2.9 Mineral Resources

This section describes the existing mineral resources present in the Alpine Community Plan Area (CPA), the applicable regulations governing mineral resources, and an analysis of potential changes to these resources that may result from implementation of the proposed project.

This section incorporates information and analysis from the 2011 General Plan Environmental Impact Report (EIR) and 2016 Forest Conservation Initiative (FCI) General Plan Amendment (GPA) EIR (referred throughout the rest of this section as "prior EIRs") as they apply to the proposed project. Section 1.3, *Project Background*, of this Supplemental Environmental Impact Report (SEIR) provides a background for both EIRs. The 2011 General Plan EIR analyzed the entirety of the Alpine CPA while the FCI EIR provided an updated analysis of impacts of land use changes within the FCI lands. These prior EIRs both have similar significance statements related to Mineral Resources. The existing conditions outlined in this section are generally consistent with those described in the prior EIRs because the type and location of mineral resources have not changed significantly since those documents were prepared. However, there are some instances where updates or changes have occurred since the prior EIRs, which have been noted accordingly.

Table 2.9-1 summarizes the impact conclusions identified in this section.

Table 2.9-1. Mineral Resources Summary of Impacts

Issue Number	Issue Topic	Prior EIRs Conclusion	Project Direct Impact(s)	Project Cumulative Impact(s)	Level of Significance After Mitigation
MIN-1	Mineral Resource Availability	Significant and Unavoidable	Potentially Significant	Potentially Significant	Significant and Unavoidable
MIN-2	Mineral Resource Recovery Sites Loss	Significant and Unavoidable	Potentially Significant	Potentially Significant	Significant and Unavoidable

One comment received in response to the Notice of Preparation related to mineral resources concerned the potential effect of extraction sites on biological habitat. Because the proposed project does not propose mineral extraction sites, the potential environmental impacts related to mineral extraction are not analyzed in this section. An analysis of the proposed project's impacts on biological habitat is provided in Section 2.4, *Biological Resources*.

2.9.1 Existing Conditions

Background information on the existing type and location of mineral resources found in the County of San Diego is included in Sections 2.9.1 of the 2011 General Plan EIR and 2.9.1 of the FCI EIR and is incorporated here by reference.

The following discussion is focused on existing conditions within the Alpine CPA and is based primarily on information contained within the prior EIRs, as well as records from the County of San Diego's Department of Planning & Development Services and the California Department of Conservation.

2.9.1.1 Existing Resources

The term *mineral resources* is used in the mining and conservation fields to describe a concentration or occurrence of natural, solid, inorganic, or fossilized organic material in or on Earth's crust in such a form and quantity and of such a quality that it has reasonable prospects for economically viable extraction (County of San Diego 2011a). For purposes of this document, three general categories of mineral resources are important to the County of San Diego:

- **Construction materials –** sand, gravel, and crushed rock. This is economically the most important category of mineral resources.
- **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.
- **Metallic and rare minerals –** precious metals (gold, silver, platinum), iron and other ferro-alloy metals, copper, lead, zinc, gemstones and semi-precious materials, and optical-grade calcite.

These three general categories of mineral resources are discussed further below. The locations of the existing mineral resources in the Alpine CPA are shown in Figure 2.9-1a. There are eight mineral deposits in the Alpine CPA, one of which is in Subarea 4 and three of which are in Subarea 7 (Figure 2.9-1b). There are four identified gold or silver deposits, one of which is in Subarea 1. There is one sand and gravel deposit, but it is not located within a subarea.

The General Plan and FCI GPA do not identify any specific mineral resource designated areas or uses. Rather, they specify land use designations where mineral resource extraction can occur if a major use permit is obtained. This includes the land use categories of Rural Lands, Open Space (Conservation), Public Agency Lands, or Semi-Rural Residential.

2.9.1.2 Construction Materials

Sand, gravel, and crushed rock provide essential construction aggregate material for modern society and comprise the most important mineral resource category in San Diego County. Aggregate is used in one form or another for the construction of roads, parking lots, buildings, homes, schools, hospitals, shopping centers, and other essential infrastructure. In the natural state, sand and gravel are usually loose, easily handled, and readily compacted, while retaining good internal drainage characteristics. These characteristics make them a preferred material for fills and a base for pavements and other structures. When combined with a cement binder, they become the principal ingredient in concrete, whether used in its fresh (plastic) state and placed in forms, or pre-cast as pipe, block, and other structural components. When combined with asphalt, sand and gravel become the aggregate forming the major element of asphaltic concrete, which is widely used as a paving material. The highest-grade aggregate is used to provide the bulk and strength to Portland Concrete Cement and Asphalt Cement. There is one deposit of sand and gravel (Figure 2.9-1a) identified in the central portion of the Alpine CPA; however, it is not in a subarea.

2.9.1.3 Industrial and Chemical Mineral Materials

Industrial and chemical mineral materials found within San Diego County include, but are not limited to, ash, boron, clay, bentonite, kaolinite, dolomite, feldspar, graphite, gypsum, mica, perlite, phosphorous, pumice, quartz, specialty sands, sodium, gypsum, calcite, silica, limestone, and dimension stone. Dimension stone consists of large, round, relatively flawless blocks or slabs of stone used for items such

as buildings, monuments, paving, and countertops. In San Diego County, dimension stone of granite, gabbro, marble, and limestone are quarried. Gypsum is a major rock-forming mineral that produces massive beds, usually from precipitation, out of highly saline waters. Gypsum deposits are located in the eastern part of the County. Moreover, gypsum is used in concrete for highways, bridges, buildings, and many other structures.

Gypsum also is used extensively as a soil conditioner to improve the workability and the water penetration of soils and to overcome the corrosive effect of alkalinity. It is also a component of plaster of Paris used in surgical and orthopedic casts.

Most of the unincorporated County, especially east of the urbanized areas, is underlain by granitic rocks. Granite is one of the most versatile stone types because it is capable of taking a wide variety of finishes, which allows designers to custom-tailor the stone to specific aesthetic or performance requirements. Composed mostly of quartz and feldspars, granite is scratch resistant and durable. Granite is a choice material for high precision applications such as surface plates, and machine mounts and press rolls. There are no industrial or chemical minerals identified within the Alpine CPA.

2.9.1.4 Metallic and Rare Minerals

No gold and only a few gemstone mines are currently active in the County, but each has played a very important historic role in the settlement of several towns largely in the backcountry of eastern San Diego County. Historical mining sites are important for their scientific, educational, and recreation uses. In addition, some historical mines may still contain resources of commercial value. No metallic or gemstone mines are currently located within the Alpine CPA.

2.9.1.5 Geologic Environments

Geologic processes in San Diego County, such as intrusive emplacement of magma, volcanism, erosion, sedimentation, and hydrothermal processes, determine the type, location, and concentration of all mineral resources. The following general geologic environments created from these various geologic processes are the most important to mineral resources that are found within the County. As identified in Figures 2.9-2a and 2.9-2b, the following geologic environments underlie the Alpine CPA.

- **Quaternary alluvium** – Sand and gravel can easily be mined and processed for construction materials from this geologic environment.
- **Tertiary Age sedimentary rocks –** Conglomerate and other sedimentary rock types can be quarried for construction materials from this geologic environment.
- **Cretaceous Age crystalline rocks and Upper Jurassic metavolcanics –** Granitic rocks and other rock types can be quarried for coarse aggregates that are needed for concrete, riprap (broken rock) for breakwaters and bank protection, as well as decorative and dimension stone from this geologic environment.

The majority of the Alpine CPA is underlain by Cretaceous crystalline rocks and Upper Jurassic metavolcanics, with a pocket of quaternary alluvium in the eastern portion of the Alpine CPA, but quaternary alluvium does not underlie any of the subareas. Tertiary sedimentary deposits underlie a small area beneath Subarea 2.

2.9.1.6 Mineral Resource Zones

In 1975, the California Surface Mining and Reclamation Act (SMARA) required the classification of land into Mineral Resource Zones (MRZs) according to the land's known or inferred mineral resource potential. The primary goal of land classification was to provide local government decision makers information regarding the mineral potential of land before they make land use decisions that may preclude mining.

The State Mining and Geology Board prioritizes areas to be classified and/or designated. The highest priority areas are those within the state subject to urban expansion or other irreversible land uses that would preclude mineral extraction. In 1982, western San Diego County was classified into distinct MRZs according to the California Mineral Land Classification System. This area is referred to as the Western San Diego County Production-Consumption (P-C) Zone. The MRZs are described below and shown in Figures 2.9-3a and 2.9-3b. A portion of the western half of the Alpine CPA has been classified as distinct MRZs, and the remaining portion of the Alpine CPA is outside the P-C Zone.

