

2.8 Mineral Resources

This section describes mineral resources on the project site and in the project area, and identifies potential impacts to mineral resources that would result from implementation of the proposed project. The analysis is based on existing mineral resources information and guidelines for determining significance contained in the County of San Diego County Guidelines for Determining Significance and Report Format and Content Requirements for Mineral Resources (County Guidelines for Mineral Resources), approved on July 30, 2008, and the Mineral Resource Technical Report (Leighton 2018) which is included in Appendix S of this EIR.

2.8.1 Existing Conditions

The project site generally consists of a flat to gently sloping valley that includes accumulations of floodplain deposits (loose sands and gravels) related to the San Diego River drainage. Granitic rock outcrops dominate the slopes and ridges on either side of the valley. Sand and gravel mining operations are well documented along the San Diego River, with at least 13 sites having historically been mined, including one located immediately west of the project site (Nelson Sloan - El Monte pit) (Leighton 2018).

The project site and vicinity fall within Sector M of the Upper San Diego River Resource area (refer to Figure 5 of the Mineral Resources Technical Report included in Appendix S of this EIR). Sector M of the Upper San Diego River Resource area has been identified as a resource area containing an estimated 63 million tons of sand (Leighton 2018).

2.8.1.1 *Mineral Resource Zones*

The California Geological Survey (CGS) classifies the regional significance of mineral resources in the state, in accordance with the California SMARA. Mineral Resource Zones (MRZ) are designated to indicate the significance of mineral deposits. The primary goal of classification is to ensure that the mineral potential of land is recognized by local government decision makers and considered before they make land use decisions that could preclude mining. The highest priority areas are those within the state that are subject to urban expansion or other irreversible land uses that would preclude mineral extraction.

The State of California Geologist has designated the alluvial portions of the project site as MRZ-2 (majority of the site); the slopes bordering the site and valley consist primarily of granitic bedrock and have been designated as MRZ-3 (Leighton 2018).

The State Mining and Geology Board (SMGB) prioritizes areas to be classified and/or designated. The highest priority areas are those within the state that are subject to urban expansion or other irreversible land uses that would preclude

mineral extraction. Areas where such a possibility is perceived to be most severe, such as Western San Diego County, are given highest priority. The area comprising approximately the western third of the County was classified into distinct Mineral Resource Zones (MRZs) according to the California Mineral Land Classification System in 1982 (San Diego County 2008). The following provides a description of the four different MRZs.

MRZ-1

MRZ-1 designates areas where adequate geologic information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence. MRZ-1 is applied by the California Geologic Survey to lands where well-developed lines of reasoning, based on economic-geologic principles and adequate data, indicate that the likelihood for occurrence of significant mineral deposits is nil or slight.

MRZ-2

MRZ-2 designates areas underlain by mineral deposits where geologic data indicates that significant measured or indicated mineral resources are present. A typical MRZ-2 area would include an operating mine, or an area where extensive sampling has indicated the presence of a significant mineral deposit.

The 1982 classification identified 22 sectors in the unincorporated County as having aggregate deposits, of which 19 are still extractable. MRZ-2 areas or sectors that meet the SMGB's guidelines, are eligible to be designated as having aggregate resources of regional or statewide significance. Sector M includes channel and floodplain deposits of the San Diego River from the City of Santee to within 1 mile of El Capitan Dam, a total of about 2,150 acres.

MRZ-3

MRZ-3 designates areas that contain known mineral deposits that may qualify as mineral resources. Further exploration work within these areas could result in the reclassification of specific localities into the MRZ-2 category. Most of the rest of the land in the Western San Diego Production-Consumption (P-C) Region is MRZ-3, except a few small areas that are MRZ-4.

MRZ-4

MRZ-4 designates areas where geologic information does not rule out either the presence or absence of mineral resources. The distinction between the MRZ-1 and MRZ-4 categories is important for land-use considerations. The MRZ-4 classification does not imply that there is little likelihood for the presence of mineral resources but rather there is a lack of knowledge regarding mineral occurrence. Further exploration could result in the reclassification of MRZ-4 lands.

2.8.1.2 Regulatory Framework

Federal

There are no applicable federal regulations.

