2.9 Mineral Resources

This section evaluates the potential for significant impacts to mineral resources associated with implementation of the proposed project. It identifies known and potential mineral resources within the project Site, and analyzes the potential for the proposed project to result in the loss of availability of a known mineral resource or the loss of availability of a locally important mineral resource recovery site. This analysis relies, in part, on the Mineral Resource Technical Report prepared by Leighton and Associates for the proposed project (EIR, Appendix P).

Comments received in response to the Notice of Preparation (NOP) included concerns regarding the need to protect and preserve the on-site mineral resources. These concerns are addressed and summarized in this section. A copy of the NOP and comment letters received in response to the NOP is included in Appendix A of this EIR.

2.9.1 Existing Conditions

Topographic Setting

The Site is located within the coastal subprovince of the Peninsular Ranges Geomorphic Province, near the western edge of the Southern California batholith. The topography at the edge of the batholith changes from the rugged landforms developed on the batholith to the more subdued landforms, which typify the softer sedimentary formations of the coastal plain. Primarily, the Site is underlain by the Cretaceous-aged granitic rock of the Southern California batholith. Erosion and regional tectonic uplift created the valleys and ridges of the area (Appendix P).

The property is generally located west of Interstate 15, east of North Twin Oaks Valley Road, north of Deer Springs Road, and south of Lawrence Welk Lane in north San Diego County and containing the Merriam Mountains. Topographically, the Site generally consists of moderate to steeply sloping hillside terrain with localized valleys and gently sloping terraces. Elevations range from a high of approximately 1,765 feet above mean sea level in the west-central portion of the Site to a low of 800 feet above mean sea level along the southerly Site boundary (Appendix P).

Generally, natural drainage is accomplished through a network of narrow, steep-sided canyons in all directions away from the approximately central, northwesterly trending ridgeline. The largest canyon on the Site is located along the southerly boundary and drains in a southward direction. Vegetation on the Site ranges from native grasses and weeds in the relatively flat canyon bottoms to moderate to thick chaparral in the upper elevations (Appendix P).

Mineral Resource Potential

As mandated by the Surface Mining and Reclamation Act of 1975, the California State Mining and Geology Board classifies California mineral resources with the Mineral Resource Zones (MRZs) system. These zones were established based on the presence or absence of significant sand and gravel deposits and crushed rock source areas (i.e., products used in the production of cement). The classification system emphasizes Portland Cement Concrete aggregate, which is subject to a series of specifications to ensure the manufacture of strong, durable concrete. The following guidelines are presented in the mineral land classification for the region (Department of Conservation 1999):

- **MRZ-1** – 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-2** – Areas where adequate information indicates that significant mineral deposits are present, or where it is judged that there is a high likelihood for their presence.
- **MRZ-3** – Areas containing mineral deposits, the significance of which cannot be evaluated from available data.
- **MRZ-4** – Areas where available information is inadequate for assignment to any other MRZ zone.

The vast majority of existing MRZ-2 zones are mapped in alluvial areas and, therefore, have irregular, organic limits defined by low-lying topographic drainages. Geologically, these areas are generally characterized by the presence of younger (Quaternary-aged) river channel, floodplain, and terrace deposits that have been eroded from the older (Tertiary to Cretaceous-aged) bedrock units, transported, and re-deposited. They consist of naturally loose mixtures of sands and rounded gravels. Laboratory testing has also confirmed the physical and chemical characteristics of the deposits are appropriate for Portland Cement Concrete–grade aggregate.

The majority of the San Diego region is mapped as an MRZ-3 zone. Generally, these areas geologically consist of the older bedrock units, including the crystalline and metavolcanic rocks that are mapped over nearly two-thirds of San Diego County. These areas are also commonly rugged mountainous terrain relatively isolated from existing development and infrastructure. As noted in the updated 1996 Division of Mines and Geology classification report, these materials can be crushed to yield Portland Cement Concrete–grade aggregate, provided they possess the appropriate chemical characteristics (Department of Conservation 1996). Despite considerable costs associated with crushing, additional processing, and transportation, crushed rock has been a feasible source when more economical alluvial materials are not readily available.

