

# CHAPTER 4

## Environmental Analysis

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### 4.0 Introduction to Environmental Analysis

#### 4.0.1 Overview

This chapter provides discussion and public disclosure of the potential environmental impacts of the Project and alternatives, including the No Project Alternative, as they relate to the following 18 areas of environmental analysis:

4.1 Aesthetics, Visual Quality, and Light and Glare	4.10 Hydrology and Water Quality
4.2 Agriculture and Forestry Resources	4.11 Land Use and Planning
4.3 Air Quality	4.12 Mineral Resources
4.4 Biological Resources	4.13 Noise
4.5 Cultural and Paleontological Resources	4.14 Population and Housing
4.6 Energy Conservation	4.15 Public Services
4.7 Geology, Soils and Seismicity	4.16 Recreation
4.8 Greenhouse Gases	4.17 Transportation/Traffic
4.9 Hazards and Hazardous Materials	4.18 Utilities and Service Systems

Analysis of each of the resource/issue areas considers the following components of the Project:

- Reclamation of the approximately 264.9-acre Quarry pit, which has been the point of mineral extraction at the Quarry for more than 80 years. Quarry pit walls would be stabilized and the pit would be backfilled primarily with material currently stored in the WMSA, resulting in gentler slopes, a shallower pit, and general consistency with the surrounding topography.
- Reclamation of the approximately 172.6-acre WMSA, which is an existing overburden storage area located west of the Quarry pit. Final WMSA elevation and contours would be returned roughly to pre-mining contours by transporting most of the materials currently stored in the WMSA into the Quarry pit and by processing the remaining materials for commercial use.
- Inclusion of the approximately 75.2-acre EMSA within the reclamation plan boundary and reclamation of the area, including the creation of a permanent overburden storage area. Final contours would be achieved, and the area graded and revegetated to be consistent with the surrounding area and topography.
- Reclamation of the approximately 53.4-acre crusher/Quarry office support area, an existing area located east of the Quarry pit and west of the EMSA. This area would be reduced in size relative to its current acreage and then reclaimed.

- Reclamation of the approximately 8.8-acre surge pile, which is an existing stockpile of crushed aggregate located southeast of the Quarry pit.
- Inclusion of the approximately 19.1-acre Rock Plant within the reclamation plan boundary and reclamation of the area. Structures would be dismantled and removed, and the area revegetated.
- Reclamation of an approximately 19.5-acre Exploration Area located south of Permanente Creek that has been subject to mining-related exploratory activities but not mineral extraction. Reclamation that has begun in this area would be completed, including reclamation of roads and pads, revegetation, and monitoring activities.
- Reclamation of approximately 49.2 acres of disturbance within the Permanente Creek Reclamation Area (PCRA), including the removal of limestone boulders from the Permanente Creek area, revegetation, implementation of erosion control measures, slope stabilization work, and restoration of certain portions of the creek channel and riparian corridor. Most of this work would occur using light trucks and foot crews to avoid damaging or destabilizing the creek channel and upslope areas.
- Designation of approximately 599.3 acres of vegetated buffer area where no mining operations would occur.

Within each of the sections in Chapter 4, the following topics are identified, described, and analyzed, respectively:

- Regional and Local Setting
- Regulatory Setting (i.e., applicable laws, plans, and standards)
- Baseline (i.e., the conditions against which the significance of Project impacts are assessed)
- Significance Criteria
- Environmental Impacts and Mitigation Measures for the Project
- Environmental Impacts and Mitigation Measures for the Alternatives to the Project

The following alternatives are fully analyzed in this EIR (each is described in Chapter 3):

- Alternative 1: Complete Backfill Alternative
- Alternative 2: Central Materials Storage Area Alternative
- No Project Alternative

Each environmental issue area analyzed in this EIR provides background information and describes the environmental setting and baseline conditions to help the reader understand the threshold that would cause an impact to occur under CEQA. In addition, each section describes how an impact is determined to be “significant” or “less than significant.” Finally, the individual sections recommend mitigation measures to reduce significant impacts. Throughout Chapter 4, both impacts and the corresponding mitigation measures are identified by a bold letter-number designation (e.g., **Impact 4.1-1** and **Mitigation Measure 4.1-1**).

In performing the analysis for this EIR, the EIR preparers relied on available published studies and reports and conducted independent investigations as needed. Information provided by the Applicant also was considered in the EIR analysis after independent review and assessment by the EIR preparers. The specific documents considered and relied upon are cited and reference information is provided in the relevant section in Chapter 4.

## 4.0.2 Environmental Assessment Methodology

### 4.0.2.1 Regional, Local and Regulatory Setting

The analysis of each resource area begins with a characterization of the setting – the environmental and regulatory context – within which the Project has been proposed. Existing physical environmental conditions as well as applicable laws, regulations, ordinances, plans, policies, and standards are described as they relate to each of the resource areas.

### 4.0.2.2 Environmental Baseline

This subsection identifies the actual existing physical conditions to provide a point of comparison of pre-Project conditions (the baseline) and post-Project conditions to ensure that changes caused by the Project are seen in context and significant effects can be identified accurately.

For purposes of assessing the environmental effects of a proposed project, CEQA Guidelines §15126.2 states, “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.” See also, CEQA Guidelines §15125(a). This general rule applies even where the existing conditions include activities that occurred as a result of illegal operations (*Communities for a Better Environment v. South Coast Air Quality Management District* (2010) 48 Cal.4<sup>th</sup> 310, 321, fn. 7 and cases cited therein). However, there is no uniform, inflexible rule regarding establishment of this “baseline,” and a lead agency has discretion to decide how the existing physical conditions without the project can most realistically be measured (*Id.* at p. 328).