State

Surface Mining and Reclamation Act [Public Resources Code §2710-2797]

Urban preemption of prime mineral deposits and conflicts between mining and other uses throughout California led to the passage of the SMARA, which establishes policies for the conservation, development, and reclamation of mineral lands. It also contains specific provisions for the classification of mineral lands by the state Geologist. SMARA requires all cities and counties to incorporate in their general plans the mapped designations approved by the California Department of Conservation, Division of Mines and Geology (DMG). According to the California Department of Conservation SMGB and Division of Mines and Geology Guidelines for Classification and Designation of Mineral Lands, these designations are to include lands categorized as MRZs. MRZ classifications are set forth in guidelines developed by the SMGB (California Department of Conservation 1998) and are used to communicate information concerning the existence of mineral resources. Most of the production and consumption of aggregates within San Diego County is within the westernmost third of the County, an area referred to as the Western San Diego County P-C Region. Roughly two-thirds of San Diego County remains unmapped. When SMARA was passed in 1975, lands designated as urban areas (i.e., P-C Regions) were the only lands required to be classified for mineral resources because the minerals there were in danger of being lost to development. In 1980, SMARA was amended to provide for the classification of non-urban areas as well. However, these non-urban portions of San Diego County have yet to be classified by the SMGB.

Section 2762(d) of SMARA has specific lead agency noticing requirements prior to permitting a use that would preclude future extraction of identified mineral resources, defined as either: (1) the potential to extract minerals in MRZ-2 lands; or (2) land designated in a lead agency's general plan as having important minerals to be protected. Prior to permitting a use that would threaten the potential to extract minerals in either of these two areas, the lead agency (in this case, the County) is required to prepare a statement specifying its reasons for permitting the proposed use. The statement is required to be forwarded to the State Geologist and SMGB for review, and is required to comply with the public review requirements of CEQA. The public review period for the mineral resources portion of the notice shall be no less than 60 days from the date of its notice. The lead agency (County) is required to prepare a written response to the comments received. In particular, when the lead agency's position is at variance with the

recommendations and objections raised in the comments, the written response must address in detail why specific comments and suggestions were not accepted.

Local

County of San Diego General Plan

The County's General Plan, Conservation and Open Space Element (Chapter 5), contains a goal (Goal COS-10) and nine policies (COS-10.1 – COS-10.9) intended to achieve an adequate supply of mineral resources to support economic growth projected under the General Plan, and comply with the requirements of SMARA with regard to the conservation of mineral resources and the permitting and reclamation of mining sites (San Diego County 2011).

County of San Diego Zoning Ordinance [Sections 2820 and 6550]

Section 2820 (S82 Extractive Use Regulations) of the Zoning Ordinance, describes the intent of the S82 zoning classification that is used to signify the presence of mineral deposits and the intent to allow the extraction of the mineral deposits.

Section 6550 of the Zoning Ordinance (Extractive Use Regulations) provides the means for public review and regulation of mineral extraction and associated on-site processing operations.

County of San Diego Grading, Clearing and Watercourses Ordinance

San Diego County Code, Title 8, Division 7 (Sections 87.701 and following), entitled Grading, Clearing, and Watercourses Ordinance, establishes the procedures and protocols related to surface mining activities to implement the minimum requirements associated with SMARA as well as the County's permit requirements for surface mining (San Diego County 2012).

2.8.2 Analysis of Project Effects and Determination as to Significance

For the purpose of this EIR, the identified significance thresholds are based on criteria provided in the County Guidelines for Determining Significance and Report Format and Content Requirements for Mineral Resources (County Guidelines for Mineral Resources), approved July 30, 2008.

2.8.2.1 Issue 1: Loss of Available Resources and Marketability

Guidelines for the Determination of Significance

Based on the County Guidelines for Mineral Resources, a significant impact would occur with implementation of the proposed project if:

- 1) The project site is located on or within the vicinity of an area classified as MRZ-2; or, on land classified as MRZ-3; or underlain by Quaternary alluvium; or on a known sand and gravel mine, quarry, or gemstone deposit;
- 2) Will result in the permanent loss of availability of a known mineral resource that would be of value to the region and the residents of the state; and,
- 3) The deposit is minable, processable, and marketable under the technologic and economic conditions that exist at present or which can be estimated to exist in the next 50 years, and meets or exceeds one or more of the following minimum values (in 1998 equivalent dollars):

Construction materials	\$12,500,000
Industrial and chemical minerals	\$2,500,000
Metallic and rare minerals	\$1,250,000

Analysis

According to the state Geologist, the project site is almost entirely within an area classified as MRZ-2, and falls within Sector M of the upper San Diego River Resource Sector as defined in the County Guidelines for Mineral Resources. The proposed project would extract up to 12.5 million tons of Portland Cement Concrete (PCC) grade sand and aggregate material from approximately 228 acres within the 479.5-acre project site that is located along the San Diego River channel.

