5. Environmental Analysis

5.11 MINERAL RESOURCES

Minerals are defined as any naturally occurring chemical element or compound, or groups of elements and compounds, formed from inorganic processes and organic substances. An "ore deposit" with minable minerals is defined as a deposit of ore or concentration of minerals having a value materially in excess of the cost of accessing, extracting, and processing the mineral(s) directly from the deposit and reclaiming the disturbed lands. The conservation, extraction, and processing of mineral resources are essential to the County's economy and the continued well-being of the State.

5.11.1 Environmental Setting

5.11.1.1 REGULATORY BACKGROUND

Surface Mining and Reclamation Act: California Public Resources Code Sections 2710 et seq.

The Surface Mining and Reclamation Act of 1975 (SMARA) is the primary regulatory framework for mining in the State. It delegates specific regulatory authority to local jurisdictions. The act requires the state geologist (California Geological Survey) to identify important mineral deposits in the state threatened by land uses that would be incompatible with future extraction and classify them into mineral resource zones. Local jurisdictions are required to enact specific procedures to guide mineral conservation and extraction at identified sites and to incorporate mineral resource management policies (MRMPs) into their general plans.

Executive Order 13817, Federal Strategy to Ensure Secure and Reliable Supplies of Critical Minerals

President's Executive Order No. 13817 instructed the Secretaries of Interior and Defense to identify and publish a list of critical minerals, including rare earths, then develop a strategy to reduce the United States' reliance on other countries to supply these increasingly important ingredients to America's defensive and economic security. The United States Department of Commerce released "A federal strategy to ensure secure and reliable supplies of critical minerals," an interagency report that outlines a government-wide action plan to ensure the United States is dependent on imports for more than 50 percent of domestic demand for 29 of the 35 minerals named on the US Geological Survey (USGS) critical list. In addition, the U.S. lacks any domestic production for 14 of the minerals and does not have domestic access to processing and manufacturing capabilities for many. The Mountain Pass Mine was once the world's leading supplier of rare earth minerals, but China began to dominate the market in the 1990s. Mountain Pass has focused on achieving greater autonomy with a \$1.7 billion separations process system that would allow it to refine and make rare earth products available for customers outside of China.

Senate Bill 1, Road Repair and Accountability Act

Senate Bill 1 (SB-1), the Road Repair and Accountability Act of 2017, was signed into law on April 28, 2017. This California legislation is projected to invest \$54 billion over the next decade to fix roads, freeways, and bridges in communities across the state. These funds will be split equally between state and local investments. A number of projects are planned and already underway within the County.

State Mining & Geology Board

The State Mining and Geology Board (SMGB) provides professional expertise and serves as a regulatory, policy, and hearing body representing the state's interest in the development, utilization, and conservation of mineral resources, the reclamation of mined lands, and the development and dissemination of geologic and seismic hazard information. The nine-member SMGB operates within the Department of Conservation and is granted certain autonomous responsibilities and obligations under several statutes, including the Alquist-Priolo Earthquake Fault Zoning Act, the Seismic Hazards Mapping Act, and the Surface Mining and Reclamation Act.

Division of Mine Reclamation

The Division of Mine Reclamation (DMR) provides a measure of oversight for local governments as they administer SMARA within their respective jurisdictions. DMR may provide comments to lead agencies on a mining operation's reclamation plan and financial assurance and, jointly with SMGB, is charged with administering actions that encourage SMARA compliance. The primary focus is on existing mining operations and reclaiming mined lands to a usable and safe condition that is readily adaptable for alternative land uses. Issues related to abandoned legacy mines are addressed in the Abandoned Mine Lands program.

California Geological Survey

The California Geological Survey (CGS) provides objective geologic expertise and information about California's diverse nonfuel mineral resources, including their related hazards, through maps, reports, and other data products to assist governmental agencies, mining companies, consultants, and the public in recognizing, developing, and protecting important mineral resources.

Division of Oil, Gas, and Geothermal Resources

The Division of Oil, Gas, and Geothermal Resources (DOGGR) oversees the drilling, operation, maintenance, and plugging and abandonment of oil, natural gas, and geothermal wells in order to protect the environment, prevent pollution, and ensure public safety. All California oil and gas wells (development and prospect wells), enhanced-recovery wells, water-disposal wells, service wells (i.e. structure, observation, temperature observation wells), core-holes, and gas-storage wells, onshore and offshore (within three nautical miles of the coastline), located on state and private lands, are permitted, drilled, operated, maintained, plugged and abandoned under requirements and procedures administered by DOGGR.