For this Project and in this EIR, the County is evaluating changes in the existing physical conditions in the affected area as they existed when the County filed an NOP in response to the Applicant’s initiation of the reclamation plan amendment process for the Quarry. By way of background, the County issued the first NOV to the Applicant in October 2006. In response to this NOV, the Applicant filed a reclamation plan amendment to address the noncompliance issues. The County issued an NOP for an EIR to be prepared for this proposal in June 2007. The County issued a second NOV to the Applicant in June 2008 related to the EMSA. This resulted in the Applicant filing two separate reclamation plan amendment proposals: one for the EMSA, and a second to address all other issues that also included a proposed new pit mine. The County issued NOPs related to these proposals in March 2010 and August 2010, respectively. Surface mining operations have continued in the Project Area in the interim in accordance with the Applicant’s vested right to mine, and have resulted in surface disturbance and other changes to the physical environment.

Under these circumstances, the County has determined that the appropriate date for establishing the baseline for purposes of evaluating the Project's environmental effects is June 2007, the date the County first issued an NOP to evaluate the environmental effects associated with amendment of the Applicant's existing, approved reclamation plan. As a result, implementation of the Project would result in a greater change in the environment relative to baseline conditions, and so would provide for a more conservative impacts analysis, than would occur if a more recent date had been selected as the baseline.

For one environmental resource area, insufficient data was available to determine the exact state of the environment in the June 2007 timeframe: Section 4.1, *Aesthetics, Visual Quality, and Light and Glare*. Relevant data limitations, the methodology for evaluating the Project's environmental effects with respect to this resource area, and the rationale for the baseline used to assess potential impacts are described in detail in Section 4.1.

In five sections (Section 4.3, *Air Quality*; Section 4.6, *Energy*; Section 4.8, *Greenhouse Gas Emissions*; Section 4.13, *Noise*; and Section 4.17, *Transportation/Traffic*), it is particularly relevant that baseline conditions consist of an existing quarry operation. Such operations are characterized by fluctuating production and associated air emissions, energy needs, and transportation demands in response to continually changing market conditions. An analysis that considers only those conditions that existed in June 2007 (or any other specific point in time) may substantially over- or under-represent typical conditions. Accordingly, the analytical baseline for air emissions (including GHGs), energy use, and traffic are based on an average over the 11-year period from January 1, 2000 to December 31, 2010, which includes periods of relatively high production as well as relatively low production at the Quarry, and thereby provides a point of comparison that does not reflect an artificial spike or dip that could skew results.

#### **4.0.2.3 Impact Significance Criteria**

Significance criteria are identified for each environmental issue area in each resource section evaluation. For this Project, the environmental criteria and considerations applied to determine the significance of Project-related changes in the environment are as set forth in the CEQA Guidelines Appendix G checklist and as adopted by the County in the *Environmental Checklist and Evaluation for Santa Clara County*. The significance criteria serve as benchmarks for determining if proposed activities or conditions would result in a significant adverse environmental impact when evaluated against the baseline. According to CEQA Guidelines §15382, a significant effect on the environment means "a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project."

#### **4.0.2.4 Impact Analysis**

This EIR evaluates the environmental consequences and potential impacts that the proposed Project, alternatives, and mitigation measures would create. The impacts identified were compared with predetermined specific, significance criteria, and were classified according to significance categories listed below. The same methodology was applied systematically to each alternative. A comparative analysis of the Project and the alternatives is provided in Chapter 5 of

this EIR. The cumulative impacts of the Project, when viewed in conjunction with past, other present, and reasonably foreseeable future projects, are analyzed in Chapter 6.

This EIR lists impacts numerically and sequentially. An impact statement precedes the discussion of each impact and provides a summary of the impact topic. Each impact is categorized as one of the following:

- **No Impact:** would not cause any adverse change in the environment, as measured by the applicable significance criterion; therefore, no mitigation would be required.
- **Less than Significant:** would cause a change, but not a substantial adverse change, in the environment, as measured by the applicable significance criterion; therefore, no mitigation would be required.
- **Less than Significant with Mitigation:** would cause a substantial adverse change in the physical conditions of the environment; one or more feasible mitigation measures would reduce the environmental effects to less than significant levels.
- **Significant and Unavoidable:** would cause a substantial adverse change in the physical conditions of the environment; there is either no feasible mitigation available, or, even with implementation of feasible mitigation measures, the Project would cause a significant adverse effect on the environment.

When significant impacts were identified, feasible mitigation measures were formulated, where possible, to eliminate or substantially reduce the intensity of the impacts. The effectiveness of a mitigation measure subsequently was determined by evaluating the impact remaining after its application. Those impacts meeting or exceeding the impact significance criteria after mitigation measures were incorporated are identified as residual impacts that remain significant and unavoidable. Implementation of more than one mitigation measure may be needed to reduce an impact below a level of significance. The mitigation measures recommended in this document are identified where relevant in Sections 4.1 through 4.18.

#### **4.0.2.5 Impacts of Alternatives**

This Chapter 4 (Sections 4.1 through 4.18) analyzes the impacts of alternatives to the Project. Chapter 5 provides a summary of the impacts of each alternative in comparison with the impacts of the Project.