The proposed project would include the removal and processing of the upper 36 to 41 feet of material across the project site with the establishment of a bottom-of-pit elevation of approximately 399 to 434 feet (from west to east) amsl (Leighton 2018). Although the proposed project would extract a portion of a high-demand mineral resource and help meet existing demand for construction aggregate in the County, the proposed project would not extract all available mineral resources within the project site. The proposed project would be limited to mining only the upper 36 to 41 feet of material in order to maintain the current water table level so impacts to the underlying aquifer and water balances do not occur. For an in depth analysis on the proposed project's effects on the existing groundwater levels, refer to Section 3.4, Hydrology and Water Quality, of this EIR.

High-quality aggregate resources that are present in the project site are known to be in short supply in San Diego County and, as a result, have the potential to be extremely marketable (San Diego County 2008). Previous studies by the State of California (DMG Open File Report 96-04) include prior borings indicating that the thickness of the resource in the project site is in the order of 100 to 200 feet in

depth (Leighton 2018). Assuming a price of \$20.00 per ton, a density of 0.055 ton per cubic foot, and a waste factor of approximately 20 percent, the value of the total 30 million tons of aggregate material mapped as MRZ-2 is estimated to be approximately \$480,000,000.00. The 12.5 million tons of sand and aggregate material that is proposed to be mined is estimated to have a value of \$200,000,000.00, based on the price and waste factors above (Leighton 2018). Therefore, there will be approximately \$280,000,000 worth of onsite mineral resources that will remain unmined and potentially lost for future mining once reclamation of the site is complete, which will exceed the minimum construction material value of \$12,500,000.00 as defined by the County's significance threshold.

Further, reclamation and revegetation of the project site would be completed for each phase after completion of sand mining in that specific area over the four phases, where approximately 75 to 80 percent of the project site's disturbed lands would be reclaimed by the time extractive operations are complete. After extraction activities have been completed, reclamation is expected to continue for up to four years, where all equipment and roads would be removed and the project site would be revegetated. Monitoring of the revegetation plan would occur annually until the performance standards established in Table 1-6 are achieved. Implementation of the reclamation and revegetation plans would restore the project site to a natural state. Successful reclamation would return the project site to a beneficial end use of revegetated land with native habitats and open space easements, as well as recreational trail easements for use by equestrians, hikers, and bicyclists. As such, the remaining mineral resources within the project site would not be accessible and would be precluded from future extraction for marketability. Therefore, the project would result in a **significant impact (Impact MR-1)** to a known mineral resource.

2.8.2.2 Issue 2: Loss of Locally Important Mineral Resource

Guidelines for the Determination of Significance

Based on the County Guidelines for Mineral Resources, a significant impact would occur with implementation of the proposed project if it would 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.

Analysis

As discussed above, the onsite mineral resources are known to be in short supply in San Diego County (Leighton 2018). Per the County's Zoning Ordinance, approximately 415 acres of the project site are zoned as S82, Extractive Use, and approximately 74 acres are zoned as A70, Limited Agriculture. The proposed project would extract a portion of the locally important mineral resource within the project site; however, the remainder would not be

extracted during the proposed 12-year mining period. The proposed end uses following mining, including reclamation and restoration to native plant communities, would return the project site to a beneficial end use of undeveloped land with recreational trail easements. Future mining activities are not anticipated to be feasible due to location of open space easements and anticipated potentially significant impacts to groundwater quality and quantity. For these reasons, it would be both logistically and legally difficult to access remaining mineral resources within the project site. As such, the project site is expected to be precluded from future extraction activities. Therefore, the loss of the availability of the remaining approximately 17.5 million tons of mineral resources from this recovery site would result in a **significant impact (Impact MR-2)**.