Mineral Resource Zone 1

MRZ-1 designates areas where adequate geologic information indicates no significant mineral deposits are present, or where it is judged there is little likelihood of their presence. This zone is applied by the California Geologic Survey (CGS) 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 little to none. MRZ-1 is not present within the area of the Alpine CPA that has been classified.

Mineral Resource Zone 2

MRZ-2 designates areas underlain by mineral deposits where geologic data show that significant measured or indicated 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. A total of 0.40 acre of MRZ-2 has been categorized on the northwestern boundary of the Alpine CPA. However, there are no MRZ-2 areas within any of the subareas.

Mineral Resource Zone 3

MRZ-3 areas 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 P-C Zone is MRZ-3, except a few small areas that are MRZ-4. The northwestern portion of the Alpine CPA, which includes Subareas 1, 2, 4, 6, portions of Subarea 7 (Figure 2.9-3b), and the majority of Subarea 3, is classified as MRZ-3 and shown in Figure 2.9-3a.

Mineral Resource Zone 4

MRZ-4 areas are those where geologic information does not rule out 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 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. There are no MRZ-4 areas within the Alpine CPA.

Uncategorized Zones

Uncategorized zones are all the lands outside the Western San Diego County P-C Zone. The majority of the Alpine CPA is in this zone, including most of Subarea 5 and portions of Subarea 7.

2.9.1.7 Mining Operations in the Alpine Community Plan Area

The County of San Diego has land use authority over surface mines, while federal agencies have jurisdiction over all underground mines. Two surface mines have been mapped in the Alpine CPA, the Turvey Pit and the Palo Verde Lake Pit (see Figures 2.9-4a and 2.9-4b). The Turvey Pit is an active surface mine located at the interchange of Interstate (I-) 8 and Dunbar Lane. The Palo Verde Lake Pit is a closed mining operation that was permitted in 1985 for a 1- to 3-year restoration project for Palo Verde Lake.

2.9.2 Regulatory Framework

Sections 2.9.2 of the 2011 General Plan EIR and 2.9.2 of the FCI EIR included a discussion of the regulatory framework related to mineral resources in the unincorporated County. These regulations identified in the prior EIRs were reviewed to ensure they are still valid today and are incorporated by reference herein and listed below. See the 2011 General Plan EIR Section 2.9, Mineral Resources and FCI EIR Section 2.9, Mineral Resources, for a more detailed discussion of each. There are no federal regulations, authorities, or administering agencies pertaining to mineral resources that regulate the proposed project.

Applicable state regulations include:

- SMARA of 1975
- Integrated Waste Management Act.

Applicable local regulations include:

- The County of San Diego's Zoning Ordinance, Sections 2820–2835, S82 Extractive Use Regulations
- The County of San Diego's Zoning Ordinance, Sections 6550–6556, Extractive Use Regulations
- County of San Diego Code of Regulatory Ordinances Section 87.701–87.714, Surface Mining.

2.9.2.1 County of San Diego General Plan Policies

There are specific General Plan policies and goals found in the Conservation and Open Space Element intended to address mineral resources. These policies are summarized below and included in Appendix C for reference.

Conservation and Open Space Element

Goal COS-10 is to ensure the long-term production of mineral materials is adequate to meet the local County average annual demand while maintaining reserves to a 50-year supply and using operational techniques and site reclamation methods consistent with SMARA to minimize adverse effects. This is accomplished by policies COS-10.1 through COS-10.9, which encourage the conservation of areas designated as having substantial potential for mineral extraction, 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. In addition, these policies 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, discourage the development of land uses that are not compatible with the retention of mining or recreational access to non-aggregate mineral

deposits, encourage the continued operation of existing mining facilities, develop specific permit types and procedures for the authorization of new mining facilities, and provide zoning overlays for MRZ-2 designated lands and a 1,300-foot-wide buffer area adjacent to such lands. These policies are further described in the General Plan.

2.9.2.2 Alpine CPU Policies

There is a specific goal found in the Conservation element of the proposed project intended to protect mineral resources as described below:

Conservation and Open Space Element

Goal COS-1 is to promote the well-planned management of all valuable resources, natural and man-made, and prevent the destruction and wasteful exploitation of natural resources where feasible.

2.9.3 Analysis of Project Effects and Determination as to Significance

Based Appendix G of the State CEQA Guidelines and the County Guidelines for Determining Significance – Mineral Resources (County of San Diego 2008), the proposed project would result in 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.

2.9.3.1 Issue 1: Mineral Resource Availability

Guidelines for the Determination of Significance Analysis

Based on Appendix G of the State CEQA Guidelines and the County Guidelines for Determining Significance - Mineral Resources, implementation of the proposed 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, such as proposing incompatible development:

- On or within the vicinity (generally up to 1,300 feet from the site) of an area classified as MRZ-2;
- On land classified as MRZ-3;
- On land underlain by Quaternary alluvium, or
- On or within the vicinity of areas containing industrial material and gemstone resources.

Impact Analysis

The prior EIRs determined that the development proposed as part of the 2011 General Plan and FCI GPA would result in incompatible uses in areas of known mineral resources. Such incompatible uses would result in the loss of availability of known or suspected mineral resources that would be of value to the region and the residents of the state. The discussion of impacts related to the loss of available mineral resources from implementation of the 2011 General Plan and FCI GPA can be found in Sections 2.9 and 2.9 of the 2011 General Plan EIR and FCI EIR, respectively, and is incorporated by reference.

In addition, the prior EIRs determined that implementation of the 2011 General Plan and FCI GPA would potentially contribute to cumulative impacts associated with the loss of available mineral resources. Compliance with regulations and implementation of the proposed General Plan policies and the prior EIRs mitigation measures would reduce the 2011 General Plan and FCI GPA's direct and cumulative impacts by identifying mineral resources and providing specific guidelines for the permitting process in the Zoning Ordinance, which would facilitate that mineral resources are taken into account during planning and development. However, although General Plan policies and the prior EIRs mitigation measures would reduce the 2011 General Plan and FCI GPA's direct and cumulative impacts to the extent feasible, impacts associated with the loss of available mineral resources were concluded to remain significant and unavoidable.

A potential adverse effect of the proposed project could be the development of incompatible land uses that either directly or indirectly make a mineral resource inaccessible for future extraction. Development of residences, infrastructure, or other buildings directly above the mineral resource could make a resource inaccessible for future extraction. Development adjacent to an identified mineral resource may indirectly make the resource inaccessible in the future because mining operations require adequate setbacks from incompatible land uses due to the potential environmental issues associated with mining, including noise, traffic, air quality, and visual impacts and there may not be ways to extract the resource through discreet subterranean means.

As shown on Figure 2.9-3a, there are 12,745 acres of land classified as MRZ-3 in the Alpine CPA. All of Subareas 1, 2, 4, 6, 7, the majority of Subarea 3, and a small portion of Subarea 5 are located on land classified as MRZ-3. None of the subareas are located on land classified as MRZ-2, or within 1,300 feet from MRZ-2 lands. Approximately 0.40 acre of the Alpine CPA is classified as MRZ-2, in the northwest portion of the Alpine CPA, north of Subarea 4. In addition, based on the United States Department of the Interior Geological Survey, there is record that granite has been identified within the Alpine CPA (USGS 1980). Granite is considered a valuable mineral resource because it can be mined for different valuable mineral materials. The proposed project includes land use changes to four of the seven subareas and mobility network changes; however, density increases would only be allowed in three of the subareas (Subareas 2, 4, and 6). The potential impacts to those subareas, and the density decrease in Subarea 5, are discussed in more detail below.

Subarea 2

Subarea 2 is made up of several disconnected areas, all of which are on lands classified as MRZ-3. The majority of Subarea 2 is underlain by Tertiary sedimentary deposits, with a small portion in the northeast and southwest sections of the subarea underlain by Cretaceous crystalline rocks and Upper Jurassic metavolcanics. The land use designation changes would involve changing existing Village Residential (VR-4.3, VR-2.9, VR-2) land uses to a higher density (VR-10.9, VR-7.3) and reclassifying a small area from Village Residential to Semi-Rural Residential (SR-1) or Neighborhood Commercial (C-3). These land use designations would result in denser residential development if completely built out and have the potential to result in up to 1,095 residential units compared to 315 residential units that would be allowed under buildout of the current General Plan land use designations. This increase in density has the potential to prevent future mineral resource extraction in lands classified as MRZ-3. Therefore, the proposed project could make lands inaccessible to future mining that may have otherwise been available.

