and a permanent 12-inch reinforced concrete pipe culvert along the access loop near SR 1 would no longer be required, as this area would no longer serve as ingress to the site. However, the alternative would still complete the project's remaining reclamation activities, including the grading of slopes, installation of new trails, improvements to existing trails, addition of hazard signs, filling of the Quarry Pit, regrading of loose soil, installation of new wetlands, and revegetation plan. While the alternative's single access point would eliminate the ground-disturbing activities related to the culverts, the alternative would still require substantial earthwork to implement the remaining components of the Reclamation Plan and require Mitigation Measure 4.6-1. The area of impact would largely remain the same under the alternative. Therefore, the alternative's impacts related to hydrology and water quality would be similar to or slightly fewer than the impacts under the proposed project.

Land Use and Planning

The Single Access Alternative would constrain reclamation-related access to the site to a single ingress/egress point at the SR 1/Reina Del Mar Avenue intersection. As a result, the installation of two temporary culverts and a permanent 12-inch reinforced concrete pipe culvert along the access loop near SR 1 would no longer be required, as this area would no longer serve as ingress to the site. However, the alternative would still complete the project's remaining reclamation activities, including the grading of slopes, installation of new trails, improvements to existing trails, addition of hazard signs, filling of the Quarry Pit, regrading of loose soil, installation of new wetlands, and revegetation plan. Because the alternative, similar to the proposed project, would not propose additional development or a change in use of the Quarry, the land use and planning impacts associated with the Quarry site under the alternative would be generally similar to that of the proposed project.

Noise

The Single Access Alternative would constrain reclamation-related access to the site to a single ingress/egress point at the SR 1/Reina Del Mar Avenue intersection. As a result, the installation of two temporary culverts and a permanent 12-inch reinforced concrete pipe culvert along the access loop near SR 1 would no longer be required, as this area would no longer serve as ingress to the site. However, the alternative would still complete the project's remaining reclamation activities, including the grading of slopes, installation of new trails, improvements to existing trails, addition of hazard signs, filling of the Quarry Pit, regrading of loose soil, installation of new wetlands, and revegetation plan. Because the alternative would alter the manner in which trucks access and exit the site, areas east of SR 1 south of Reina Del Mar Avenue would not be exposed to project-related trucks. However, the alternative would still implement the proposed Dust Control Plan, necessitating Mitigation Measure 4.8-1. The alternative would not significantly alter the number of trucks and equipment accessing and operating the site to implement the Reclamation Plan; thus, the alternative's impacts related to noise would be similar to or slightly fewer than the impacts under the proposed project.

Parks and Recreation

The Single Access Alternative would constrain reclamation-related access to the site to a single ingress/egress point at the SR 1/Reina Del Mar Avenue intersection. As a result, the installation of two temporary culverts and a permanent 12-inch reinforced concrete pipe culvert along the access loop near SR 1 would no longer be required, as this area would no longer serve as ingress to the site. However, the alternative would still complete the project's remaining reclamation activities, including the grading of slopes, installation of new trails, improvements to existing trails, addition of hazard signs, filling of the Quarry Pit, regrading of loose soil, installation of new wetlands, and revegetation plan. Under the alternative, the end use of the project site, pursuant to the Reclamation Plan, would still be open land. Therefore, the parks and recreation impacts associated with the Quarry site under the alternative would be generally similar to that of the proposed project.

Transportation

The Single Access Alternative would constrain reclamation-related access to the site to a single ingress/egress point at the SR 1/Reina Del Mar Avenue intersection. As a result, the installation of two temporary culverts and a permanent 12-inch reinforced concrete pipe culvert along the access loop near SR 1 would no longer be required, as this area would no longer serve as ingress to the site. However, the alternative would still complete the project's remaining reclamation activities, including the grading of slopes, installation of new trails, improvements to existing trails, addition of hazard signs, filling of the Quarry Pit, regrading of loose soil, installation of new wetlands, and revegetation plan.

With a single access point to the project site, truck trip volume on the southbound right turn movement at the SR 1/Reina Del Mar Avenue intersection would increase while the through lane volume would equally decrease. The deceleration required as trucks approach the SR 1/Reina Del Mar Avenue intersection for ingress would add additional delay to traffic flow on southbound SR 1. Haul trucks would continue to not use City streets at any time, similar to the proposed project, and haul trucks would have the opportunity to queue within the Eastern Parcel prior to passing through the existing Calera Creek overcrossing and accessing the Quarry Parcel. Because the alternative would not significantly alter the number of trucks and equipment needed to implement the Reclamation Plan, vehicle miles traveled would remain consistent under the alternative with the proposed project. Finally, given that the alternative would result in nearly all of the same reclamation activities as the proposed project, including the proposed Dust Control Plan, the design of the Reclamation Plan would be nearly identical under the alternative to that of the proposed project, thus, requiring Mitigation Measures 4.10-3(a) through (c). Therefore, the transportation impacts associated with the Quarry site under the alternative would be generally similar to or slightly greater than that of the proposed project.

Utilities and Service Systems

The Single Access Alternative would constrain reclamation-related access to the site to a single ingress/egress point at the SR 1/Reina Del Mar Avenue intersection. As a result, the installation of two temporary culverts and a permanent 12-inch reinforced concrete pipe culvert along the access loop near SR 1 would no longer be required, as this area would no longer serve as ingress to the site. However, the alternative would still complete the project's remaining reclamation activities, including the grading of slopes, installation of new trails, improvements to existing trails, addition of hazard signs, filling of the Quarry Pit, regrading of loose soil, installation of new wetlands, and revegetation plan. Thus, the alternative would result in nearly all of the same reclamation activities as the proposed project, within a largely similar area of impact. Therefore,

the impacts to utilities and service systems associated with the Quarry site under the alternative would be generally similar to that of the proposed project.

3. Reduced Fill Alternative

The following section includes a description of this alternative, an evaluation of the alternative's consistency with project objectives, and an impact comparison analysis.