2.8.3 Cumulative Impact Analysis

Issue 1: Loss of Available Resources and Marketability

The geographic context for the analysis of cumulative impacts in regards to mineral resources is considered San Diego County. According to the County General Plan, a 1996 California Department of Conservation report provided an estimate of aggregate consumption in the western San Diego region and concluded that in order to satisfy the future demand of aggregate through the year 2056, approximately 1,164 million tons of aggregate would be needed. As of 2006, an estimated 198 million tons of permitted aggregate resources were available in the County, which would meet only 17 percent of the projected 50-year demand of 1,164 million tons between 2006 and 2056. Based on the aggregate reserve estimates of 1996, construction aggregate reserves would have been exhausted by 2016 (County of San Diego 2011). In addition, the 1996 report concluded that it would not be possible to mine all identified resources, as access to these resources could become restricted by competing conservation measures such as the MSCP (San Diego County 2011). In order to meet aggregate demand within the County, substantial volumes of aggregate are being imported from quarries outside the County, which has increased the price of aggregate due to high transportation costs (County of San Diego 2011).

A cumulative impact would occur if other cumulative development projects would result in the loss of available and marketable mineral resources in areas of the county classified as MRZ-2 or MRZ-3. Development of cumulative projects could result in the loss of mineral resources, including but not limited to, constructing impervious surfaces on a site, which would preclude future mining activities, or dedication of open space, conservation easements, Multiple Species Conservation Plan designations, or something similar, which would preclude the site from future mining activities. As stated above the geographic context for cumulative impacts to mineral resources is county-wide. Development projects throughout the County have resulted in loss of available marketable resources and comprise a cumulative impact.

As described above in Section 2.8.2 the proposed project has a direct impact to loss of availability of a marketable mineral resource and would result in a considerable contribution to the cumulative loss of availability of marketable mineral resources. Therefore, the project contributes to a **cumulatively considerable significant impact (Impact MR-3)** regarding the loss of availability of marketable mineral resources.

Issue 2: Loss of Locally Important Mineral Resource

Cumulative development activities in the County, in conjunction with the limited availability of local mineral resources, have resulted in a short supply of locally available construction aggregate resources. Development projects within the County have reduced the supply and accessibility of locally important mineral resources within the County. Therefore, a significant cumulative impact exists regarding loss of locally important mineral resources.

The project is proposed to extract up to approximately 10.3 million tons of the available 30 million tons of available aggregate resource on the project site, and subsequently implement reclamation and restoration plans to restore the project site to a natural state. Successful reclamation would return the project site to a beneficial end use of undeveloped land with dedicated open space easements and recreational trail easements for use by equestrians, hikers, and bicyclists. By restoring the project site back to a natural state, the remaining aggregate resource would be left in place, which would preclude mining on the project site in the future, resulting in the loss of locally important mineral resources. This has been identified as a project direct impact above in Section 2.8.2.2 and the proposed project, in conjunction with cumulative development activities and the limited availability of local mineral resources in the County, would result in a **cumulatively considerable significant impact (Impact MR-4)**.

2.8.4 Significance of Impacts Prior to Mitigation

The following significant impacts related to mineral resources would occur with project implementation:

Impact MR-1: The proposed project is located on a site primarily classified as MRZ-2; would result in the permanent loss of availability of a known mineral resource that would be of value to the region; and would exceed minimum construction material values as established by the County.

Impact MR-2: Implementation of the proposed project would result in the loss of an available, locally important mineral resource as delineated by the County's General Plan.

Impact MR-3: Implementation of the proposed project in combination with other past, present, and anticipated development projects in the County

would result in a cumulatively considerable significant impact related to the loss of available mineral resources and marketability within the region.

Impact MR-4: Implementation of the proposed project in combination with other past, present, and anticipated development projects and the limited availability of local mineral resources in the County would result in a cumulatively considerable significant impact related to the loss of locally important mineral resources.

2.8.5 Conclusion

Impact MR-1, Impact MR-2, Impact MR-3, and Impact MR-4 are significant and unavoidable. The proposed project would extract up to approximately 10.3 million of locally important mineral resources from the San Diego River channel; however, an additional significant portion of this important aggregate resource would remain in place and not be recovered by the proposed project and the site is anticipated to be precluded from future mineral resource extraction activities.

As described above in Section 2.8.1.2, Section 2762(d) of the Surface Mining and Reclamation Act (SMARA) has specific lead agency noticing requirements prior to permitting a use which would preclude future extraction of identified mineral resources. The County will process a statement specifying the County's reasons for extinguishing access to mineral resources of regional significance pertaining to the mineral resources that will remain in the ground below the proposed mining depth. The Statement of Reasons will be circulated for a 60-day public review and provided to the State Geologist and the State Mining and Geology Board for review and comment.

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