Subarea 4

Subarea 4 is on lands classified as MRZ-3 and underlain by Cretaceous crystalline rocks and Upper Jurassic metavolcanics. A mineral deposit is in the southern portion of Subarea 4. The proposed project would

include re-designation of existing Semi-Rural Residential (SR-1, SR-2) to uniformly SR-0.5 land use designations. The addition of the Village Core Mixed Use (VCMU) and Neighborhood Commercial (C-3) near the intersection of Dunbar Lane and Chocolate Summit Drive would introduce local services to this subarea. The higher density residential land use designation has the potential to result in up to 851 residential units compared to 166 residential units that would be allowed under buildout of the current General Plan land use designations. Therefore, the proposed project could make lands inaccessible to future mining that would have otherwise been available.

Subarea 5

The far western portion of Subarea 5 is located on lands classified as MRZ-3, underlain by Cretaceous crystalline rocks and Upper Jurassic metavolcanics, and does not have mineral deposits or active mines present. The majority of Subarea 5 is located on Uncategorized Zones, as shown on Figure 2.9-3a. This means the land has not been classified, and it is unknown whether mineral resources are present in the area.

The proposed project would result in 429 dwelling units (a reduction of 31 units compared to the current General Plan) and 10.96 acres of commercial land uses (an increase of 3.94 acres in commercial land uses) as well as mobility network changes. While this results in slightly lower density than the current General Plan, the commercial intensity would increase, and overall development would intensify compared to the current General Plan.

Subarea 6

Subarea 6, known as the Alpine Village, is located entirely on lands classified as MRZ-3, underlain by Cretaceous crystalline rocks and Upper Jurassic metavolcanics, and does not have mineral deposits or active mines present. The proposed project would change the existing land use designations of Residential Commercial (RC) to VCMU to provide additional high-density residential options and flexibility in commercial options. The proposed project has the potential to result in up to 617 residential units compared to 38 residential units that would be allowed under buildout of the current General Plan Land Use designation. This increase in density has the potential to prevent future mineral resource extraction in lands classified as MRZ-3. Therefore, the proposed project could potentially make lands inaccessible to future mining that would have otherwise been available; however, Subarea 6 is located along Alpine Boulevard, and contains most of the community's existing and planned retail and commercial services. Of the approximately 105 acres within the subarea, only 18 percent of the land is considered developable and available for future mining operations.

Federal, State, and Local Regulations and Existing Regulatory Processes

As identified in Section 2.9.2, various regulations are in place to protect mineral resources in the County that are also applicable to the proposed project. Compliance with these applicable regulations, such as the SMARA, which establishes policies for conservation and development of mineral containing lands and requires all cities and counties to incorporate the mapped MRZs into their general plans; and Sections 2820 through 2825 of the County of San Diego Zoning Ordinance, which preserves areas with valuable mineral deposits until the deposits can be extracted and identifies zones within the County where mining and quarrying uses are permitted, could help to reduce impacts associated with the loss of available mineral resources. However, these regulations are primarily intended to protect existing extraction sites or known mineral resource deposits and they would not help to reduce potential impacts of previously unknown mineral resources, such as resources in areas designated as MRZ-3.

The 2011 General Plan and FCI GPA include several policies within the Conservation and Open Space Element reducing the potential of the proposed project to limit the availability of mineral resources, because the policies are intended to discourage incompatible land uses and reduce encroachment of urbanization on aggregate resource extraction. These include policies COS-10.1 through COS-10.4, COS-10.6, COS-10.8, and COS-10.9, which are presented above in Section 2.9.2.

In addition, the prior EIRs identified one mitigation measure addressing impacts related to mineral resource availability that would be applicable to the proposed project, Min-1.1, which is provided in Sections 2.9.6 of the 2011 General Plan EIR and 2.9.4 of the FCI EIR.

Summary

The proposed project would include land use designation changes to Subareas 2, 4, and 6 in areas designated as MRZ-3, and allow a density of development and mobility network changes incompatible with future mining operations. The remaining portions of the Alpine CPA outside of the subareas would not experience land use designation changes and would still be available for potential mineral extraction if mineral resources are identified. However, because land that could contain mineral resources would have land use designations that would prevent mineral extraction that would have been available under the existing land use designations, there would be a potentially significant impact. The prior EIRs also identified a significant impact related to availability of mineral resources; however because the proposed project would result in additional development densities than analyzed in the prior EIRs, there would be a **potentially significant** impact and it would be more severe compared to the prior EIRs (Impact-MIN-1).

2.9.3.2 Issue 2: Mineral Resource Recovery Site Loss

Guidelines for the Determination of Significance Analysis

The proposed project would have a significant impact 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. Resource recovery sites are areas where mineral resources could be extracted for use. Locally important resource recovery sites or areas where important resource recovery sites could potentially be located are designated by the CGS as MRZ-2 or MRZ-3, or as being underlain by Quaternary alluvium.

Impact Analysis

The prior EIRs do not identify specific mineral resource recovery sites but they determined that the General Plan allows land uses incompatible with mining and resource recovery operations in areas designated as MRZ-2 or MRZ-3 and areas underlain by Quaternary alluvium, that contain, or potentially contain, important aggregate resources. The discussion of impacts related to mineral resource recovery sites from implementation of the 2011 General Plan and FCI GPA are provided in Sections 2.9 of the 2011 General Plan EIR and 2.9 of the FCI EIR and are incorporated by reference.

The prior EIRs determined General Plan policies and mitigation measures would reduce potential impacts on mineral resources because they would facilitate the identification of mineral resources in the Zoning Ordinance, discourage incompatible uses, and provide specific permitting guidelines for extraction sites, and provide guidance for the consideration of mineral resources during planning and development. Although compliance with regulations and implementation of the proposed General Plan policies and mitigation measure would reduce the 2011 General Plan and FCI GPA's direct and cumulative impacts to the extent feasible, the prior EIRs determined that impacts associated with the loss of available mineral resources recovery sites would remain significant and unavoidable.

The Turvey Pit, located just southeast of the interchange of I-8 and Dunbar Lane, is the only active mining operation within the Alpine CPA. The Turvey Pit is not within a subarea, so the land use designations would not be changed at, or adjacent to, the Turvey Pit mine. Thus, the proposed project would not introduce any incompatible uses near any existing, active resource recovery sites.

The proposed project would, however, introduce incompatible uses to land within the Alpine CPA mapped by the CGS as MRZ-3, as discussed under Issue 1 above. Land designated as MRZ-3 is considered a locally important resource recovery site by the County. As described in Section 2.9.1.1, *Existing Resources*, known isolated deposits also exist within two subareas that have proposed land use changes: Subarea 1 contains a deposit of silver and/or gold, and Subarea 4 contains a deposit of mineral resources. No additional residential units would result from implementation of the proposed project in Subareas 1, 3, and 7, as compared to buildout under the current General Plan land use designations, and therefore proposed land use designations would not result in further impacts related to access to the known silver and/or gold deposit.

Subarea 4 would have an increase in density through the re-designation of existing Semi-Rural Residential (SR-1, SR-2) to uniformly SR-0.5 land use designations. The addition of the Village Core Mixed Use (VCMU) and Neighborhood Commercial (C-3) near the intersection of Dunbar Lane and Chocolate Summit Drive will introduce local services to this subarea, and the higher density residential land use designation has the potential to result in up to 851 residential units compared to 166 residential units that would be allowed under buildout of the current General Plan land use designations, which could introduce new incompatible land uses to Subarea 4.

Quaternary alluvium, which is also considered a locally important resource recovery site, does not underlay any subareas in the Alpine CPA. However, because the proposed project would introduce incompatible land uses in subareas categorized as MRZ-3, and unclassified lands that may be underlain by granite (USGS 1980), the proposed project would result in potentially significant impacts on mineral resource recovery sites.

Federal, State, and Local Regulations and Existing Regulatory Processes

Existing regulations listed above in Section 2.9.2 are applicable to the proposed project. Compliance with these applicable regulations would reduce impacts associated with the loss of mineral resources recovery sites.

The current General Plan includes several policies within the Conservation and Open Space Element reducing the potential of the proposed project from limiting the availability of mineral resources, because the policies are intended to protect against the loss of mineral resource availability. These include policies COS-10.1 through COS-10.4, COS-10.6, COS-10.8, and COS-10.9, which are presented in Section 2.9.2. In addition, the prior EIRs identified one mitigation measure addressing impacts on mineral resources that would be applicable to the proposed project, Min-1.1, which is provided in Section 2.9.6.