Description of Alternative

Under this alternative, the proposed project would implement the components of the Reclamation Plan, but with alterations to the project's filling and grading components, due to a reduction in the amount of imported fill. As currently proposed, the project would require 970,000 CY of imported fill to grade the Quarry site. Fill would occur on the inside of the Southern Bluff, where existing slopes are very steep, and within the Quarry Pit, which would be filled and restored to pre-mining conditions. For the Southern Bluff, where the fill is relatively minimal (the southern end), a 2:1 slope has been proposed. Where the fill is more extensive (the northern end), a 5:1 slope has been proposed. Based on the amount of fill, the project as proposed would be anticipated to result in an average of approximately 167 truck trips per day plus 10 employee trips per day, including 16 truck trips during the AM and PM peak hours. Under the proposed project's current plans, trucks hauling fill to the site would come from the north and access the project site from southbound SR 1 through the Old Quarry Road connection, an existing dirt access road located approximately one-third mile south of Reina Del Mar Avenue. Vehicle egress from the site would be accommodated at the existing traffic signal at SR 1/Reina Del Mar Avenue. Trucks would turn left onto SR 1 and return to the north via Interstate 280. Trucks would not use City streets at any time.

However, under the Reduced Fill Alternative, the minimum fill required to meet SMARA requirements and slope stability would be used. While the minimum fill would alter the amount of fill within the Quarry Pit, the alternative would still complete the remaining reclamation activities proposed under the proposed project, including the installation of new trails, improvements to existing trails, addition of hazard signs, regrading of loose soil, installation of new wetlands, installation of temporary and permanent culverts, and revegetation plan.

Consistency with Project Objectives

As the alternative would use the minimum fill required to meet SMARA standards; thus, the alternative would generally be capable of meeting all of the project objectives.

Impacts of Alternative

The following provides a discussion evaluating the impacts of this alternative on baseline conditions as compared to the impacts of the proposed project on baseline conditions for each impact area addressed within this EIR.

Aesthetics

The Reduced Fill Alternative would use the minimum fill required to meet SMARA standards, altering the extent to which the inside of the Southern Bluff and the Quarry Pit would be filled in comparison to the proposed project. However, the alternative would still complete the remaining reclamation activities proposed under the proposed project, including the installation of new trails, improvements to existing trails, addition of hazard signs, regrading of loose soil, installation of new wetlands, installation of temporary and permanent culverts, and revegetation plan. As such, the alternative's area of impact would remain largely similar to that of the proposed project.

Therefore, the aesthetics impacts associated with the Quarry site under the alternative would be generally similar to that of the proposed project.

Air Quality and Greenhouse Gas Emissions

The Reduced Fill Alternative would use the minimum fill required to meet SMARA standards, altering the extent to which the inside of the Southern Bluff and the Quarry Pit would be filled in comparison to the proposed project. However, the alternative would still complete the remaining reclamation activities proposed under the proposed project, including the installation of new trails, improvements to existing trails, addition of hazard signs, regrading of loose soil, installation of new wetlands, installation of temporary and permanent culverts, and revegetation plan.

The alternative would still require implementation of Mitigation Measure 4.2-1 related to the use of higher-tier off-road equipment, as the trucks and equipment needed to implement the Reclamation Plan under the alternative would still be significant. However, the alternative's reduced amount of fill would reduce the number of trips required by trucks to import fill to the project site, as well as reduce the duration of trucks and equipment operating onsite to implement the Reclamation Plan. Therefore, the alternative would result in fewer impacts related to air quality and GHG emissions.

Biological Resources

The Reduced Fill Alternative would use the minimum fill required to meet SMARA standards, altering the extent to which the inside of the Southern Bluff and the Quarry Pit would be filled in comparison to the proposed project. However, the alternative would still complete the remaining reclamation activities proposed under the proposed project, including the installation of new trails, improvements to existing trails, addition of hazard signs, regrading of loose soil, installation of new wetlands, installation of temporary and permanent culverts, and revegetation plan. Because the reduced amount of fill would not appreciably diminish the physical area of impact under the alternative in comparison to the proposed project, Mitigation Measures 4.3-1(a) through (c), 4.3-2(a) through 4.3-2(g), 4.3-3(a) and (b), 4.3-5(a) and (b), and 4.3-7(a) and (b) related to biological resources identified within the project site would still be required for this alternative. Based on the above information, the alternative would result in similar impacts as the proposed project.

Cultural and Tribal Cultural Resources

The Reduced Fill Alternative would use the minimum fill required to meet SMARA standards, altering the extent to which the inside of the Southern Bluff and the Quarry Pit would be filled in comparison to the proposed project. However, the alternative would still complete the remaining reclamation activities proposed under the proposed project, including the installation of new trails, improvements to existing trails, addition of hazard signs, regrading of loose soil, installation of new wetlands, installation of temporary and permanent culverts, and revegetation plan. Because the reduced amount of fill would not appreciably diminish the physical area of impact under the alternative, a significant amount of ground disturbance would still be expected to occur. As such, Mitigation Measures 4.4-2(a) and 4.4-2(b) related to the discovery of resources during ground disturbance would still be required under the alternative. Based on the above information, the alternative would result in similar impacts as the proposed project.

Geology and Soils/Mineral Resources

The Reduced Fill Alternative would use the minimum fill required to meet SMARA standards, altering the extent to which the inside of the Southern Bluff and the Quarry Pit would be filled in comparison to the proposed project. However, the alternative would still complete the remaining

reclamation activities proposed under the proposed project, including the installation of new trails, improvements to existing trails, addition of hazard signs, regrading of loose soil, installation of new wetlands, installation of temporary and permanent culverts, and revegetation plan.

Because the reduced amount of fill would not appreciably diminish the physical area of impact under the alternative, Mitigation Measures 4.5-2, 4.5-3, and 4.5-5, which pertain to soil erosion, loss of topsoil, subsidence, and paleontological resources would still be required under the alternative. Although, the alternative's reduced amount of fill would alter the amount of grading required as part of the Reclamation Plan, similar potential issues would remain. Therefore, the alternative would result in fewer impacts, compared to the proposed project, related to geology and soils and mineral resources.

Hydrology and Water Quality

The Reduced Fill Alternative would use the minimum fill required to meet SMARA standards, altering the extent to which the inside of the Southern Bluff and the Quarry Pit would be filled in comparison to the proposed project. However, the alternative would still complete the remaining reclamation activities proposed under the proposed project, including the installation of new trails, improvements to existing trails, addition of hazard signs, regrading of loose soil, installation of new wetlands, installation of temporary and permanent culverts, and revegetation plan.