5.11.1.2 MINERAL RESOURCE CLASSIFICATION AND DESIGNATION

Classification is the process of identifying lands containing significant mineral deposits. Designation is the formal recognition by the SMGB, after consultation with lead agencies and other interested parties, of areas containing mineral deposits of regional or statewide significance.

The objective of classification and designation processes is to ensure, through appropriate lead agency policies and procedures, that strategic mineral deposits of statewide or of regional significance are available when needed.

The California Geological Survey Mineral Resources Program provides information about California's nonfuel mineral resources. The Mineral Resources Project classifies lands throughout the state that contain regionally significant mineral resources as mandated by SMARA. Nonfuel mineral resources include metals such as gold, silver, iron, and copper; industrial minerals such as boron compounds, rare-earth elements, clays, limestone, gypsum, salt, and dimension stone; and construction aggregates, including sand, gravel, and crushed stone. Building and infrastructure development generally results in a demand for minerals, especially construction aggregates. Urban expansion over prime deposits and conflicts between mining and other incompatible land uses throughout California led to SMARA's guidelines for classification and designation of mineral lands, which require all cities and counties to incorporate MRMPs into their general plans and approval by the State Mining and Geology Board.

The classification process has developed Production-Consumption (P-C) region boundaries based on identification of active aggregate operations (production) and the market areas served (consumption). The P-C regional boundaries are modified to include only the parts of the region that are urbanized or are urbanizing and are classified for their aggregate resource significance. An aggregate resource appraisal further evaluates the presence or absence of important sand, gravel and dimension stone deposits that are suitable sources of construction aggregate. The classification and designation of these mineral resources is a joint effort of the state and the local governments. It is based on geologic factors and requires that the State Geologist classify the mineral resources area as one of the four Mineral Resource Zones (MRZs), Scientific Resource Zones (SZ), or Identified Resource Areas (IRAs), described below.

- 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-2a: Areas underlain by mineral deposits where geologic data show that significant measured or indicated resources are present.
- MRZ-2b: Areas underlain by mineral deposits where geologic information indicates that significant inferred resources are present.
- MRZ-3a: Areas containing known mineral deposits that may qualify as mineral resources
- MRZ-3b: Areas containing inferred mineral deposits that may qualify as mineral resources.
- MRZ-4: Areas where geologic information does not rule out either the presence or absence of mineral resources (SMGB 2019).
- SZ Areas: Contain unique or rare occurrences of rocks, minerals, or fossils that are of outstanding scientific significance.
- **IRA Areas:** County- or state-identified areas where production and information indicates that significant minerals are present.

As part of the classification and designation processes, an analysis of site-specific conditions is utilized to calculate the total volume of aggregates within individually identified resource sectors. Designated resource sectors are MRZ-2 areas judged to contain a significant deposit of construction quality aggregates. Anticipated aggregate demand in the P-C regions for the next 50 years is estimated and compared to the total volume of aggregate reserves identified in the P-C region by the state. Reserves are aggregates that have been determined to be acceptable for commercial use, are in properties owned or leased by aggregate producing companies, and for which permits have been issued allowing mining and processing of the material.

5.11.1.3 EXISTING CONDITIONS

Mineral Resource Zones

- Valley Region. Nearly the entire Valley Region—except for its southwest corner—is designated either MRZ-2 (about 113,500 acres) or MRZ-3 (about 174,000 acres).
- Mountain Region. Approximately 13 percent of the region is designated MRZ-2 or MRZ-3; the designated areas are mostly north, east, and southeast of Big Bear Lake.
- North Desert Region. Approximately 6.2 percent of the region is designated MRZ-2 or MRZ-3. Such designations are scattered widely but are somewhat more common in the eastern part of the region than the western part.

East Desert Region. Approximately 2 percent of the region is designated MRZ-2 or MRZ-3; most of the designated area is near the west region boundary west of the Homestead Valley CPA. MRZ-2 and MRZ-3 areas in the Valley and Mountain regions and the southwest part of the North Desert Region are mapped on Figure 5.11-1, *Mineral Resource Zones 2 and 3 in the Southwest Quadrant of County*. MRZ-2 and MRZ-3 areas in the east half of the County (in the two desert regions) are shown on Figure 5.11-2, *Mineral Resource Zones 2 and 3 in the Eastern Half of County*.