Summary

The proposed project would introduce incompatible land uses in subareas categorized as MRZ-3, and in unclassified lands that may be underlain by granite (USGS 1980), the proposed project would result in **potentially significant** impacts on mineral resource recovery sites. Although compliance with existing regulations and implementation of the current General Plan policies and the mitigation measure would reduce the proposed project's impact associated with the loss of available mineral resources recovery sites to the extent feasible, the proposed project would result in higher development densities than the

2011 General Plan or FCI GPA. As such, the proposed project would result in a more severe impact on mineral resource recovery sites than the impacts determined in the prior EIRs (Impact-MIN-2).

2.9.4 Cumulative Impact Analysis

The geographic scope of the cumulative impact analysis for minerals includes the entire Alpine CPA and immediately adjacent areas, depending on the location of mineral deposits or operations.

2.9.4.1 Issue 1: Known Mineral Resource Availability

Construction and operation of cumulative projects in the vicinity of the Alpine CPA and within the San Diego region would have the potential to result in the loss of availability of known mineral resources. Urbanization and development could convert lands containing mineral resources to incompatible land uses, thereby reducing the availability of mineral resources in the region. Additionally, there are other jurisdictions in the vicinity of the Alpine CPA, such as the Viejas Reservation and the United States Forest Service, for which the County does not have oversight. These jurisdictions may propose future projects that could contribute to the loss of mineral resources in the region. It is also possible that reasonably foreseeable projects and community plans in the vicinity of the Alpine CPA would contain measures and policies to protect and preserve mineral resources and would not result in a cumulatively considerable contribution to impacts on mineral resources. However, because the contents of future community plans, or the type or extent of potential development are not currently known, it is possible cumulative growth and development would result in a significant cumulative impact associated with the loss of available mineral resources.

The proposed subsequent development would result in a reasonably foreseeable loss of mineral resources due to the encroachment of incompatible uses on and adjacent to areas of potential mineral resources, which would limit future availability. Specifically, increased density is proposed in areas zoned as MRZ-3, which have the possibility of containing mineral resources. Therefore, the proposed project would also have the potential to reduce availability of mineral resources if it is fully built out. As a result, future impacts under the proposed project would cause more severe impacts related to the loss of available mineral resources compared to the prior EIRs.

Compliance with existing regulations and implementation of the current General Plan policies and the mitigation measure would reduce this impact to the extent feasible for the reasons described above; however, impacts associated with the loss of available mineral resources would remain significant and unavoidable. Because the proposed project would allow for increased development beyond what was anticipated in the prior EIRs, impacts related to the loss of available mineral resources would be more severe than those identified in the prior EIRs and would be considered a **cumulatively considerable impact** associated with the proposed project (Impact-C-MIN-1).

2.9.4.2 Issue 2: Mineral Resource Recovery Site Loss

Construction and operation of cumulative projects near the Alpine CPA and adjacent areas would have the potential to result in the loss of available locally important mineral resources recovery sites. The County has envisioned preparing 15 community plan updates by 2030. These updates could propose increased residential or commercial land use designations, which could further reduce land available for mining. Urbanization and development have the potential to encroach on known or unknown mineral resource deposits in a way that would have the potential to prevent the success of future resource recovery sites. It is also possible reasonably foreseeable community plans in the vicinity of the Alpine CPA would contain policies to protect and preserve mineral resources and would not result in a cumulatively

considerable contribution to impacts on mineral resources. However, because the contents of future community plans, or the type or extent of potential development are not currently known, it is possible cumulative growth and development would result in a significant cumulative impact associated with the loss of mineral resource recovery sites.

The County considers potential impacts to be incompatible uses in the vicinity of locally important resource recovery sites or areas where important resource recovery sites could potentially be located, which are designated by the CGS as MRZ-2 or MRZ-3, or as being underlain by Quaternary alluvium. The proposed project would introduce incompatible uses on land within the Alpine CPA mapped by the CGS as MRZ-3. Future development in these areas would have the potential to encroach on known or unknown mineral resource deposits and potentially prevent the success of future resource recovery sites. As a result, future development under the proposed project would cause more severe impacts related to the loss of available mineral resources recovery sites compared to the prior EIRs. Compliance with existing regulations and the implementation of the current General Plan policies and the mitigation measure would reduce this impact to the extent feasible; however, impacts associated with the loss of locally important resource recovery sites or areas where important resource recovery sites could be located would remain significant and unavoidable. Therefore, the proposed project's contribution to this impact would be **cumulatively considerable** (Impact-C-MIN-2).

2.9.5 Significance of Impacts Prior to Mitigation

The proposed project would result in potentially significant impacts associated with mineral resource availability and mineral resource recovery sites.

Impact-MIN-1: Reduce Mineral Resource Availability. Due to the increase of land uses incompatible with mining operations allowed by the proposed project, the proposed project would result in a more severe potentially significant impact related to reducing mineral resource availability than determined in the prior EIRs. This would be considered a significant impact.

Impact-MIN-2: Preclude Future Mineral Resource Recovery Sites. Due to the higher density development and encroachment of incompatible uses on potential or likely mineral resource deposits in land categorized as MRZ-3, the proposed project would result in more severe impacts on mineral resource recovery sites compared to the prior EIRs. This would be considered a significant impact.

Impact-C-MIN-1: Reduce Mineral Resource Availability. The proposed project, in combination with other growth in the San Diego region, would result in a more severe potentially significant impact related to reducing mineral resource availability than determined in the prior EIRs. Therefore, impacts associated with the loss of available mineral resources would be significant.

Impact-C-MIN-2: Preclude Future Mineral Resource Recovery Sites. The proposed project, in combination with other growth in the San Diego region, would result in more severe impacts on mineral resource recovery sites compared to the prior EIRs. Therefore, impacts associated with mineral resources recovery sites would be significant.

2.9.6 Mitigation

2.9.6.1 Issue 1: Mineral Resource Availability

As discretionary projects are submitted, CEQA review would be completed, which may require a formal study that would analyze impacts and identify project-specific mitigation measures to reduce impacts. In

addition, implementation of the following prior EIRs mitigation measures in combination with the current General Plan policies and compliance with existing regulations would reduce Impact-MIN-1 and Impact-C-MIN-1 but not to a level below significant. These impacts are related to the loss of known mineral resources. However, even with the implementation of policies and mitigation, impacts would remain **significant and unavoidable**.

Infeasible Mitigation Measures

The following measures were considered in attempting to reduce impacts associated with mineral resources to below a level of significance. However, the County has determined that these measures would be infeasible and therefore these mitigation measures would not be implemented.

- Prohibit incompatible uses that would be located on or near significant mineral sites.

  Explanation: This measure would result in restriction on future development in areas of the CPA identified for increased growth because potentially significant mineral resources sites have the potential to occur in Subareas 2, 4, and 6. Restrictions on the type or amount of development within a community would conflict with areas that may accommodate additional growth. Therefore, this measure would be infeasible because community plans are required to be consistent with the adopted General Plan. The measure would also conflict with goals of the Housing Element to provide sufficient housing stock and would not achieve one of the primary objectives of the proposed project, which is to accommodate a reasonable amount of growth.

- For projects that propose incompatible uses near significant resource sites, require the applicants to mine the site prior to project development.

  Explanation: While the majority of the proposed project is located on lands designated MRZ-3, and could potentially contain mineral resources, the area of known significant mineral resources within the Alpine CPA is not located within one of the subareas identified in the proposed project. It is also not feasible to require property owners to mine their properties prior to development. Therefore, this potential mitigation measure is infeasible.

2011 General Plan and FCI EIR Mitigation Measures

The following mitigation measure is being carried forward and applies to the proposed project: Min-1.1 (see Appendix B, General Plan EIR Mitigation Measures). Implementation of this measure would reduce the proposed project's impacts to mineral resources.

Alpine Community Plan Update Mitigation Measures

No additional feasible mitigation measures are available.

2.9.6.2 Issue 2: Availability of a Mineral Resource Recovery Site Loss

As discretionary projects are submitted, CEQA review would be completed, which may require a formal study that would analyze impacts and identify project-specific mitigation measures to reduce impacts. In addition, implementation of the prior EIRs mitigation measure Min-1, identified for Issue 1 above, in combination with the current General Plan policies and compliance with existing regulations, would reduce Impact-MIN-2 and Impact-MIN-C-2, related to the loss of mineral resource recovery sites but not

to a level below significant. However, even with the implementation of policies and mitigation, impacts would remain **significant and unavoidable**.