Because the reduced amount of fill would not appreciably diminish the physical area of impact under the alternative, a significant amount of earthwork would still be expected to occur, which would continue to necessitate the proposed Dust Control Plan. As such, the alternative would still require Mitigation Measure 4.6-1 and would result in similar impacts, in comparison to the proposed project, related to hydrology and water quality.

Land Use and Planning

The Reduced Fill Alternative would use the minimum fill required to meet SMARA standards, altering the extent to which the inside of the Southern Bluff and the Quarry Pit would be filled in comparison to the proposed project. However, the alternative would still complete the remaining reclamation activities proposed under the proposed project, including the installation of new trails, improvements to existing trails, addition of hazard signs, regrading of loose soil, installation of new wetlands, installation of temporary and permanent culverts, and revegetation plan. Because the alternative, similar to the proposed project, would not propose additional development or a change in use of the Quarry, the land use and planning impacts associated with the Quarry site under the alternative would be generally similar to that of the proposed project.

Noise

The Reduced Fill Alternative would use the minimum fill required to meet SMARA standards, altering the extent to which the inside of the Southern Bluff and the Quarry Pit would be filled in comparison to the proposed project. However, the alternative would still complete the remaining reclamation activities proposed under the proposed project, including the installation of new trails, improvements to existing trails, addition of hazard signs, regrading of loose soil, installation of new wetlands, installation of temporary and permanent culverts, and revegetation plan.

The Reduced Fill Alternative would still require a significant amount of earthwork to implement the alternative's Reclamation Plan. Thus, the proposed Dust Control Plan would be required, necessitating Mitigation Measure 4.8-1. However, the alternative's reduced amount of fill would alter the number of trips required by trucks to import fill to the project site, as well as reduce the

duration of trucks and equipment onsite to implement the Reclamation Plan. Therefore, the alternative would result in fewer impacts related to noise.

Parks and Recreation

The Reduced Fill Alternative would use the minimum fill required to meet SMARA standards, altering the extent to which the inside of the Southern Bluff and the Quarry Pit would be filled in comparison to the proposed project. However, the alternative would still complete the remaining reclamation activities proposed under the proposed project, including the installation of new trails, improvements to existing trails, addition of hazard signs, regrading of loose soil, installation of new wetlands, installation of temporary and permanent culverts, and revegetation plan. The project site's end use under the alternative would still be open land, pursuant to the Reclamation Plan. Therefore, the parks and recreation impacts associated with the Quarry site under the alternative would be generally similar to that of the proposed project.

Transportation

The Reduced Fill Alternative would use the minimum fill required to meet SMARA standards, altering the extent to which the inside of the Southern Bluff and the Quarry Pit would be filled in comparison to the proposed project. However, the alternative would still complete the remaining reclamation activities proposed under the proposed project, including the installation of new trails, improvements to existing trails, addition of hazard signs, regrading of loose soil, installation of new wetlands, installation of temporary and permanent culverts, and revegetation plan.

Although the alternative would result in nearly all of the same reclamation activities as the proposed project, which would result in a largely similar design under the alternative to that of the proposed project, the alternative's reduced amount of fill would alter the number of trips required by trucks to import fill to the project site. However, the proposed Dust Control Plan would still be required, necessitating Mitigation Measures 4.10-3(a) through (c). Based on the above, the VMT associated with the Quarry site under the alternative would be fewer than that required by the proposed project.

Utilities and Service Systems

The Reduced Fill Alternative would use the minimum fill required to meet SMARA standards, altering the extent to which the inside of the Southern Bluff and the Quarry Pit would be filled in comparison to the proposed project. However, the alternative would still complete the remaining reclamation activities proposed under the proposed project, including the installation of new trails, improvements to existing trails, addition of hazard signs, regrading of loose soil, installation of new wetlands, installation of temporary and permanent culverts, and revegetation plan. Thus, the alternative would result in nearly all of the same reclamation activities as the proposed project, within the same area of impact. Therefore, the utilities and service systems impacts associated with the Quarry site under the alternative would be generally similar to that of the proposed project.

4. Open Trails Alternative

The following section includes a description of this alternative, an evaluation of the alternative's consistency with project objectives, and an impact comparison analysis.

Description of Alternative

Under this alternative, while the currently proposed project's components in the Eastern Parcel would remain the same, work in the Quarry Parcel, including the project's soil hauling, slope cuts, and grading components, would be implemented in two primary phases, such that temporary