Reclassification of an MRZ-3 zone to a MRZ-2 designation is under the purview of the California State Geologist. The criteria includes determination that 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 (in 1996 equivalent dollars) $12,150,000 for construction materials" (Department of Conservation 1996). Note this equated to $5,000,000 in 1978 dollars when the guidelines were first written.

Project Site

The Newland Sierra Site includes areas zoned as MRZ-2 and MRZ-3. Because it consists of mountainous terrain as opposed to an alluvial river valley, the Site's resource designations result from the presence of crystalline and metavolcanic rocks, which, when crushed to suitable sizes, could be considered for construction material in the form of aggregate materials (Appendix P).

Note that the MRZ-2 zone includes two parts: The Quarry Parcel area (168 acres) to the west, which was originally designated as MRZ-2, is also zoned for extractive use (S82) by the County of San Diego (see Figure 2.9-1, Mineral Resources). Within this area, a quarry operation was previously in operation. This site, known as the Twin Oaks Quarry, was historically permitted for aggregate mining by South Coast Asphalt Products. Although they had a use permit for quarrying of rock from the site, they were not permitted to crush, screen, or wash the quarried rock on-site. The Sycamore Ridge Parcel (482 acres) was reclassified as MRZ-2 in response to a petition by HG Fenton Material Company (Appendix P).

Within the MRZ-2 area in the western portion of the site (the Quarry parcel), an operation was previously permitted to quarry rock from the site, but the operation was not permitted to crush or screenwash the quarried rock on-site because of concerns about noise, dust, and pollutants. The on-site MRZ-2 parcel, known as Sycamore Ridge, was previously owned by HG Fenton Material Company and later by Hanson Aggregate/Pacific Southwest. Under these ownerships, permitting efforts were initiated for activation of mining and further exploration on the site. However, permits were never obtained, and these efforts were discontinued, reportedly due to the presence of adjacent residential development and on-site sensitive environmental resources. Although the presence of mineable on-site resources has been long recognized, extraction permits have never been obtained. Although portions of the site have zoning overlays to preserve the resource, no policy decisions have been implemented to avoid sterilization of the resource by urban encroachment (Appendix P).

2.9.2 Regulatory Setting

Federal Regulations

There are no federal regulations, authorities, or administering agencies pertaining to mineral resources that regulate the proposed project.

State Regulations

California Surface Mining and Reclamation Act

Sections 2762 and 2763 of the California Surface Mining and Reclamation Act (SMARA) require that jurisdictions issue a Statement of Reasons when projects would result in the elimination of the potential to extract minerals in the areas containing regionally significant mineral resources. On the project Site, 650 acres have been classified as MRZ-2 lands, including 124 acres that the State Mining and Geology Board have formally designated as a Regionally Significant Construction Aggregate Resources Area.

Compliance with SMARA requires that County of San Diego (County) decision-makers consider the loss of access to mineral resources on the project Site, weigh the importance of the Site's mineral resources to the region, and balance these mineral values against the proposed land uses when making land-use decisions. The Statement of Reasons lists seven potential reasons to permit the project and to eliminate access to important mineral resources that the decision-maker may adopt or modify during their deliberations in accordance with SMARA Section 2763(a). 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.

Integrated Waste Management Act

Assembly Bill 939, the Integrated Waste Management Act, mandates that each jurisdiction reduce the amount of waste entering landfills each year. This is beneficial in lengthening the lifespan of available mineral resources within the County by recycling materials from demolished buildings, roadways, or other facilities.

Local Regulations

County of San Diego General Plan

The Conservation and Open Space Element of the General Plan includes a Mineral Resources section, which identifies goals and policies intended to assure an adequate supply of mineral resources to support the economic activity projected to occur under the General Plan and to assure compliance with the requirements of the SMARA with regard to the conservation of

mineral resources, and the permitting and reclamation of mining sites. The following goals and policies are identified:

- **Goal COS-10: Protection of Mineral Resources.** The long-term production of mineral materials adequate to meet the local County average annual demand, while maintaining permitted reserves equivalent to a 50- year supply, using operational techniques and site reclamation methods consistent with SMARA standards such that adverse effects on surrounding land uses, public health, and the environment are minimized.
    - **Policy COS-10.1 Siting of Development.** Encourage the conservation (i.e., protection from incompatible land uses) of areas designated as having substantial potential for mineral extraction. Discourage development that would substantially preclude the future development of mining facilities in these areas. Design development or uses to minimize the potential conflict with existing or potential future mining facilities. For purposes of this policy, incompatible land uses are defined by SMARA Section 3675.
    - **Policy COS-10.2 Protection of State-Classified or Designated Lands.** Discourage development or the establishment of other incompatible land uses on or adjacent to areas classified or designated by the State of California as having important mineral resources (MRZ-2), as well as potential mineral lands identified by other government agencies. The potential for the extraction of substantial mineral resources from lands classified by the State of California as areas that contain mineral resources (MRZ-3) shall be considered by the County in making land use decisions.
    - **Policy COS-10.3 Road Access.** Prohibit development from restricting road access to existing mining facilities, areas classified MRZ-2 or MRZ-3 by the State Geologist, or areas identified in the County Zoning Ordinance for potential extractive use in accordance with SMARA Section 2764.a.
    - **Policy COS-10.4 Compatible Land Uses.** Discourage the development of land uses that are not compatible with the retention of mining or recreational access to non-aggregate mineral deposits. See Policy COS-10.1 for a definition of incompatible land uses.
    - **Policy COS-10.6 Conservation of Construction Aggregate.** Encourage the continued operation of existing mining facilities and streamline the permitting of new mining facilities consistent with the goal to establish permitted aggregate resources that are sufficient to satisfy 50 years of County demand.
    - **Policy COS-10.7 Recycling of Debris.** Encourage the installation and operation of construction and demolition (C&D) debris recycling facilities as an accessory use at permitted (or otherwise authorized) mining facilities to increase the supply of available mineral resources.

- **Policy COS-10.8 New Mining Facilities.** Develop specific permit types and procedures for the authorization of new mining facilities that recognize the inherent physical effects of mining operations and the public necessity for available mineral resources adequate to meet local demand, in accordance with PRC Section 2762.
- **Policy COS-10.9 Overlay Zones.** Provide zoning overlays for MRZ-2 designated lands and a 1,500-foot-wide buffer area adjacent to such lands. Within these overlay zones, the potential effects of proposed land use actions on potential future extraction of mineral resources shall be considered by the decision makers.

San Diego County Zoning Ordinance, Sections 2820–2835, S82 Extractive Use Regulations

San Diego County Zoning Ordinance, Section 2820 et seq., are known as the S82 Extractive Use Regulations and are intended to identify and create areas within the County where mining, quarrying, or oil extractive uses are permitted. Typically, the S82 Extractive Use Regulations would be applied to areas of mineral deposits to signify the presence of such deposit and notify adjacent or affected properties of the intention to allow extraction of minerals within the zone. They would be used to preserve areas with valuable mineral deposits until extraction can take place.

San Diego County Zoning Ordinance, Sections 6550–6556, Extractive Use Regulations

San Diego County Zoning Ordinance, Section 6550 et seq., is known as the Extractive Use Regulations and provides the means for public review and regulation of mineral extraction and associated on-site processing operations.

County of San Diego Code of Regulatory Ordinances Sections 87.701–87.714, Surface Mining

In 2003, the Board of Supervisors added Sections 87.701 through 87.714, entitled Surface Mining, to the County of San Diego Code of Regulatory Ordinances to regulate all surface mining operations in the unincorporated area of the County, as authorized by the San Diego County Zoning Ordinance and SMARA to ensure that:

a. The continued mining of minerals will be permitted in a manner which will protect the public health and safety and will provide for the protection and subsequent beneficial use of mined and reclaimed land;

b. The possible adverse effects of surface mining operations on the environment, including air pollution, impedance of groundwater movement, water quality degradation, damage to aquatic or wildlife habitat, flooding, erosion and sedimentation, will be prevented or minimized; and

c. The production and conservation of minerals will be encouraged while giving consideration to values relating to recreation, watershed, wildlife, range and forage, and aesthetic enjoyment.

This Ordinance is intended to implement the minimum requirements of SMARA and to specify local requirements. County Code Sections 87.701 through 87.714 require that no person conduct surface mining unless a Major Use Permit is obtained, a Reclamation Plan is approved as provided by the Zoning Ordinance and SMARA, and financial assurances for reclamation have been approved by the County. Grading performed pursuant to such a Major Use Permit or Reclamation Plan must be in accordance with a plot plan and conditions approved therewith. Where surface mining has been conducted in disregard of this or other ordinances, a Reclamation Plan must be obtained for the restoration of the site (Appendix P).