Production-Consumption Regions

The Valley Region and the southern edges of the Mountain Region are divided into two P-C regions by the California Geological Survey.

- San Bernardino. The San Bernardino P-C region includes the balance of the Valley region and extends south, encompassing much of western Riverside County.
- Claremont-Upland. The Claremont-Upland P-C region includes part of the west Valley region extending east to the City of Rancho Cucamonga; and extends west into part of the San Gabriel Valley in Los Angeles County.

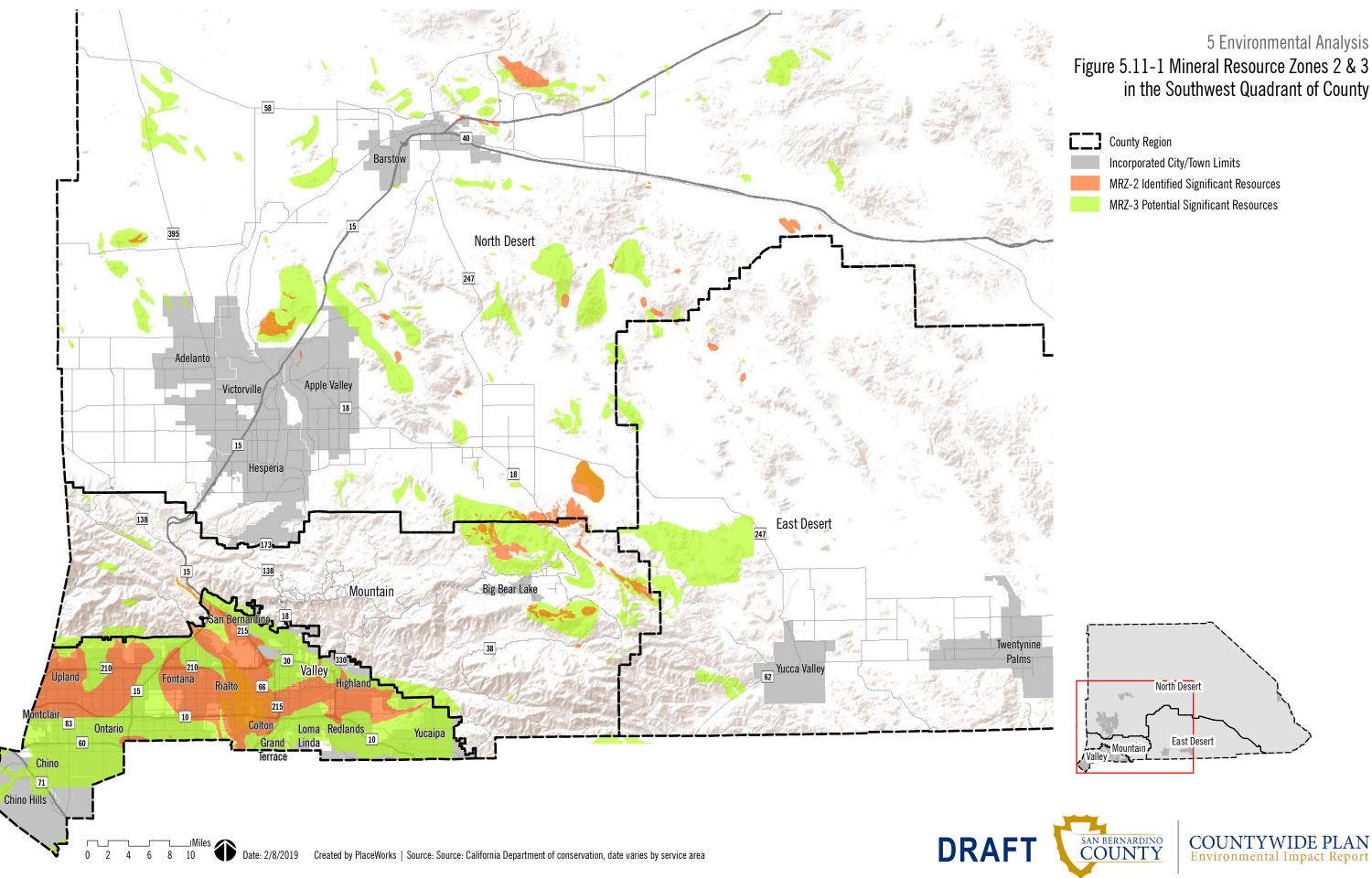
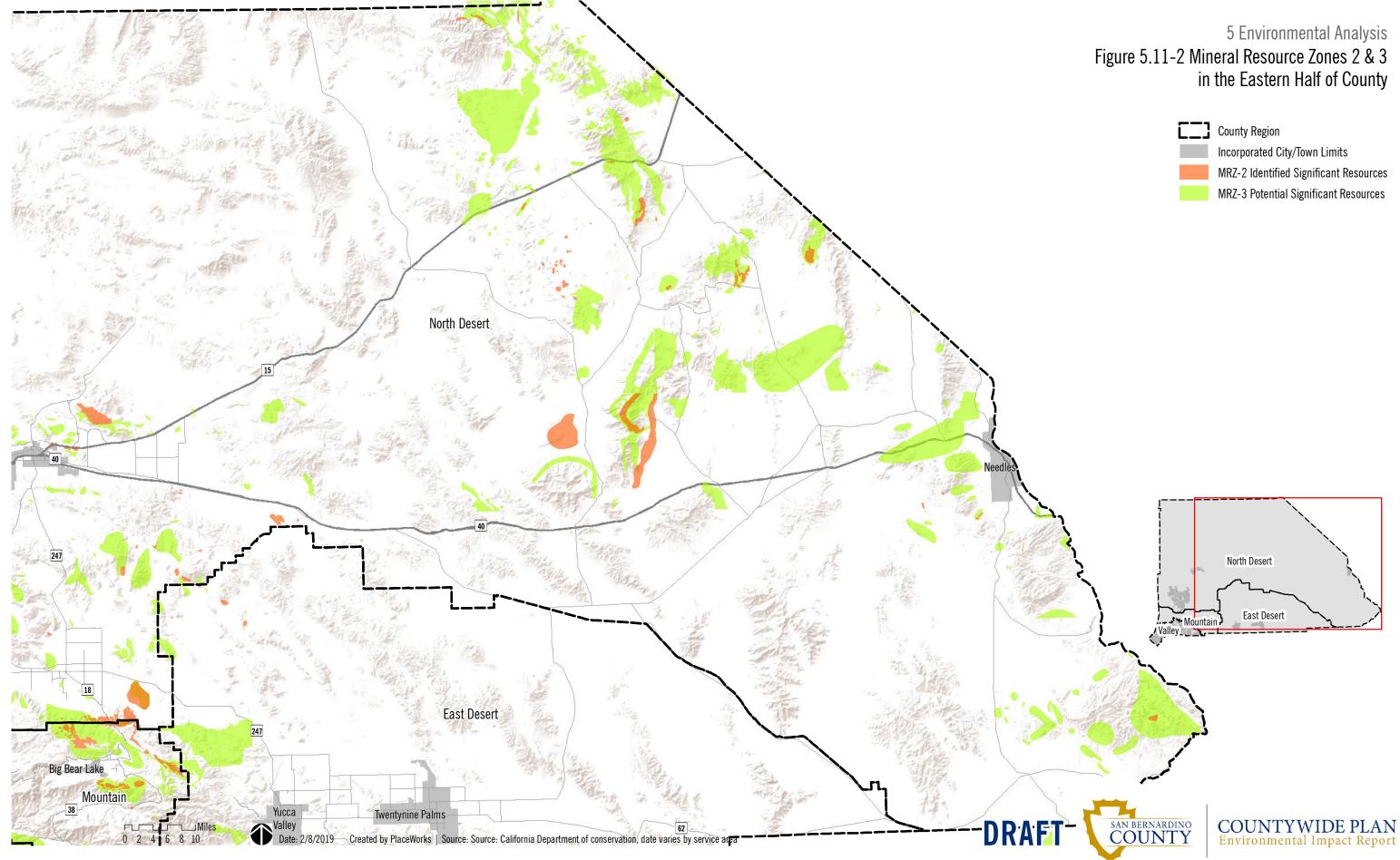


Figure 5.11-1 Mineral Resource Zones 2 & 3 in the Southwest Quadrant of County

COUNTYWIDE PLAN Environmental Impact Report



in the Eastern Half of County

i	

Regionally Significant Construction Aggregate Resource Areas

Regionally significant construction aggregate resource areas were mapped by the State Geologist and recognized by the State Mining and Geology Board in the San Bernardino P-C region in 2017 (see Figure 5.11-3, *Regionally Significant Construction Aggregate Resource Areas in the San Bernardino Production-Consumption Region*) and in the Claremont-Upland P-C region in 1987 (see Figure 5.11-4, *Mineral Resource Sectors in the Claremont-Upland Production-Consumption Region*). The areas mapped in the Claremont-Upland region were incorporated into the Updated Mineral Land Classification Report for the Claremont-Upland Region completed in 2007; by that time, portions of those areas were mapped as lost to land uses incompatible with mining.