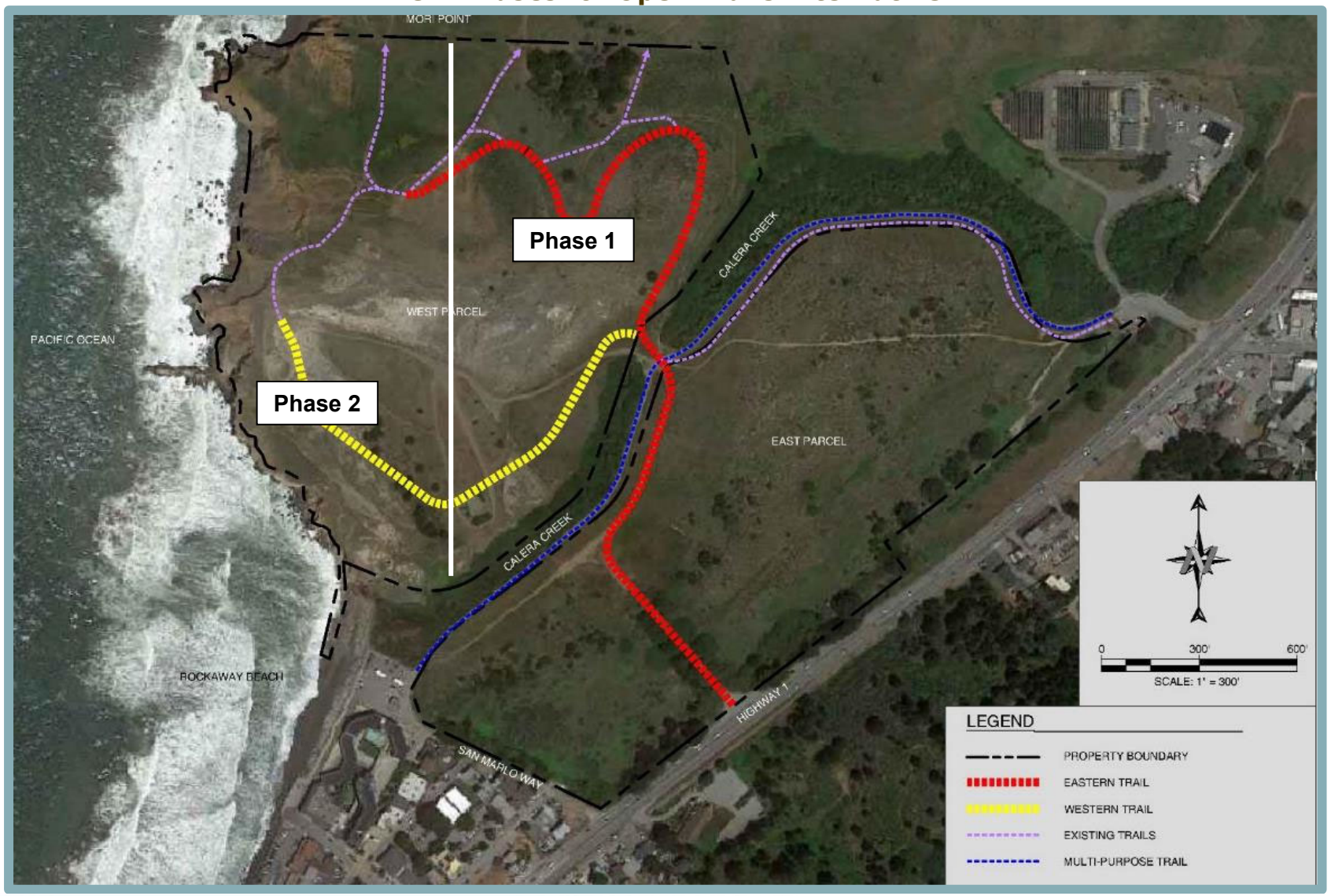
closures of the existing, on-site trails as a result of reclamation-related activities would be reduced to the maximum extent feasible. As currently proposed, the project would complete work on the Quarry Parcel in four sub-phases: Phase 1A, 1B, 1C, and 1D with all supplementary grading, revegetation, and additional work being completed in the End Use Phase (see Table 3-1 in Chapter 3). Improvements would involve closure of trails within the Quarry Parcel's grading footprint for limited periods of time. The CCMP Trail and parts of the Eastern Trail would have occasional closures to provide reclamation equipment access.

As currently proposed, Phase 1A would include site preparation and site clearing of the Quarry Parcel and Calera Creek culvert crossing. Work would also include placement of 250,000 CY of imported fill in the areas at the Calera Creek culvert crossing/access point and the Quarry Pit. Phase 1B would include excavation of 85,000 CY of cut material at the top of the Quarry Face, East Flank, and Quarry Pit for rough grading of the access path/multi-use trail and stabilization of the top of the hillside. Placement of an additional 250,000 CY of imported fill in the Quarry Pit and East Flank to raise the grade and generate the rough grades for the access path/multi-use trail along the East Flank up to the top of the Quarry Face would also be included in Phase 1B. Phase 1C would include placement of an additional 250,000 CY of imported fill in the Quarry Pit. Additional work in Phase 1C would include construction of the concrete lined drainage ditches, swales, storm drain lines, and drop inlets along the access path/multi-use trail and Hilltop located on the upper Quarry Face and East Flank. Phase 1C would also include the sedimentation junction structure and culvert tie-in located at the Calera Creek crossing. The final Phase on the Quarry Parcel would include placement of an additional 220,000 CY of imported fill at the Quarry Pit and rough grading for the access path/multi-use trail within the Quarry Pit area. Phase 1D would also include construction of the swales, concrete lined drainage ditches, swales, storm drain lines, drop inlets and the junction structure located in the Quarry Pit area. Additional construction would include fine grading and construction of the structural section of the full length of the multi-use trail on the Quarry Parcel in compliance with the Reclamation Plan.

In this alternative, the four sub-phases would instead be constrained to two primary phases for reclamation activities within the Quarry Parcel (see Figure 6-3). The new Phase 1 would include site preparation and site clearing of the eastern half of the Quarry Parcel and Calera Creek culvert crossing. Placement of imported fill in the areas at the Calera Creek crossing/access point and the Quarry Pit would be focused on the eastern half of the Quarry Pit. Phase 1 would then include excavation of cut material on the eastern half of the Quarry Face, eastern half of the Quarry Pit, and the East Flank for rough grading of the access path/multi-use trail and stabilization of the top of the hillside. Placement of imported fill in the eastern half of the Quarry Pit and East Flank to raise the grade and generate the rough grades for the access path/multi-use trail along the East Flank up to the Quarry Face would also occur. Phase 1 would also include all other reclamation activities with respect to drainage, swales, and drop inlets in the eastern half of the Quarry Parcel. After the completion of reclamation activities in the eastern half of the Quarry Parcel, Phase 2 would commence, with remaining reclamation activities completed for the western half of the Quarry Parcel.

In scheduling reclamation activities associated with the Quarry Parcel in such a manner, the Open Trails Alternative would allow for the internal trails within the western half of the Quarry Parcel to remain largely open to pedestrian access during Phase 1, and the internal trails in the eastern half of the Quarry Parcel to remain open to the public during Phase 2. However, the alternative's timeline for reclaiming the Quarry Parcel would be assumed to be longer than the timeline of the proposed project.

Figure 6-3
New Phases for Open Trails Alternative



Consistency with Project Objectives

The Open Trails Alternative would generally be capable of meeting all of the project objectives.

Impacts of Alternative

The following provides a discussion evaluating the impacts of this alternative on baseline conditions as compared to the impacts of the proposed project on baseline conditions for each impact area addressed within this EIR.

Aesthetics

The Open Trails Alternative would implement reclamation activities in the Quarry Parcel, including the project's soil hauling, slope cuts, and grading components, in two primary phases. Reclamation activities in the Eastern Parcel would remain identical under the alternative to those called for by the proposed project.

Because the alternative would only change the manner in which a portion of the Reclamation Plan's activities are implemented, the alternative would still result in all of the components of the Reclamation Plan, including the grading of slopes, installation of new trails, improvements to existing trails, addition of hazard signs, filling of the Quarry Pit, regrading of loose soil, installation of new wetlands, installation of temporary and permanent culverts, and revegetation plan. As such, while the timeline for reclaiming the Quarry Parcel would be longer under the alternative, the alternative's area of impact would still remain identical to the proposed project's area of impact. Therefore, the aesthetics impacts associated with the Quarry site under the alternative would be generally similar to that of the proposed project.