2.9.3 Analysis of Project Effects and Determination as to Significance

Guidelines for Determining Significance

The following significance guidelines are from the County of San Diego Guidelines for Determining Significance and Report Format and Content Requirements – Mineral Resources (County of San Diego 2008). They should guide the evaluation of whether a significant impact to mineral resources will occur as a result of project implementation. A project will generally be considered to have a significant effect if it proposes any of the following, absent specific evidence to the contrary. Conversely, if a project does not propose any of the following, it will generally not be considered to have a significant effect on mineral resources, absent specific evidence of such an effect.

1. The project is:
    - On or within the vicinity (generally up to 1,300 feet from the site) 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;

      AND

      The project 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

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 (sand and gravel, crushed rock): $12,500,000
  - Industrial and chemical mineral materials (limestone, dolomite, and marble [except where used as construction aggregate]; specialty sands, clays, phosphate, borates; and gypsum, feldspar, talc, building stone and dimension stone): $2,500,000

- Metallic and rare minerals (precious metals [gold, silver, platinum], iron and other ferroalloy metals, copper, lead, zinc, uranium, rare earths, gemstones and semi-precious materials, and optical–grade calcite): $1,250,000

2. The project 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

The project Site includes areas designated as MRZ-2, which means adequate information indicates significant mineral deposits are present in the area, or a high likelihood exists for their presence. Approximately 650 acres of the project Site are classified as MRZ-2. The remainder of the Site is classified as MRZ-3, which means the area's potential to contain mineral deposits cannot be evaluated from available data. Due to the mountainous terrain of the project Site, as opposed to an alluvial river valley, these resource designations result from the presence of crystalline and metavolcanic rocks that, when crushed to appropriate sizes, could be considered as aggregate suitable for construction material. Aggregate suitable for construction material is considered to be a valuable mineral resource to residents of the state and region.

Although portions of the Site have been categorized as containing MRZ-2 resources, the property is not currently being used for extraction, and previous attempts to re-initiate extraction operations at the abandoned quarry site have been unsuccessful. In addition, no mining activities have taken place within the Sycamore Ridge area.

The 650-acre area zoned MRZ-2 includes the Sycamore Ridge parcel and the Quarry parcel, with approximated areas of 482 and 168 acres, respectively. The size of the MRZ-2 zoned area available for eventual extraction would be reduced by development of the proposed project on the southeast corner of the Sycamore Ridge parcel. This area includes a calculated 37.8 acres lost to the residential development. This reduction in MRZ-2 acres accounts for approximately 5.8 percent of the total 650-acre area designated as MRZ-2. However, a greater area would be affected (approximately 119 acres) to provide a buffer between the proposed development and a

hypothetical extractive use program designed elsewhere across the Sycamore Ridge parcel. To provide an adequate buffer to achieve separation from noise and dust, a separation of 1,300 feet is typically used.

The existing quarry area is situated on a west-facing slope adjacent to the north/south-trending North Twin Oaks Valley Road, which provides quarry access. The quarry is separated from the Sycamore Ridge parcel by a large topographic summit (1,630 feet above mean sea level). The quarry area currently zoned S-82 for extractive use would not be developed, and its access (from the west) would not be affected by the proposed development. The project does not propose any on-site or off-site development within 1,300 feet of the quarry; however, future mining in this area would be prohibited, as it is proposed as biological open space.

The California Geologic Survey (formerly Division of Mines and Geology) documented that the volcanic rock within the MRZ-2 zoned area is minable, processable, and marketable under the present (1996) and near future technologic and economic conditions (Department of Conservation 1996). In addition, assuming similar extraction practices as the existing mining site located in the western portion of the site, a price of $20 per ton, a density of 0.075 tons per cubic foot, and a waste factor of approximately 10 percent, a hypothetical mining operation would far exceed the threshold of $12,500,000 for construction material. The value of the on-site MRZ-2 mineral resources is estimated to be worth approximately $63 million.