2011 General Plan and FCI EIR Mitigation Measures

The following mitigation measure is being carried forward and applies to the proposed project: Min-1.1 (see Appendix B, General Plan EIR Mitigation Measures). Implementation of this measure would reduce the proposed project's impacts to mineral resources.

Alpine Community Plan Update Mitigation Measures

No additional feasible mitigation measures are available.

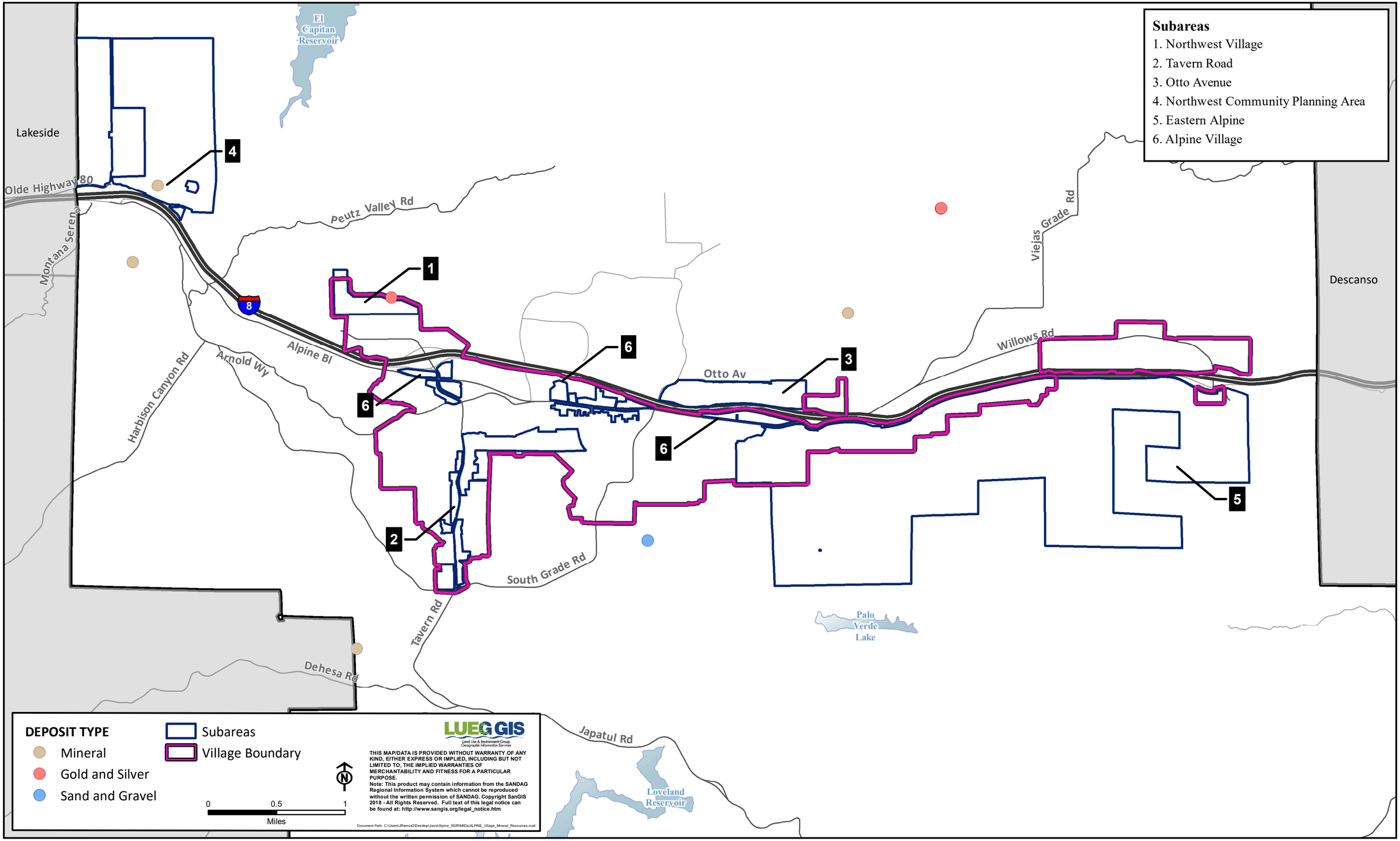
2.9.7 Conclusion

2.9.7.1 Issue 1: Mineral Resource Availability

Implementation of the proposed project would result in potentially significant impacts on the availability of mineral resources because the proposed project would allow for incompatible development within land classified as MRZ-3. This development would include land uses incompatible with mineral resource extraction operations, including high density residential and commercial land uses. Therefore, the proposed project would result in a potentially significant impact associated with the loss of available mineral resources, which would be more severe than impacts identified in the prior EIRs (Impact-MIN-1). Additionally, the proposed project would result in a potentially significant cumulative impact (Impact-C-MIN-1). Current General Plan policies and existing regulations and the prior EIRs mitigation measure would reduce direct impacts associated with the loss of available mineral resources, but not below a level of significance. Direct and cumulative impacts would remain **cumulatively considerable** and **significant and unavoidable**.

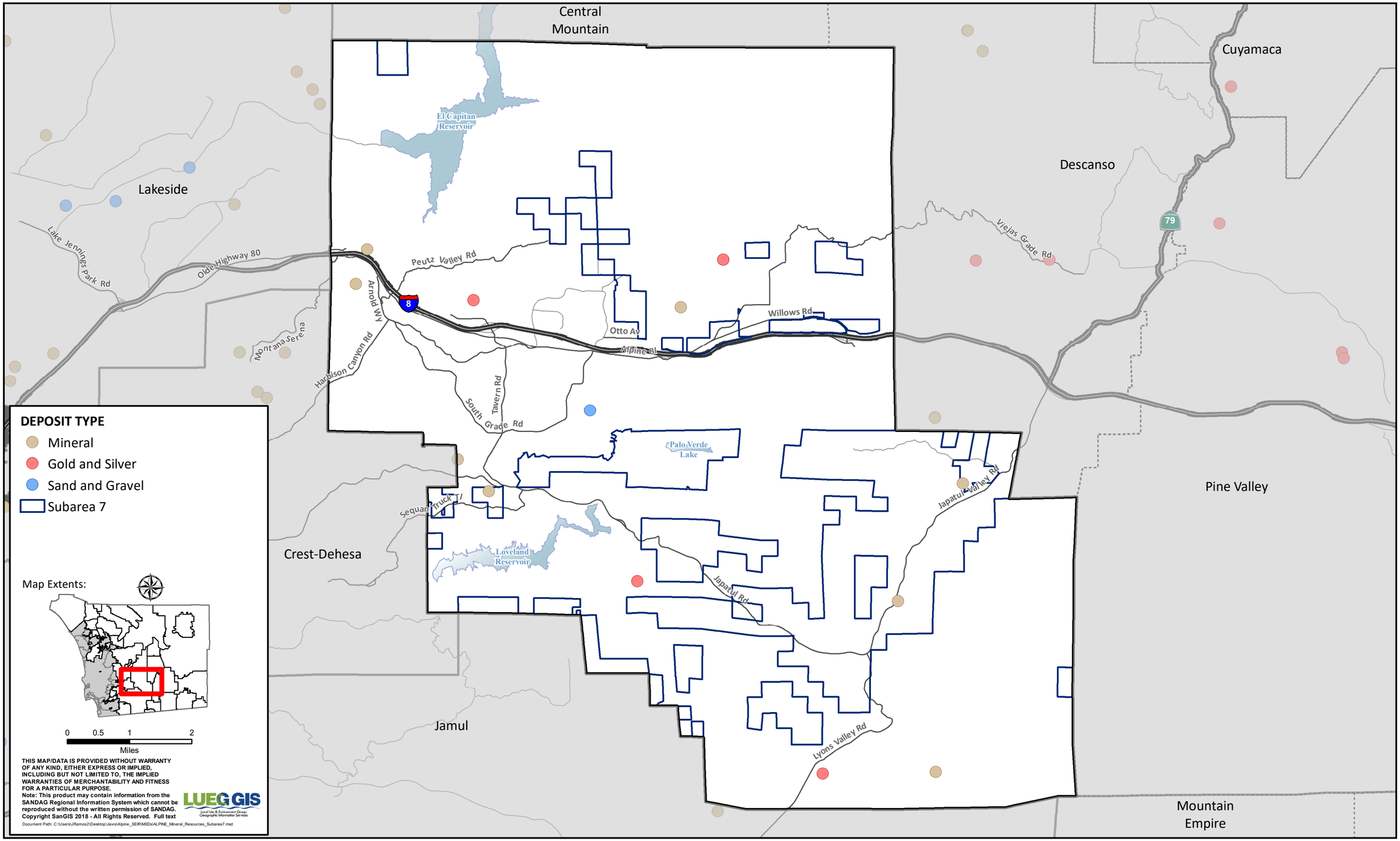
2.9.7.2 Issue 2: Mineral Resource Recovery Site Loss