Air Quality and Greenhouse Gas Emissions

The Open Trails Alternative would implement reclamation activities in the Quarry Parcel, including the project's soil hauling, slope cuts, and grading components, in two primary phases. Reclamation activities in the Eastern Parcel would remain identical under the alternative to those called for by the proposed project.

Because the alternative would only change the manner in which a portion of the Reclamation Plan's activities are implemented, the alternative would still result in all of the components of the Reclamation Plan, including the grading of slopes, installation of new trails, improvements to existing trails, addition of hazard signs, filling of the Quarry Pit, regrading of loose soil, installation of new wetlands, installation of temporary and permanent culverts, and revegetation plan. As such, the alternative's area of impact and sources of air quality and GHG emissions would remain identical to the proposed project. Therefore, the alternative would still require implementation of Mitigation Measure 4.2-1 related to the use of higher-tier off-road equipment. Thus, the alternative would result in similar impacts related to air quality and GHG emissions.

Biological Resources

The Open Trails Alternative would implement reclamation activities in the Quarry Parcel, including the project's soil hauling, slope cuts, and grading components, in two primary phases. Reclamation activities in the Eastern Parcel would remain identical under the alternative to those called for by the proposed project.

Because the alternative would only change the manner in which a portion of the Reclamation Plan's activities are implemented, the alternative would still result in all of the components of the Reclamation Plan, including the grading of slopes, installation of new trails, improvements to

existing trails, addition of hazard signs, filling of the Quarry Pit, regrading of loose soil, installation of new wetlands, installation of temporary and permanent culverts, and revegetation plan. As such, the alternative's area of impact would remain identical to the proposed project's area of impact. Therefore, Mitigation Measures 4.3-1(a) through (c), 4.3-2(a) through 4.3-2(g), 4.3-3(a) and (b), 4.3-5(a) and (b), and 4.3-7(a) and (b) related to biological resources identified within the project site would still be required for this alternative. Based on the above information, the alternative would result in similar impacts as the proposed project.

Cultural and Tribal Cultural Resources

The Open Trails Alternative would implement reclamation activities in the Quarry Parcel, including the project's soil hauling, slope cuts, and grading components, in two primary phases. Reclamation activities in the Eastern Parcel would remain identical under the alternative to those called for by the proposed project.

Because the alternative would only change the manner in which a portion of the Reclamation Plan's activities are implemented, the alternative would still result in all of the components of the Reclamation Plan, including the grading of slopes, installation of new trails, improvements to existing trails, addition of hazard signs, filling of the Quarry Pit, regrading of loose soil, installation of new wetlands, installation of temporary and permanent culverts, and revegetation plan. As such, the alternative's area of impact would remain identical to the proposed project's area of impact. Therefore, Mitigation Measures 4.4-2(a) and 4.4-2(b) related to the discovery of resources during ground disturbance would still be required under the alternative. Based on the above information, the alternative would result in similar impacts as the proposed project.

Geology and Soils/Mineral Resources

The Open Trails Alternative would implement reclamation activities in the Quarry Parcel, including the project's soil hauling, slope cuts, and grading components, in two primary phases. Reclamation activities in the Eastern Parcel would remain identical under the alternative to those called for by the proposed project.

Because the alternative would only change the manner in which a portion of the Reclamation Plan's activities are implemented, the alternative would still result in all of the components of the Reclamation Plan, including the grading of slopes, installation of new trails, improvements to existing trails, addition of hazard signs, filling of the Quarry Pit, regrading of loose soil, installation of new wetlands, installation of temporary and permanent culverts, and revegetation plan. As such, the alternative's area of impact would remain identical to the proposed project's area of impact. Therefore, Mitigation Measures 4.5-2, 4.5-3, and 4.5-5, which pertain to soil erosion, loss of topsoil, subsidence, and paleontological resources would still be required under the alternative, and the alternative would result in similar impacts to the proposed project related to geology and soils and mineral resources.

Hydrology and Water Quality

The Open Trails Alternative would implement reclamation activities in the Quarry Parcel, including the project's soil hauling, slope cuts, and grading components, in two primary phases. Reclamation activities in the Eastern Parcel would remain identical under the alternative to those called for by the proposed project.

Because the alternative would only change the manner in which a portion of the Reclamation Plan's activities are implemented, the alternative would still result in all of the components of the

Reclamation Plan, including the grading of slopes, installation of new trails, improvements to existing trails, addition of hazard signs, filling of the Quarry Pit, regrading of loose soil, installation of new wetlands, installation of temporary and permanent culverts, and revegetation plan. As such, the alternative's area of impact would remain identical to the proposed project's area of impact, requiring Mitigation Measure 4.6-1. Therefore, the alternative would result in similar impacts to the proposed project related to hydrology and water quality.

Land Use and Planning

The Open Trails Alternative would implement reclamation activities in the Quarry Parcel, including the project's soil hauling, slope cuts, and grading components, in two primary phases. Reclamation activities in the Eastern Parcel would remain identical under the alternative to those called for by the proposed project.

Because the alternative would only change the manner in which a portion of the Reclamation Plan's activities are implemented, the alternative would still result in all of the components of the Reclamation Plan, including the grading of slopes, installation of new trails, improvements to existing trails, addition of hazard signs, filling of the Quarry Pit, regrading of loose soil, installation of new wetlands, installation of temporary and permanent culverts, and revegetation plan. As such, the alternative's area of impact and post-reclamation land use would remain identical to the proposed project. Because the alternative, similar to the proposed project, would not propose additional development or a change in use of the Quarry, the land use and planning impacts associated with the Quarry site under the alternative would be generally similar to that of the proposed project.

Noise

The Open Trails Alternative would implement reclamation activities in the Quarry Parcel, including the project's soil hauling, slope cuts, and grading components, in two primary phases. Reclamation activities in the Eastern Parcel would remain identical under the alternative to those called for by the proposed project.

Because the alternative would only change the manner in which a portion of the Reclamation Plan's activities are implemented, the alternative would still result in all of the components of the Reclamation Plan, including the grading of slopes, installation of new trails, improvements to existing trails, addition of hazard signs, filling of the Quarry Pit, regrading of loose soil, installation of new wetlands, installation of temporary and permanent culverts, and revegetation plan. As such, the alternative's area of impact would remain identical to the proposed project's area of impact and would require Mitigation Measure 4.8-1. Therefore, the alternative would result in similar impacts related to noise.

