

4.12 MINERAL RESOURCES

This section describes the existing mineral resources available on and in the vicinity of the project site, and assesses the potential for the project to result in a significant environmental impact to mineral resources. Information regarding mineral resources was obtained from:

- The Contra Costa County General Plan 2005-2020 (General Plan)
- California Department of Conservation
- The United States Department of Agriculture (USDA)

These reports are available for review at the Contra Costa County (County) Department of Conservation and Development, Community Development Division, 30 Muir Street, Martinez, California.

No comments regarding mineral resources were submitted in response to the Notice of Preparation for this draft EIR.

4.12.1 EXISTING CONDITIONS

The most valuable mineral resources mined within the County are crushed rock in the Concord area, shale in the Port Costa area, and sand and sandstone in the Byron area. There are also regionally significant deposits of diabase, an intrusive igneous rock used as roadbase and rip-rap to prevent streambank erosion, found in the Mount Zion area near the cities of Concord and Clayton (Contra Costa County, 2005). There are no mines or quarries located within the project site and its vicinity.

The USDA Web Soil Survey identified five types of soil present on the project site (USDA, 2015). Soils at the project site include Clear Lake clay, Garretson loam, Lodo clay loam, Millsholm loam, and Tierra loam. The majority of the site is Millsholm loam, with fingers of Lodo clay loam encroaching from the western hills. Garretson loam dominates the low lying eastern portions before transitioning into Clear Lake clay at the northeastern border of the project site. Tierra loam is only present to the northwest corner of the site. Official soil series descriptions were assigned by the USDA Natural Resources Conservation Service, and are provided below.

- *Clear Lake clay* is characterized by very deep, poorly drained soils formed in fine textured alluvium derived from sandstone and shale. It is typically found in flat basins or swales, and has very low permeability. This soil is used for rangeland, dry farmed pasture, and row crops.
- *Garretson loam* has slightly acid, gravelly, very fine sandy loam and gravelly loam surface characteristics, and slightly acid/neutral gravelly loam substratum. This soil is well drained with slow to medium runoff and moderate permeability.

Uses include production of deciduous fruit, citrus fruit, irrigated field crops, and homesites. Vegetation includes annual grasses, forbs, and scattered oaks. Native vegetation includes chamise, scattered oak trees, and shrubs.

- *Lodo clay loam* exists on mountainous regions and characterized by shallow, somewhat excessively drained soils, moderate permeability, and medium to rapid runoff. Vegetation commonly found growing on this soil series includes buckwheat, scattered oak trees, Foothill pine, chaparral, annual grasses, and forbs. This soil type is mainly used for livestock grazing.
- *Millsholm loam* is a high-elevation shallow soil that formed in material weathered from sandstone, mudstone, and shale. This well-drained soil has moderate permeability and low to very high runoff. Millsholm soils provide livestock grazing, and host a range of native plants such as annual grasses, blue oak, manzanita, ceanothus, and Foothill pine.
- *Tierra loam* is a deep, moderately well drained soil formed in alluvial materials from sedimentary rocks. Runoff is slow to rapid and permeability is very slow. This soil is used for grazing and growing small grains, but many cultivated areas have reverted to grass.

4.12.2 REGULATORY SETTING

State

California Surface Mining and Reclamation Act of 1975

The California Surface Mining and Reclamation Act (SMARA) was enacted in 1975 and updated in January 2007 to limit new development in areas with significant mineral deposits. Through SMARA, the California Geological Survey identifies geologic deposits of valuable minerals used in manufacturing processes and the production of construction materials. SMARA classifies lands into mineral resource zones (MRZs) according to the known or inferred mineral potential.

The criteria for establishing the zones are based on four general categories, discussed below:

MRZ 1: Areas where adequate information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence.

MRZ 2: Areas where adequate information indicates that significant mineral deposits are present, or where it is judged that a high likelihood exists for their presence.

MRZ 3: Areas containing mineral deposits, the significance of which cannot be evaluated.

MRZ 4: Areas where available information is inadequate for assignment to any other MRZ zone.

Project Consistency Analysis

The project is not located within an identified mineral resource zone.

Contra Costa County General Plan

General Plan Chapter 8, Conservation Element, contains the following policies related to mineral resources.

Conservation Element

- 8-54: Mining and quarrying shall be a permitted use in certain privately owned areas which are in an open space designation in the General Plan (e.g. Open Space, Agricultural lands, etc.) and which contain known mineral deposits with potential commercial value. These deposits include, but are not limited to, rocks, gravel, sand, salt, and clay.
- 8-56: Incompatible land uses shall not be permitted within the mineral resource impact areas identified as containing significant sand and gravel deposits (as shown in Figure 8-4 of the General Plan).
- 8-57: Incompatible uses are defined as land uses inherently incompatible with mining and/or uses that require high public or private investment in structures, land improvements, and landscaping that prevent mining because of the higher economic value of the land and its improvements.
- 8-58: Future development in the vicinity of valuable mineral resource zones shall be planned and designed to minimize disturbance to residential areas or other sensitive land uses and to permit the safe passage of quarry trucks.
- 8-59: Development of compatible land uses shall be encouraged within 1,000 feet of the quarrying sites. Compatible uses include secondary activity related to the quarry operation, recreation facilities, parks, agricultural uses, and permanent open space.

Policy Consistency Analysis

The project is not located within an identified mineral resources zone and thus would not cause an incompatible land use near a mine or quarry. The project would be consistent with the General Plan mineral resources policies.

4.12.3 IMPACTS AND MITIGATION MEASURES

Significance Criteria

Appendix G of the California Environmental Quality Act (CEQA) Guidelines identifies environmental issues a lead agency can consider when determining whether a project could have significant effects on the environment. The project would have a significant impact if it would:

- 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.
- Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan.

Discussion of No Impacts

Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

According to the General Plan, the project site is not within an area of known mineral importance. The closest region of mineral importance is a diabase deposit on the north side of Mount Diablo. Furthermore, the project site is not classified or designated within a mineral resource zone (California Department of Conservation, 1996). The project would not impact mineral resources.

Would the project result in the loss of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

Neither the project site nor the project vicinity has a history of mining. The project site is not identified as a mineral resource recovery site. Therefore, the project would not result in the loss of a locally important mineral resource recovery site and no impact would occur.

4.12.4 CUMULATIVE IMPACTS

The cumulative setting for mineral resources includes the project in combination with the cumulative projects listed in **Table 4-1**. None of these projects are within an area of known mineral importance. Therefore, the project, in combination with other projects in the area would have no potential to impact state-designated regionally significant mineral resources. No cumulative impact would occur.

4.12.5 REFERENCES

California Department of Conservation - Division of Mines and Geology, 1996. *Update of Mineral Land Classification: Aggregate Materials in the South San Francisco Bay Production-Consumption Region*. Prepared by Susan Kohler-Antablin.

Contra Costa County, 2005. *Contra Costa County General Plan 2005-2020: Conservation Element*.

United States Department of Agriculture, 2015. *Custom Soil Resource Report for Contra Costa County, California*.

United States Department of Agriculture - Natural Resources Conservation Service, 2003. *Official Soil Series Descriptions*. Available: <https://soilseries.sc.egov.usda.gov/>. Accessed September 4, 2015.

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