Implementation of the proposed project would result in potentially significant impacts on the future extraction of aggregate resources because the proposed project would allow for higher-density development in areas of known, or likely, locally important resource recovery sites or areas where important resource recovery sites could potentially be located. This has the potential to allow incompatible land uses to be developed, which would preclude the extraction of mineral resource recovery sites in the Alpine CPA. Therefore, the proposed project would result in a potentially significant impact associated with the loss of available locally important resource recovery sites or areas where important resource recovery sites could potentially be located, which would be more severe than impacts identified in the prior EIRs (Impact-MIN-2). Additionally, the proposed project would result in a potentially significant cumulative impact (Impact-C-MIN-2). Current General Plan policies and existing regulations and the prior EIRs mitigation measure would reduce direct impacts associated with the loss of available mineral resources recovery sites, but not below a level of significance. Direct and cumulative impacts would remain **cumulatively considerable** and **significant and unavoidable**.



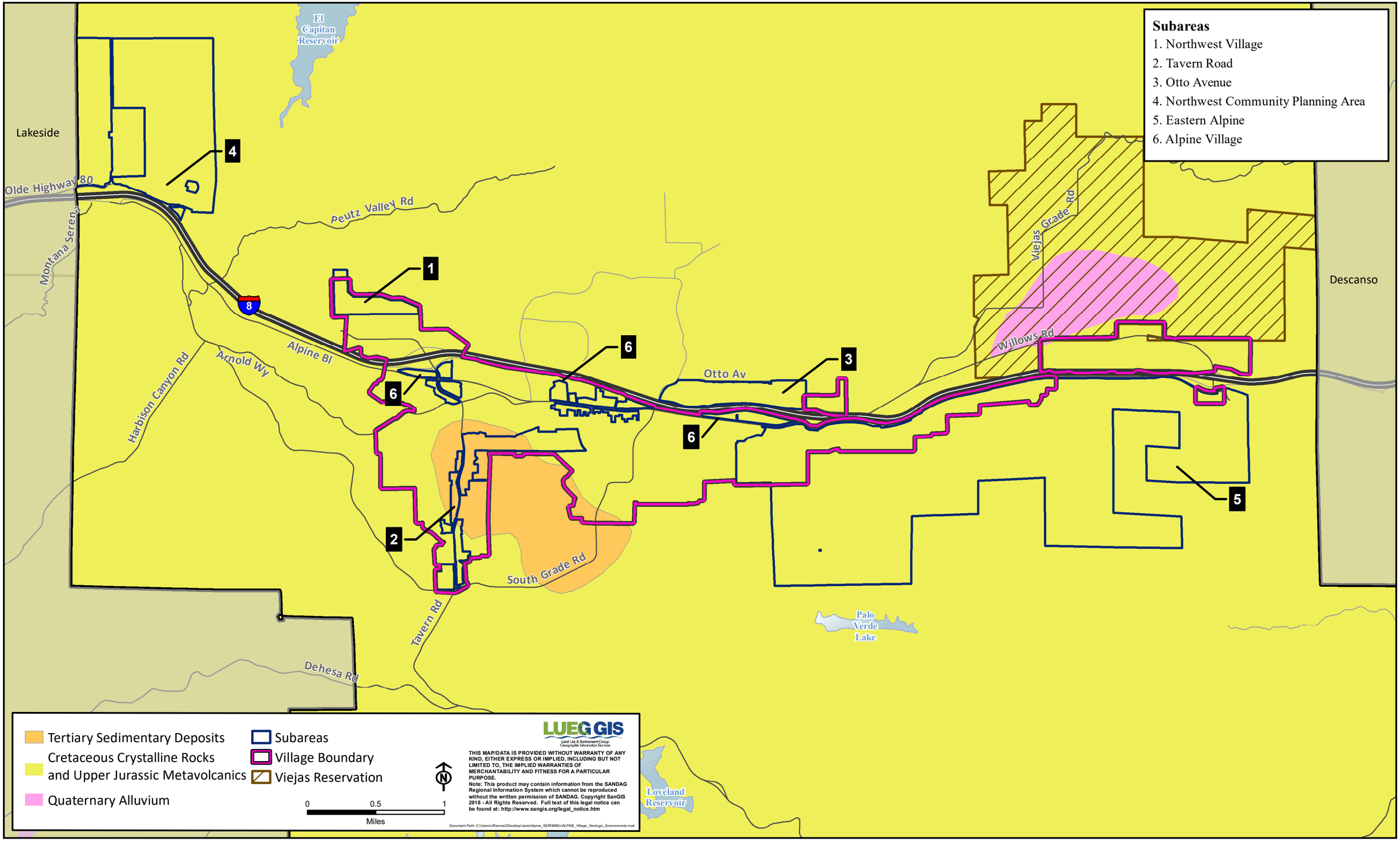
Source: SanGIS, County of San Diego, 2020

Figure 2.9-1a
Mineral Resources
Subareas 1-6



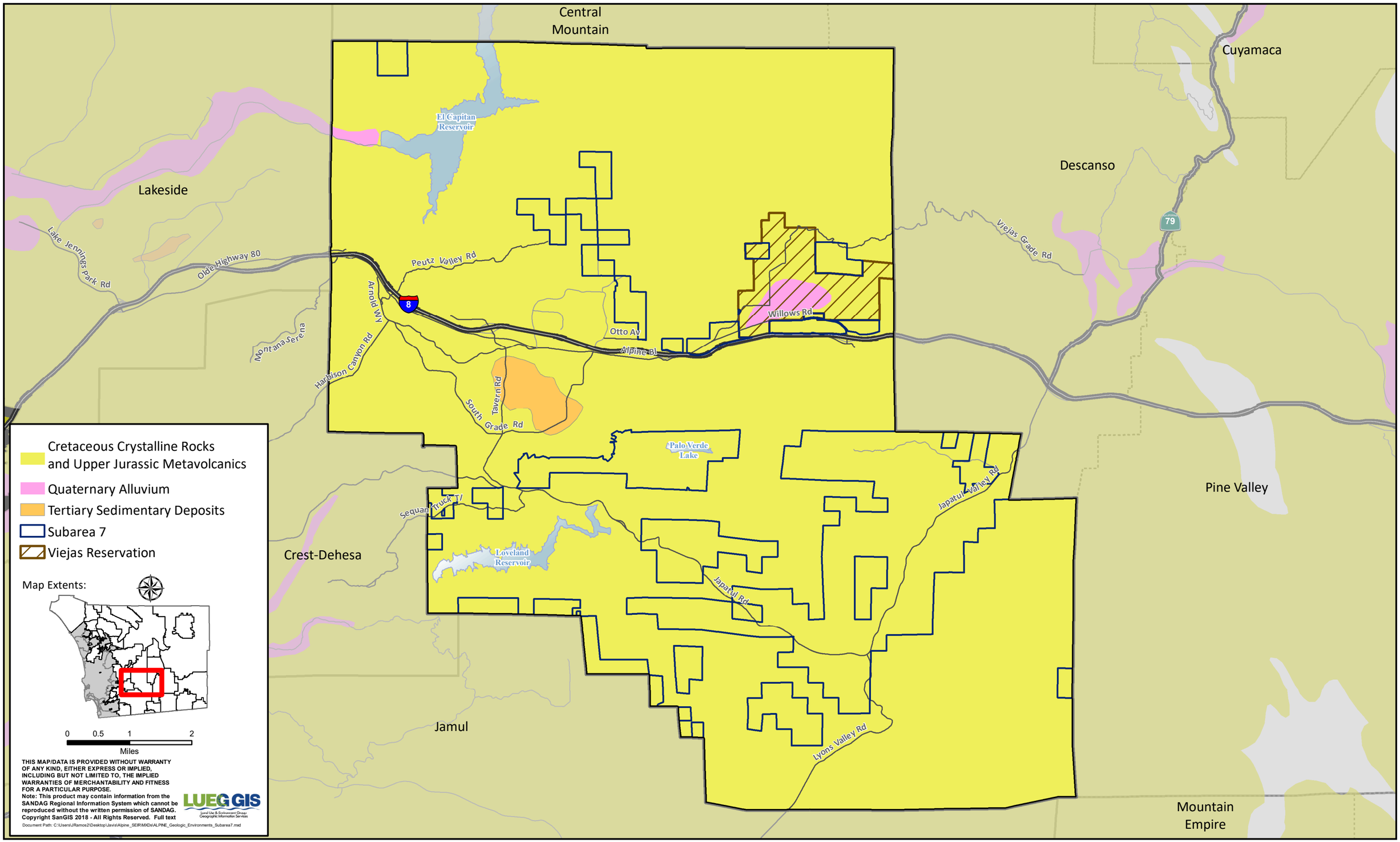
Source: SanGIS, County of San Diego, 2020