Overall, the granitic materials underlying the project Site are of MRZ-2 quality and are a potentially significant resource that currently could be recovered if the County were to issue a permit for extraction. 156.8 acres of the total MRZ-2 land at the Sycamore Ridge parcel would be effectively lost once development is complete and these resources have been determined to be minable, processable, and marketable under technologic and economic conditions. Development of the proposed project would affect future extraction of the mineral resources in and around this area (**Impact MR-1**). Impacts would be **significant**.

The I-15 interchange improvements are expected to be confined to a relatively constrained area, both in terms of size and configuration, and any potential mineral resource would be un-mineable due to the surrounding constraints of the freeway and existing interchange. Further, the improvements are anticipated to be constructed within the I-15 right-of-way, and any potential mineral resources underlain the location are already considered to be no longer available for extraction; thus, no additional new impacts would be expected to occur to mineral resources.

2.9.3.1 Consistency with Applicable Plans, Policies, and Ordinances

The proposed project is consistent with the following General Plan Goals and Policies: Goal COS-10, Policies COS-10.1 through 10.4, and Policies COS-10.6 through 10.9. The proposed project is

consistent with Goal COS-10 because, although portions of the project Site have been categorized as containing MRZ-2 resources, the property is not currently being used for extraction, and previous attempts to re-initiate extraction operations at the abandoned quarry site have been unsuccessful. In addition, no mining activities have taken place within the Sycamore Ridge area.

The project is consistent with Policies COS-10.1 through 10.4 because the quarry area currently zoned S-82 for extractive use would not be developed, and its access (from the west) would not be affected by the proposed development. The project does not propose any on-site or off-site development within 1,300 feet of the quarry, which would potentially be incompatible with future mining operations. The project Site does not currently contain an operating mining facility and past attempts to re-initiate extraction operations at the abandoned quarry site have been unsuccessful. Thus, the project is consistent with Policy COS-10.6. During construction of the proposed project, demolition and construction debris will be recycled to the extent feasible, as indicated in Policy COS-10.7. In addition, the project does not propose new mining facilities or overlay zones, as indicated in Policies COS-10.8 and 10.9.

For additional detail regarding the proposed project's consistency with applicable plans and policies, see Section 3.3, Land Use and Planning.

2.9.4 Cumulative Impact Analysis

As growth in the region continues, mining and extraction activities are likely to be directly and indirectly impacted by new development. Mineral resources, particularly sand, gravel, and rock, are a regional resource (see Figure 2.9-2, County-Wide Quarries, Mines, and Gem Deposits). The proposed project, in combination with the cumulative projects, could potentially impact mineral resources within the MRZ-2 zone. Only a small portion of planned development is proposed within the MRZ-2 zone located in the northern portion of the development, and potential future extraction from the Quarry parcel would not be precluded.

On a region-wide cumulative scale, the eastern portion of San Diego County would not be economically feasible for mining activities due to haul distances and lack of infrastructure. Because the majority of resources would be available for extraction, a significant cumulative impact would not occur. As such, cumulative projects would result in a less-than-significant impact, and the proposed project would **not result in a cumulatively considerable impact** on mineral resources.

2.9.5 Significance of Impacts Prior to Mitigation

The following mineral resource impacts have been identified:

Impact MR-1 The proposed project would result in the loss of availability of approximately 156.8 acres of MRZ-2 designated land, and impacts would be significant.

2.9.6 Mitigation Measures

The proposed project would result in significant impacts to the availability of mineral resources. In the context of the proposed project, no measures that would mitigate impacts to below a level of significance for the loss of availability of mineral resources have been found to be feasible. Potential partial mitigation for this resource would be to extract some of it prior to or in conjunction with Site construction. In addition, as an alternative partial mitigation, a portion of the material could be processed and used on-site as part of the construction process, thereby eliminating the need to import material from alternate sources. Rock excavations on-site could be used for slab underlayment, backfill of utility trenches, road base, or aggregate, thus eliminating the need for importing of these materials. Rock excavations used on the Site for construction materials would be part of the maximum cubic yards of cut and would not come from old mining areas or other areas outside the development footprint. The project does not propose mining operations for construction materials.

Other potential measures to mitigate the identified impact relate to policy decisions not under the control of the project applicant. The most effective mitigation would be for the County to identify feasible mineral resource extraction areas and to implement policies that would avoid resource sterilization (encroachment by development). Evidence of resource sterilization having already occurred at the project Site is provided by records related to previous efforts to permit mining (Appendix P).