Parks and Recreation

The Open Trails Alternative would implement reclamation activities in the Quarry Parcel, including the project's soil hauling, slope cuts, and grading components, in two primary phases. Reclamation activities in the Eastern Parcel would remain identical under the alternative to those called for by the proposed project.

Because the alternative would only change the manner in which a portion of the Reclamation Plan's activities are implemented, the alternative would still result in all of the components of the Reclamation Plan, including the grading of slopes, installation of new trails, improvements to existing trails, addition of hazard signs, filling of the Quarry Pit, regrading of loose soil, installation

of new wetlands, installation of temporary and permanent culverts, and revegetation plan. However, as the alternative would result in fewer closures to the internal trails to reclaim the Quarry Parcel, fewer impacts would occur as compared to the proposed project, as fewer closures to trails under the alternative would subsequently equate to fewer members of the public being forced to seek recreation elsewhere during reclamation of the Quarry Parcel. Therefore, the parks and recreation impacts associated with the Quarry site under the alternative would be fewer as compared to the proposed project.

Transportation

The Open Trails Alternative would implement reclamation activities in the Quarry Parcel, including the project's soil hauling, slope cuts, and grading components, in two primary phases. Reclamation activities in the Eastern Parcel would remain identical under the alternative to those called for by the proposed project.

Because the alternative would only change the manner in which a portion of the Reclamation Plan's activities are implemented, the alternative would still result in all of the components of the Reclamation Plan, including the grading of slopes, installation of new trails, improvements to existing trails, addition of hazard signs, filling of the Quarry Pit, regrading of loose soil, installation of new wetlands, installation of temporary and permanent culverts, and revegetation plan. As such, the alternative's area of impact would remain identical to the proposed project's area of impact. The alternative would not result in different access locations or VMT. The alternative would require Mitigation Measures 4.10-3(a) through (c). Therefore, the alternative would result in similar impacts related to transportation.

Utilities and Service Systems

The Open Trails Alternative would implement reclamation activities in the Quarry Parcel, including the project's soil hauling, slope cuts, and grading components, in two primary phases. Reclamation activities in the Eastern Parcel would remain identical under the alternative to those called for by the proposed project.

Because the alternative would only change the manner in which a portion of the Reclamation Plan's activities are implemented, the alternative would still result in all of the components of the Reclamation Plan, including the grading of slopes, installation of new trails, improvements to existing trails, addition of hazard signs, filling of the Quarry Pit, regrading of loose soil, installation of new wetlands, installation of temporary and permanent culverts, and revegetation plan. Therefore, the impacts to utilities and service systems under the alternative would be generally similar to that of the proposed project.

6.4 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

CEQA Guidelines Section 15126.6(e)(2) requires consideration of an environmentally superior alternative from the range of reasonable alternatives evaluated. If the environmentally superior alternative is the No Project Alternative, the EIR must identify the environmentally superior alternative among the other alternatives. The environmentally superior alternative is the alternative that would result in the fewest or least significant environmental impacts.

Table 6-1 provides a summary comparison of significance levels for identified impacts under each alternative and is summarized below.

Alternative 1 (No Project Alternative) would result in similar impacts, as compared to the proposed project, related to Aesthetics, Land Use and Planning, and Utilities and Service Systems. In addition, Alternative 1 would result in greater impacts, as compared to the proposed project, for Geology and Soils/Mineral Resources as well as Parks and Recreation. The alternative would result in fewer impacts associated with the remaining environmental issue areas. Alternative 1 would not meet any of the project objectives.

Alternative 2 (Single Access Alternative) would result in similar or slightly fewer impacts to all issue areas except Transportation, which would be similar to or slightly greater. As a result of eliminating the temporary and permanent culverts planned as part of the proposed project, Alternative 2 would result in inconsistency with the project objectives related to site safety, access, and erosion control, as the culverts would serve to improve drainage in the project site's Eastern Parcel. As such, Alternative 2 would only partially meet Objectives #1, #3, #6, #9, and #10. Alternative 2 would meet Objectives #2, #4, #5, #7, and #8.

Alternative 3 (Reduced Fill Alternative) would result in fewer impacts as compared to the proposed project to Air Quality and Greenhouse Gas Emissions; Geology and Soils/Mineral Resources; Noise; and Transportation. For all other issue areas, Alternative 3 would result in similar impacts. Because Alternative 3 would use the minimum fill required to meet SMARA standards, all project objectives would be met.

Alternative 4 (Open Trails Alternative) would result in fewer impacts as compared to the proposed project to Parks and Recreation, and similar impacts to all other issue areas. As Alternative 4 would not result in different reclamation activities from the proposed project, Alternative 4 would generally be capable of meeting all of the project objectives.

Based on the analysis presented in this Draft EIR and the summary provided in Table 6-1, Alternative 3 (Reduced Fill Alternative) would meet all project objectives and would result in similar or fewer impacts as compared to the proposed project. Therefore, Alternative 3 would be the Environmentally Superior Alternative.

Table 6-1
Comparison of Environmental Impacts for Project Alternatives

Resource Area	Proposed Project level of significance after mitigation	1. No Project Alternative	2. Single Access Alternative	3. Reduced Fill Alternative	4. Open Trails Alternative
Aesthetics	Less than Significant	=	=	=	=
Air Quality and Greenhouse Gas Emissions	Less than Significant	<	≤	<	=
Biological Resources	Less than Significant	<	≤	=	=
Cultural and Tribal Cultural Resources	Less than Significant	<	≤	=	=
Geology and Soils/Mineral Resources	Less than Significant	>	=	<	=
Hydrology and Water Quality	Less than Significant	<	≤	=	=
Land Use and Planning	Less than Significant	=	=	=	=
Noise	Less than Significant	<	≤	<	=
Parks and Recreation	Less than Significant	>	=	=	<
Transportation	Less than Significant	<	≥	<	=
Utilities and Service Systems	Less than Significant	=	=	=	=

Note: Less than Proposed Project = "<;" Similar to Proposed Project = "=", Greater than Proposed Project = ">", Similar or Less than Proposed Project = "≤", and Similar or Greater than Proposed Project = "≥"

7. REFERENCES

7. REFERENCES

1. Association of Bay Area Governments and Metropolitan Transportation Commission. *Plan Bay Area 2040: Final.* Available at: http://2040.planbayarea.org/reports. Accessed December 2019.