Figure 2.9-1b
Mineral Resources
Subarea 7



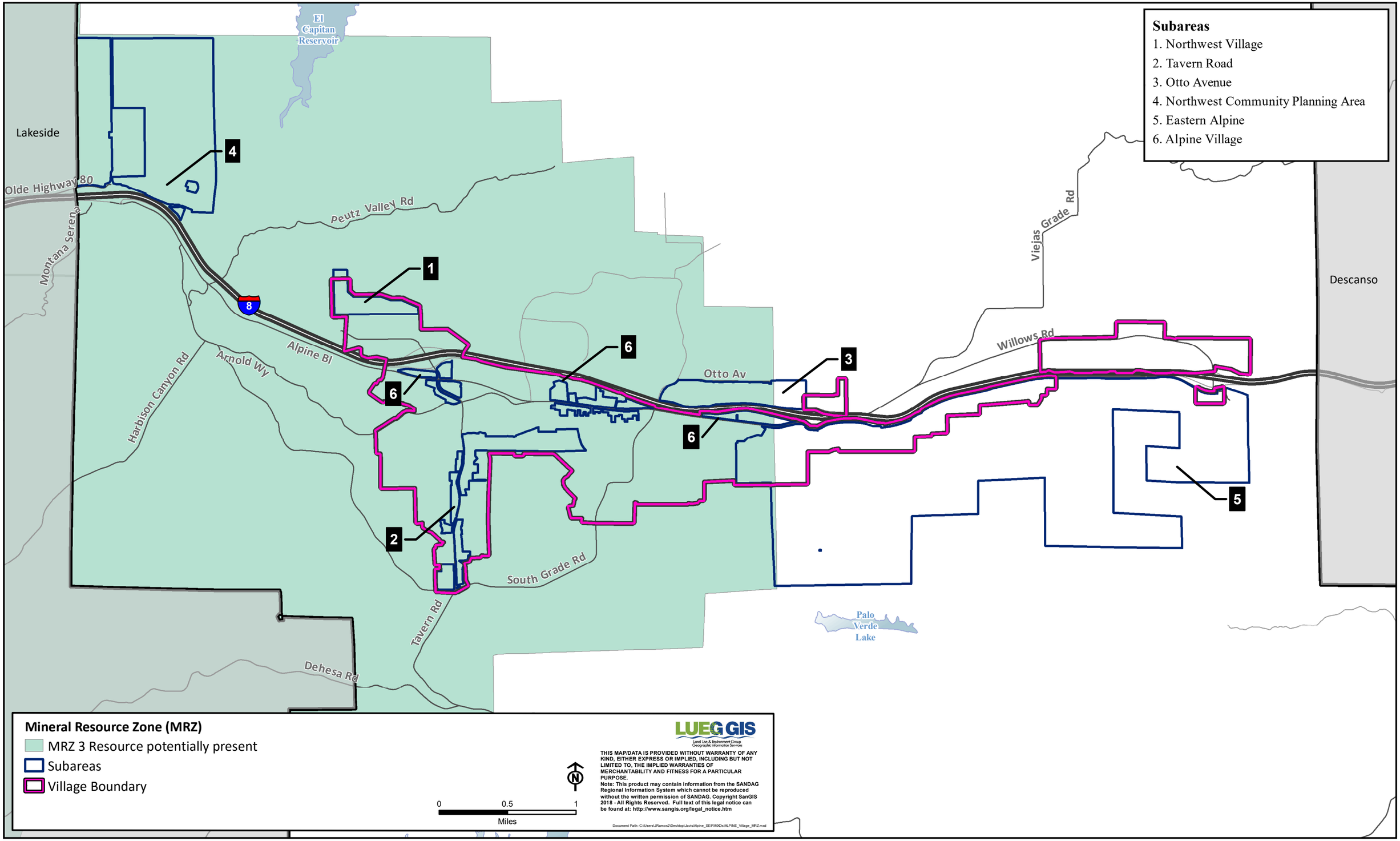
Source: SanGIS, County of San Diego, 2019

Figure 2.9-2a
Geologic Environments
Subareas 1-6



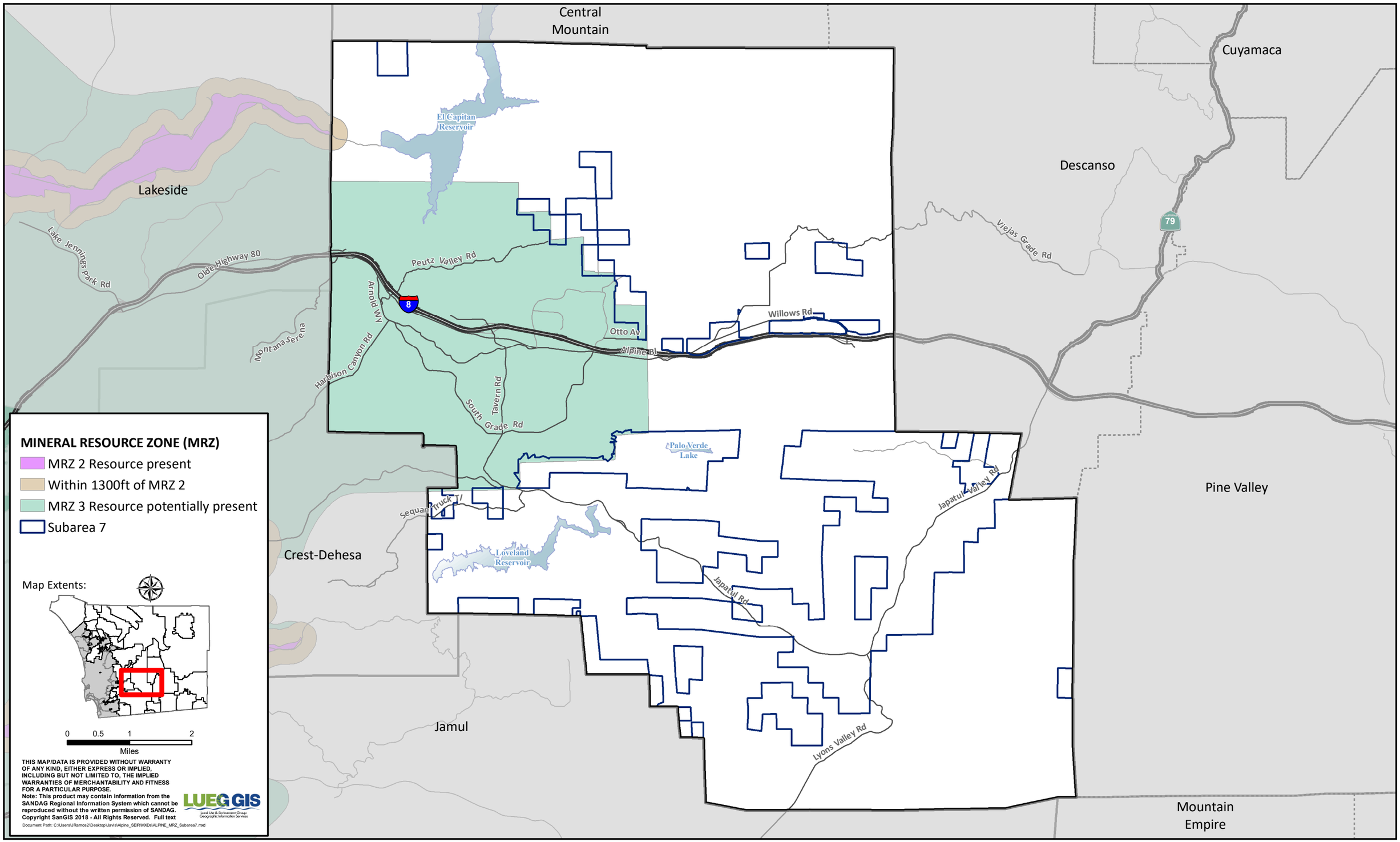
Source: SanGIS, County of San Diego, 2020