2.9.7 Conclusion

Since no feasible mitigation exists to reduce impacts to below a level of significance, impacts would be **significant and unavoidable**.

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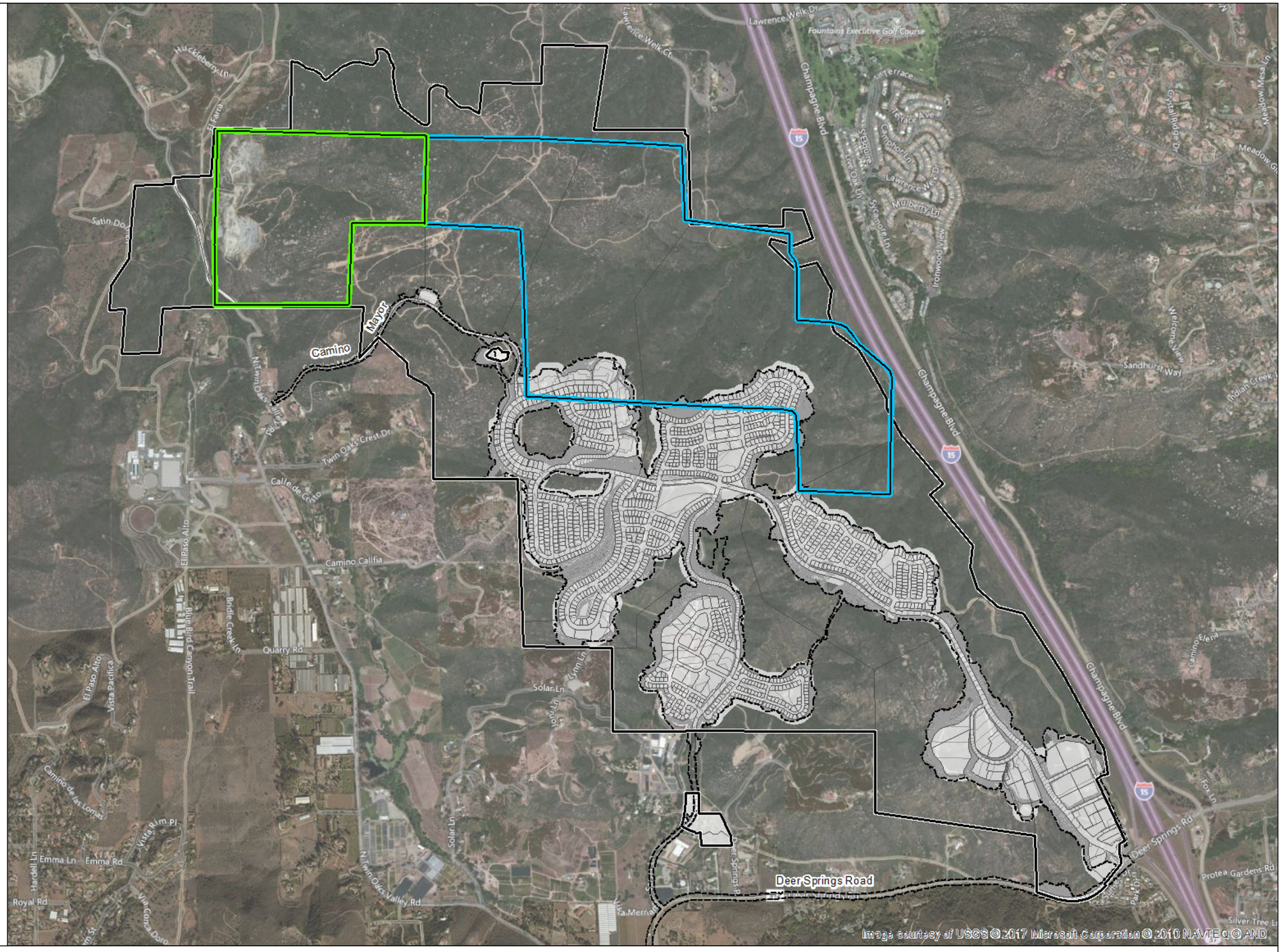
Project Site

Quarry Parcel MRZ-2, per DMG Special Report 153 (CGS 1987) (Approx. 168 Acres)