2. Bay Area Air Quality Management District. *Air Quality Standards and Attainment Status.* Available at: http://www.baaqmd.gov/research-and-data/air-quality-standards-and-attainment-status. Accessed February 2021.

3. Bay Area Air Quality Management District. *Air Quality Summary Reports*. Available at: http://www.baaqmd.gov/about-air-quality/air-quality-summaries. Accessed March 2020.

4. Bay Area Air Quality Management District. *California Environmental Quality Act Air Quality Guidelines*. May 2017.

5. Bay Area Air Quality Management District. *California Environmental Quality Act Guidelines Update: Proposed Thresholds of Significance*. December 7, 2009.

6. Baylands Soil Pacifica, LLC. *Response to Engeo Peer Review of Geotechnical Investigation; Traffic Analysis; and On-Site Equipment Information.* October 30, 2020.

7. Baylands Soils Pacifica, LLC. *Soil Management Plan for The Preserve at Pacifica, LLC Amended Reclamation Plan at the Pacifica Quarry, Pacifica, California*. September 2021.

8. Baylands Soil Pacifica, LLC. *Submittal Guidelines for Imported Soil*. 2021.

9. California Air Resources Board. *2002-07-29 Asbestos ATCM for Construction, Grading, Quarrying, and Surface Mining Operations*. June 3, 2015. Available at: http://www.arb.ca.gov/toxics/atcm/asb2atcm.htm. Accessed April 2017.

10. California Air Resources Board. *AB 32 Scoping Plan*. Accessible at: https://www.arb.ca.gov/cc/scopingplan/scopingplan.htm. Accessed August 2019.

11. California Air Resources Board. *Aerometric Data Analysis and Management (iADAM) System.* Available at http://www.arb.ca.gov/adam/welcome.html. Accessed January 2020.

12. California Air Resources Board. *Air Quality and Land Use Handbook: A Community Health Perspective*. April 2005.

13. California Air Resources Board. *Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling*. October 24, 2013. Available at: http://www.arb.ca.gov/msprog/truck-idling/truck-idling.htm. Accessed August 2019.

14. California Air Resources Board. *California Ambient Air Quality Standards (CAAQS).* Available at: https://ww2.arb.ca.gov/resources/california-ambient-air-quality-standards. Accessed January 2021.

15. California Air Resources Board. *Current California Greenhouse Gas Emissions Inventory Data (2020 Edition).* Available at: https://ww3.arb.ca.gov/cc/inventory/data/data.htm. Accessed February 2021.

16. California Air Resources Board. *Glossary of Air Pollution Terms.* Available at: https://ww2.arb.ca.gov/glossary. Accessed January 2021.

17. California Air Resources Board. *In-Use Off-Road Diesel Vehicle Regulation*. December 10, 2014. Available at: http://www.arb.ca.gov/msprog/ordiesel/ordiesel.htm. Accessed August 2019.

18. California Air Resources Board. *Low Carbon Fuel Standard Data Dashboard*. Available at: https://www.arb.ca.gov/fuels/lcfs/dashboard/dashboard.htm. Accessed May 2019.

19. California Air Resources Board. *Overview of ARB Emissions Trading Program*. Available at: https://www.arb.ca.gov/cc/capandtrade/guidance/cap_trade_overview.pdf. Accessed August 2019.

20. California Air Resources Board. *Reducing Toxic Air Pollutants in California's Communities*. February 6, 2002.

21. California Department of Conservation, Division of Mines and Geology. *A General Location Guide for Ultramafic Rocks in California – Areas More Likely to Contain Naturally Occurring Asbestos*. August 2000.

22. California Department of Conservation. *Tsunami Inundation Map for Emergency Planning, Montara Mountain Quadrangle.* June 15, 2009.

23. California Department of Resources Recycling and Recovery (CalRecycle). *Facility/Site Summary Details: Corinda Los Trancos Landfill (Ox Mtn) (41-AA-0002)*. Available at https://www2.calrecycle.ca.gov/swfacilities/Directory/41-AA-0002/. Accessed April 2020.

24. California Natural Resources Agency. *Safeguarding California: Reducing Climate Risk*. July 2014.

25. California Public Utilities Commission. *PG&E Bankruptcy.* Available at: https://www.cpuc.ca.gov/pgechapter11/. Accessed October 2019.

26. California Scenic Highway Mapping System. *San Mateo County*. Available at: http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/. Accessed January 3, 2017.

27. City of Pacifica. *City of Pacifica Coastal Trail Network.* Available at: https://www.cityofpacifica.org/depts/pw/parks/trails_n_walkways/default.asp. Accessed November 2019.

28. City of Pacifica. *City of Pacifica General Plan.* Adopted 1980.

29. City of Pacifica. *City of Pacifica Local Coastal Land Use Plan.* March 24, 1980.

30. City of Pacifica. *Pacifica Climate Action Plan*. July 14, 2014.

31. City of Pacifica. *Pacifica General Plan Draft Environmental Impact Report.* March 2014.

32. City of Pacifica. *Rockaway Beach Specific Plan*. Amended 1992.

33. City of Pacifica. *Trails & Walkways*. Available at: https://www.cityofpacifica.org/depts/pw/parks/trails_n_walkways/default.asp. Accessed November 2019.

34. City of Pacifica. *Tree Ordinance/Permits*. Available at: https://cityofpacifica.org/trees/ordinances.asp. Accessed December 2020.

35. City/County Association of Governments of San Mateo County, San Mateo Countywide Water Pollution Prevention Program. *Construction Best Management Practices.* Available at: http://www.cityofpacifica.org/depts/planning/stormwater_compliance/default.asp. Accessed August 3, 2020.

36. City/County Association of Governments of San Mateo County, San Mateo Countywide Water Pollution Prevention Program. *C.3 Stormwater Technical Guidance.* June 2016.

37. Department of Transportation. *California Scenic Highway System Lists.* Available at: https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways. Accessed January 2020.