Figure 2.9-2b
Geologic Environments
Subarea 7



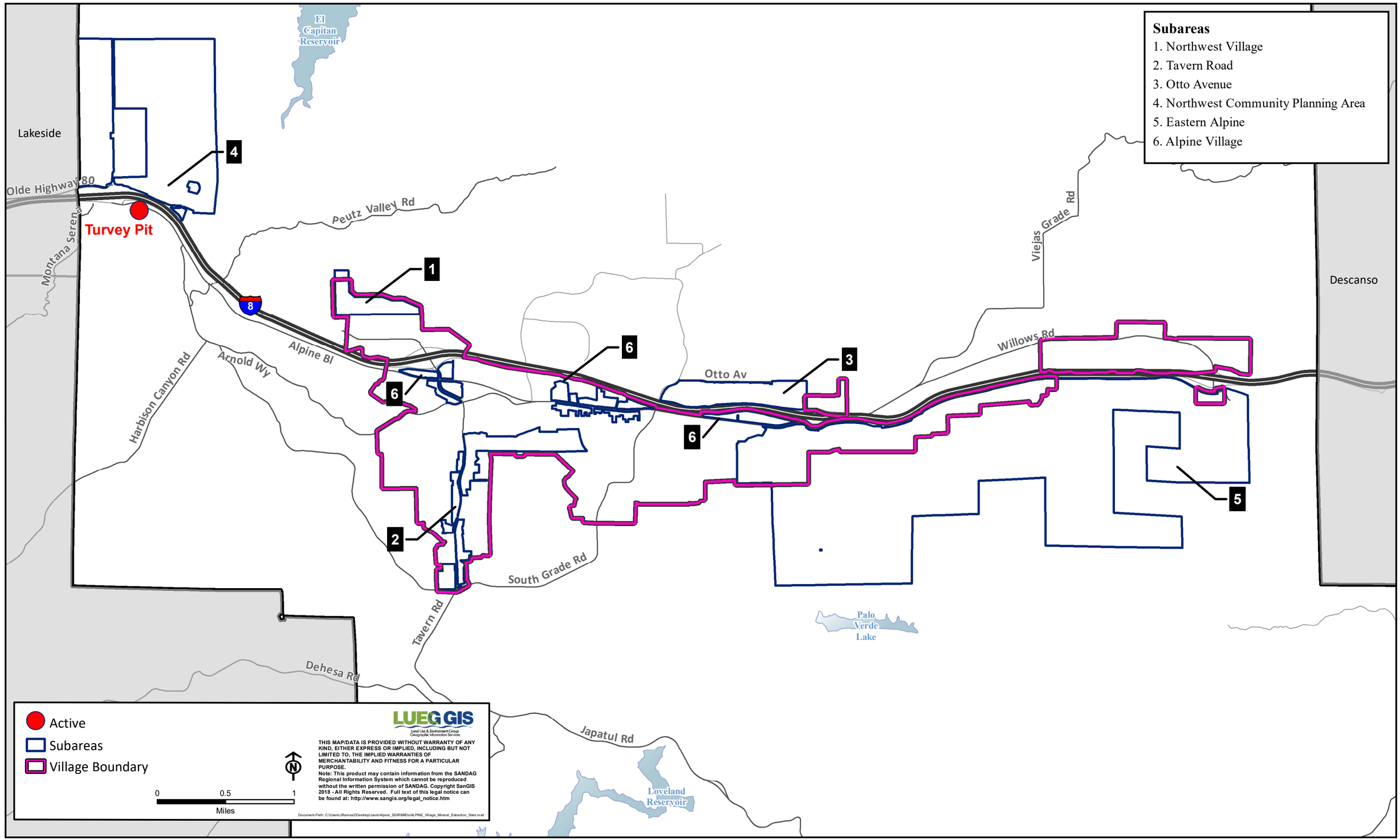
Source: SanGIS, County of San Diego, 2019

Figure 2.9-3a
Mineral Resource Zones
Subareas 1-6



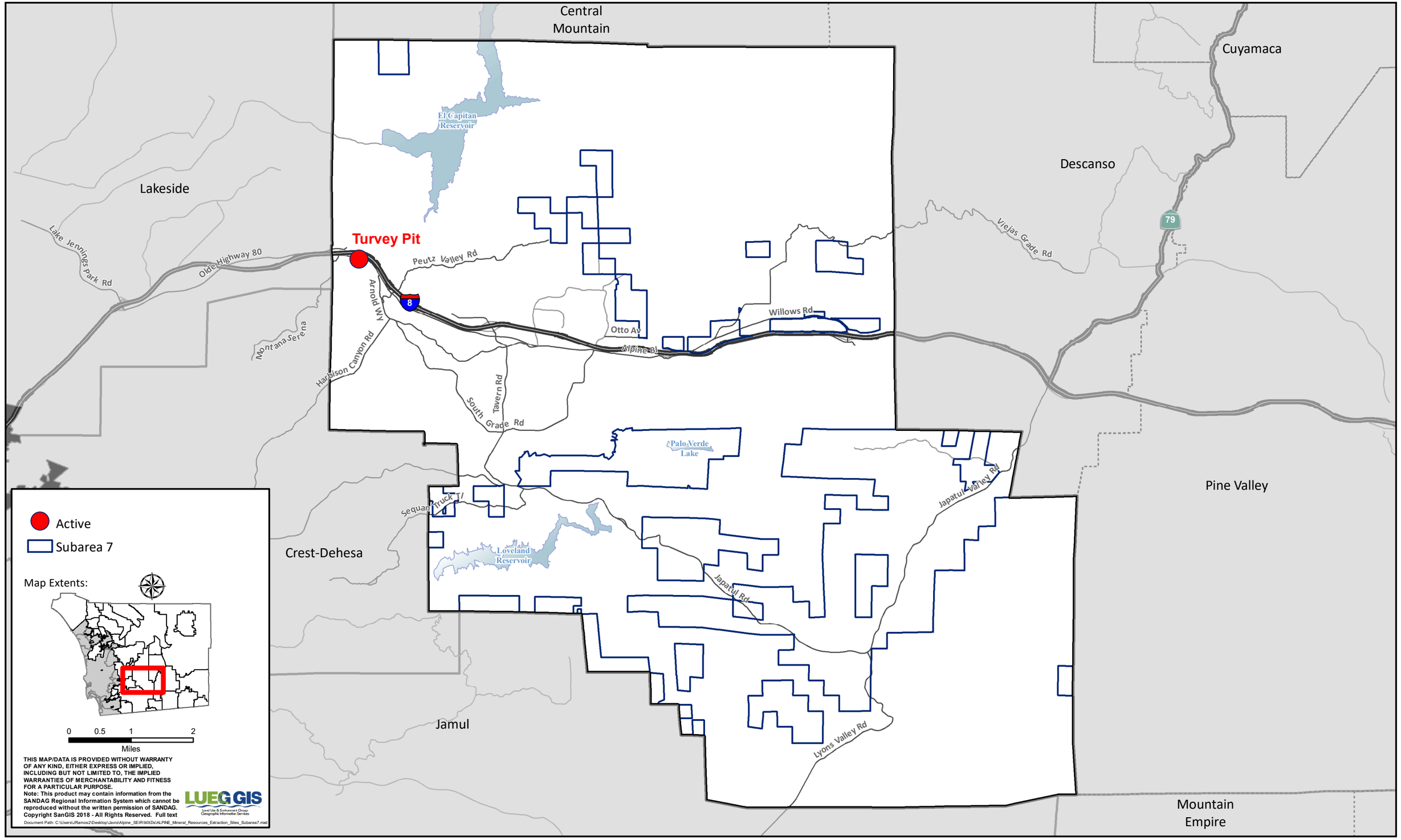
Source: SanGIS, County of San Diego, 2019

Figure 2.9-3b
Mineral Resource Zones
Subarea 7



Source: SanGIS, County of San Diego, 2020

Figure 2.9-4a
Mineral Resource Extraction Sites
Subareas 1-6



Source: SanGIS, County of San Diego, 2018

Figure 2.9-4b
Mineral Resource Extraction Sites
Subarea 7