Sycamore Ridge Parcel MRZ-2A, per DMG Open-File Report 96-04 (CGS 1996) (Approx. 482 Acres)



0 800 1,600 Feet

SOURCE: Leighton 2015

FIGURE 2.9-1

Mineral Resources

Newland Sierra Environmental Impact Report

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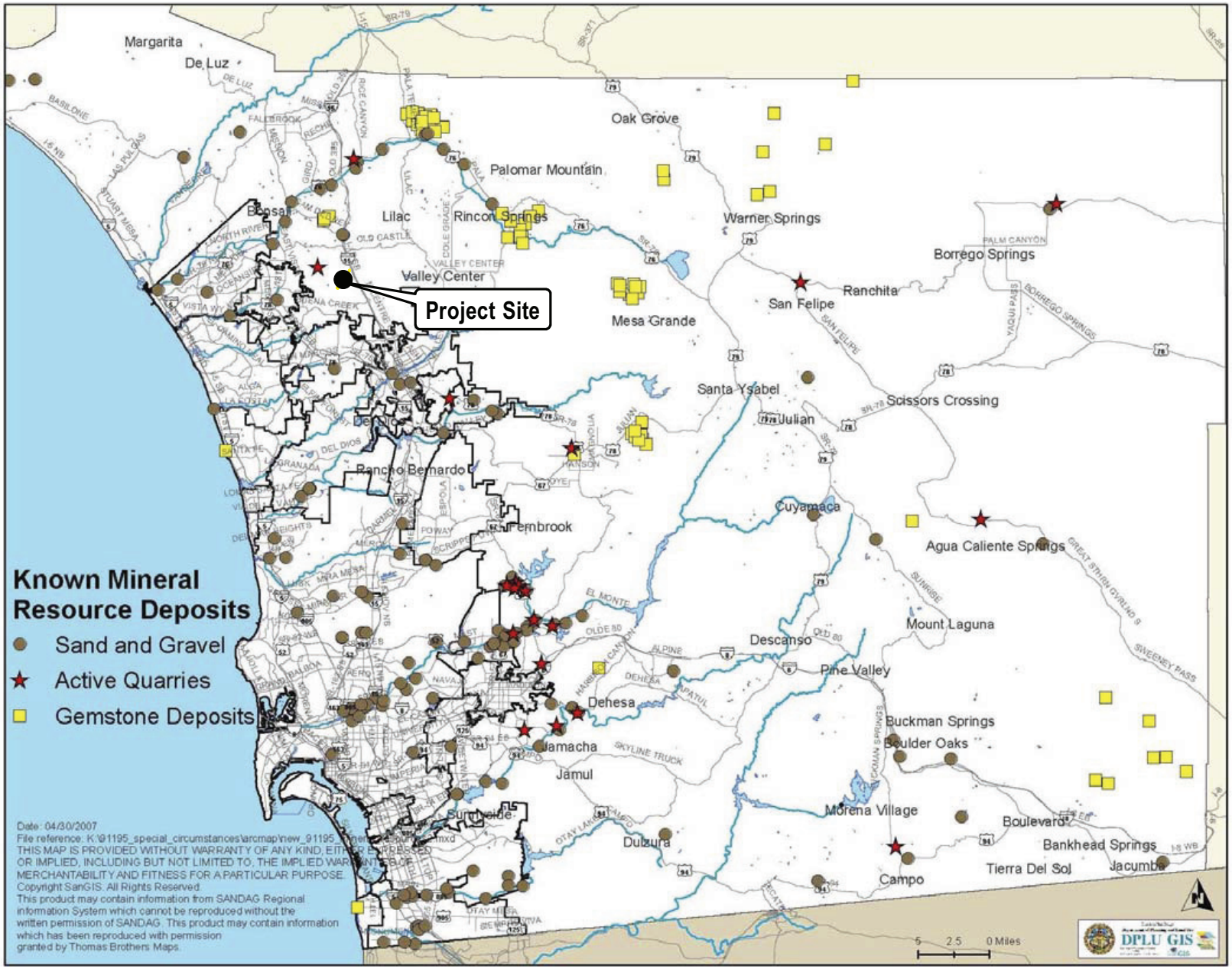

FIGURE 2.9-2

County-Wide Quarries, Mines, and Gem Deposits

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