38. Department of Water Resources. *San Pedro Valley Groundwater Basin, California's Groundwater, Bulletin 118*. 2004.

39. ENGEO. *Quarry Reclamation Plan, Rockaway Quarry, Pacifica, California, Geotechnical Peer Review.* January 18, 2021.

40. Federal Highway Administration. *Roadway Construction Noise Model User's Guide*. January 2006.

41. Federal Interagency Committee on Noise. *Section 4: Assessing Aviation Noise.* Available at: http://airportnoiselaw.org/65dnl.html. Accessed September 2020.

42. Federal Transit Administration. *Transit Noise and Vibration Impact Assessment Guidelines*. May 2006.

43. Federal Emergency Management Agency. *FEMA's National Flood Hazard Layer (NFHL) Viewer.* Available at: https://hazards-fema.maps.arcgis.com/apps/webappviewer/index.html?id=8b0adb51996444d4879338b5529aa9cd&extent=-122.50223994979875,37.6091209967086,-122.48146892318685,37.61761981456234. Accessed February 19, 2021.

44. Geocon Consultants, Inc. *Geotechnical Investigation for Quarry Reclamation, Rockaway Quarry, Pacifica, California.* December 2018.

45. Health Effects Institute. *Understanding the Health Effects of Ambient Ultrafine Particles*. January 2013.

46. Intergovernmental Panel on Climate Change. *Climate Change 2007: Impacts, Adaptation, and Vulnerability.* 2007.

47. National Park Service. *Mori Point and Surrounding Area*. Available at: https://www.nps.gov/goga/planyourvisit/upload/Mori-Point-trail-map_2016.pdf. Accessed September 2020.

48. Native American Heritage Commission. *Pacifica Quarry Reclamation Project, San Mateo County.* December 3, 2019.

49. North Coast County Water District. *2020 Urban Water Management Plan.* June 16, 2021.

50. Omni Calculator. *Distance Attenuation Calculator*. Available at: https://www.omnicalculator.com/physics/distance-attenuation. Accessed January 2022.

51. Office of Environmental Health Hazard Assessment. *Air Toxics Hot Spots Program Risk Assessment Guidelines, Guidance Manual for Preparation of Health Risk Assessments*. February 2015.

52. Pacific Gas & Electric Company. *Company Profile*. Available at: https://www.pge.com/en_US/about-pge/company-information/profile/profile.page. Accessed June 2019.

53. Regional Water Quality Control Board San Francisco Bay Region. *City of Pacifica, Calera Creek Water Recycling Plant and Wastewater Collection System, Pacifica, San Mateo County.* Available at: https://www.waterboards.ca.gov/sanfranciscobay/board_info/agendas/2017/April/7_ssr.pdf. April 12, 2017.

54. Rincon Consultants, Inc. *Rockaway Quarry Reclamation Project Greenhouse Gas Emissions Analysis Study*. July 2020.

55. Sacramento Metropolitan, El Dorado, Feather River, Placer, and Yolo-Solano Air Districts, Spare the Air website. *Air Quality Information for the Sacramento Region*. Available at: sparetheair.com. Accessed January 2021.

56. South Coast Air Quality Management District. *Final 2012 Air Quality Management Plan*. December 2012.

57. U.S. Environmental Protection Agency. *Climate Change Indicators: Atmospheric Concentrations of Greenhouse Gases*. Available at: https://www.epa.gov/climate-indicators/climate-change-indicators-atmospheric-concentrations-greenhouse-gases. Accessed March 2020.

58. U.S. Environmental Protection Agency. *Sources of Greenhouse Gas Emissions*. Available at: https://19january2017snapshot.epa.gov/ghgemissions/sources-greenhouse-gas-emissions_.html. Accessed August 2019.

59. U.S. Environmental Protection Agency. *User's Guide for the AMS/EPA Regulatory Model (AERMOD)*. December 2016.

60. USEPA. *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2013*. April 15, 2017.

61. Walsh Engineering. *Drainage Report, Hydrologic & Hydraulic Analysis, Rockaway Quarry Reclamation.* June 14, 2019.

62. Weather Spark. *Average Weather in Pacifica, California*. Available at: https://weatherspark.com/y/544/Average-Weather-in-Pacifica-California-United-States-Year-Round. Accessed December 2020.

63. WRA, Inc. *Biological Resources Assessment, Rockaway Quarry Project*. March 2020.

64. WRA, Inc. *Memorandum: Risk of the Application of Gorilla-Snot Dust Control Compound Near Potential Sensitive Biological Resources*. November 19, 2021.

65. WRA, Inc. *Section 7 Biological Assessment, Rockaway Quarry Reclamation Project*. March 2020.

66. W-Trans. *Response to Comments on the Draft Traffic Analysis for the Rockaway Quarry Reclamation Project*. October 28, 2021.

67. W-Trans. *Traffic Analysis for Rockaway Quarry Reclamation Project.* July 13, 2020.

68. Zentner and Zentner. *Pacifica Quarry, Reclamation Project, Historical and Cultural Resources Assessment*. October 10, 2019.

8. EIR Authors and Persons Consulted

8. EIR AUTHORS AND PERSONS CONSULTED

RANEY PLANNING & MANAGEMENT, INC.

C. Timothy Raney, AICP	President
Cindy Gnos, AICP	Senior Vice President
Nick Pappani	Vice President
Rod Stinson	Vice President
Angela DaRosa	Division Manager/Air Quality Specialist
Briette Shea	Senior Associate/Air Quality Technician
Joe Baucum	Associate
Jesse Fahrney	Associate

CITY OF PACIFICA

Christian Murdock	Deputy Director
Tina Wehrmeister	Planning Director/Assistant City Manager

GEOCON CONSULTANTS, INC.

Shane Rodacker, PG, GE	Senior Engineer
John Pfeiffer, PG, CEG	Senior Geologist

MADRONE ECOLOGICAL CONSULTING, LLC

Ginger E. Fodge	Principal
Dustin Brown	Senior Biologist

ZENTNER AND ZENTNER

John Zentner	Founder/Consulting Staff
Sean Micallef	Partner-Chief Ecologist

RINCON CONSULTANTS, INC.

Shawn Somers, P.E.	Project Engineer

WALSH ENGINEERING

William R. Walsh III	Professional Engineer

WRA ENVIRONMENTAL CONSULTANTS

Geoff Smick	Principal Biologist
Greg Sproull	Project Manager
Gavin Albertoli	Biologist, ISA-Certified Arborist
Molly Brewer	Wildlife Biologist

W-Trans

Mark Spencer, P.E.	Senior Principal