"Resources" include reserves and all of the potentially usable aggregate materials that may be mined in the future, but for which no permit allowing mining has been issued, or for which marketability has not yet been established.

Aggregate Reserves

Reserves are aggregate that has been determined to be acceptable for commercial use, are in properties owned or leased by aggregate producing companies, and for which permits have been issued allowing mining and processing of the material. CGS estimated that as of the year 2017 reserves of Portland-cement-concrete (PCC) grade aggregate, that is, the type of aggregate most commonly used in construction, would be depleted in the San Bernardino P-C region in 11 to 20 years and in the Claremont-Upland P-C region in 21 to 30 years (see Table 5.11-1) (CGS 2018).

	San Bernardino Production- Consumption Region (Million Tons)	Claremont-Upland Production- Consumption Region (Million Tons)
Current Permitted Aggregate Reserves	156	90
Projected 50-Year Aggregate Demand as of January 2017	939	202
Estimated Years Until Depletion	11 to 20 Years	21 to 30 Years
Sources: CGS 2018.		

Table 5.11-1 Aggregate Reserves, San Bernardino and Claremont-Upland P-C Regions, million tons

Mines

San Bernardino County has two active iron mines and is home to the largest cement producer in the state. Over 90 percent of mining activities in the county are in the two desert regions.

Mines Online, Division of Mine Reclamation

Active mines in San Bernardino County are identified on the Mines Online database maintained by the DMR and listed in Table 5.11-4. Mines Online lists mines subject to SMARA requirements that disturb more than one acre or remove more than 1,000 cubic yards of material. This includes, but is not limited to: prospecting and exploratory activities, dredging and quarrying, streambed skimming, borrow pitting, and the stockpiling of mined materials. Active mines are mapped on Figure 5.11-5, *Active Mines in San Bernardino County*. Notable active mines in San Bernardino County include:

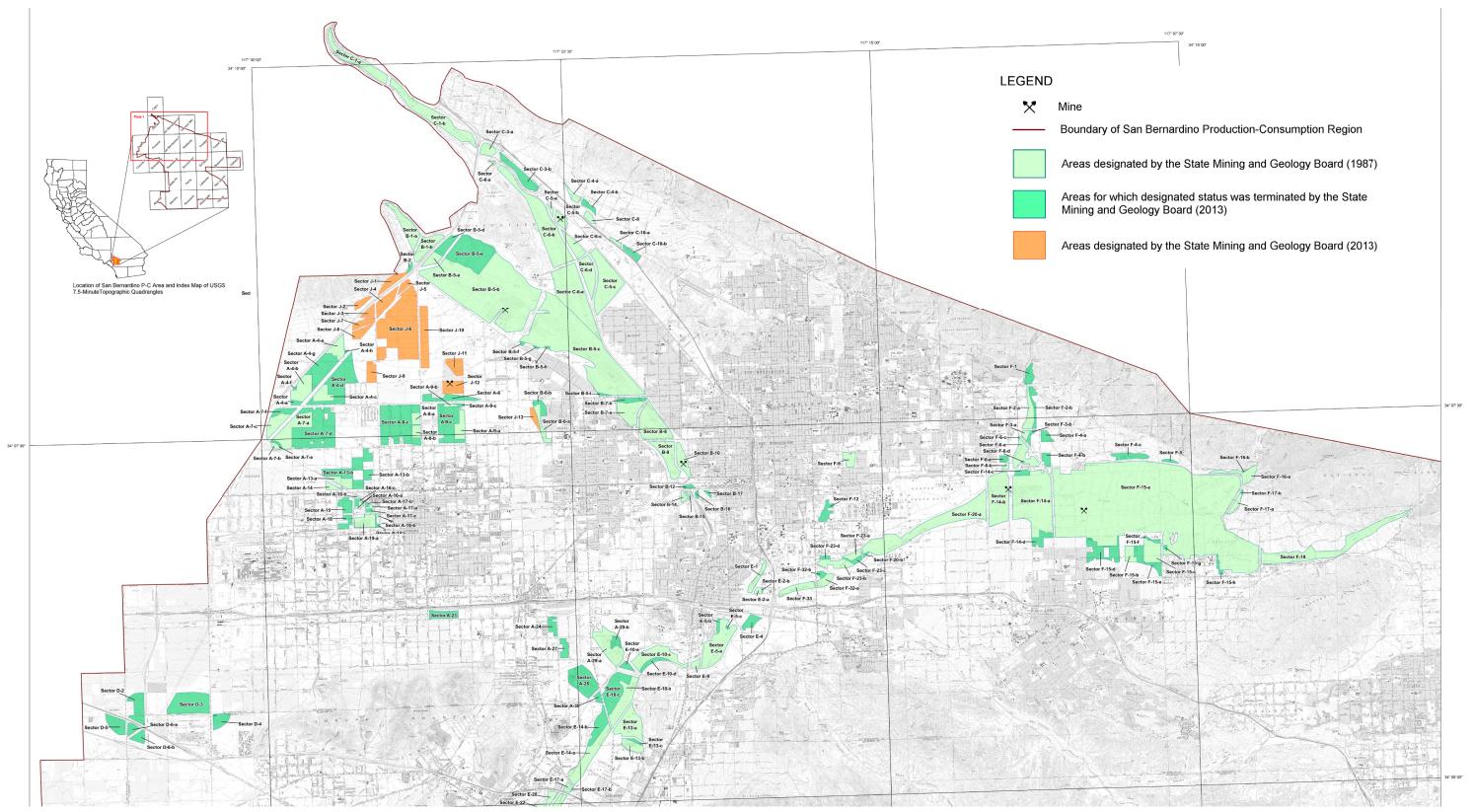
- Mountain Pass Mine, just north of I-15 at Mountain Pass, is in one of the largest rare earth deposits in the world. The major rare earth elements in the Mountain Pass deposit are cerium, lanthanum, neodymium and praseodymium. The balance of rare earths includes samarium, europium, gadolinium, terbium, dysprosium, holmium, erbium, thulium, ytterbium, and lutetium. Rare earth elements are used in production of cell phone and computer components, strong permanent magnets, specialized glasses including camera lenses and monitor screens, military and water purification technology and petroleum refining.
- Victorville Quarries and Cement Plant, north of Victorville, produces aggregate products and cement from localized deposits of siliceous limestone conglomerate, quartzite, and iron-rich alumina rock.
- Hector Mine, west of Ludlow, is the only known economic deposit of hectorite clay in North America
 and produces clay containing lithium that exhibits a consistency similar to candle wax. Hectorite is used in
 production of pharmaceuticals and cosmetics and in beer brewing.
- Cushenbury Quarry and Cement Plant, west of State Route 18 on the northern slopes of the San Bernardino Mountains, produces cement from high-brightness, high-purity limestone deposits.
- Oro Grande Quarries and Cement Plant, east of National Trails Highway and on both sides of Oro Grande Canyon, produces quartzite, aggregate products and specialized cement from siliceous limestone that is low in magnesium.
- **Castle Mountain Mine,** to the west of the Nevada State line is an open pit gold mine that recently produced more than a million ounces of gold. Continued production is expected to produce several million ounces.
- Salt products are produced from evaporite deposits found at Searles Valley, Bristol Dry Lake and Cadiz Dry Lake south of the town of Amboy.

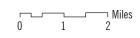
Abandoned, Closed, and Reclaimed Mines

The DMR mines database lists 75 abandoned, closed, and reclaimed mines in San Bernardino County (3 abandoned, 48 closed, and 24 reclaimed); 61 of the 75 mines are located in unincorporated San Bernardino County (OMR 2017).

Minerals Resource Data System (MRDS), US Geological Survey

The Minerals Resource Data System (MRDS) is a database that was maintained by the USGS until 2011; USGS is working to develop a new database. MRDS listed 156 producers in the county, 46 of which produced construction aggregates and other building materials; 1,298 past producers; and 16 plants. Mine locations are not identified by city in the MRDS database; therefore, the data are for the entire county and are not distinguished between unincorporated and incorporated areas. (USGS 2017).



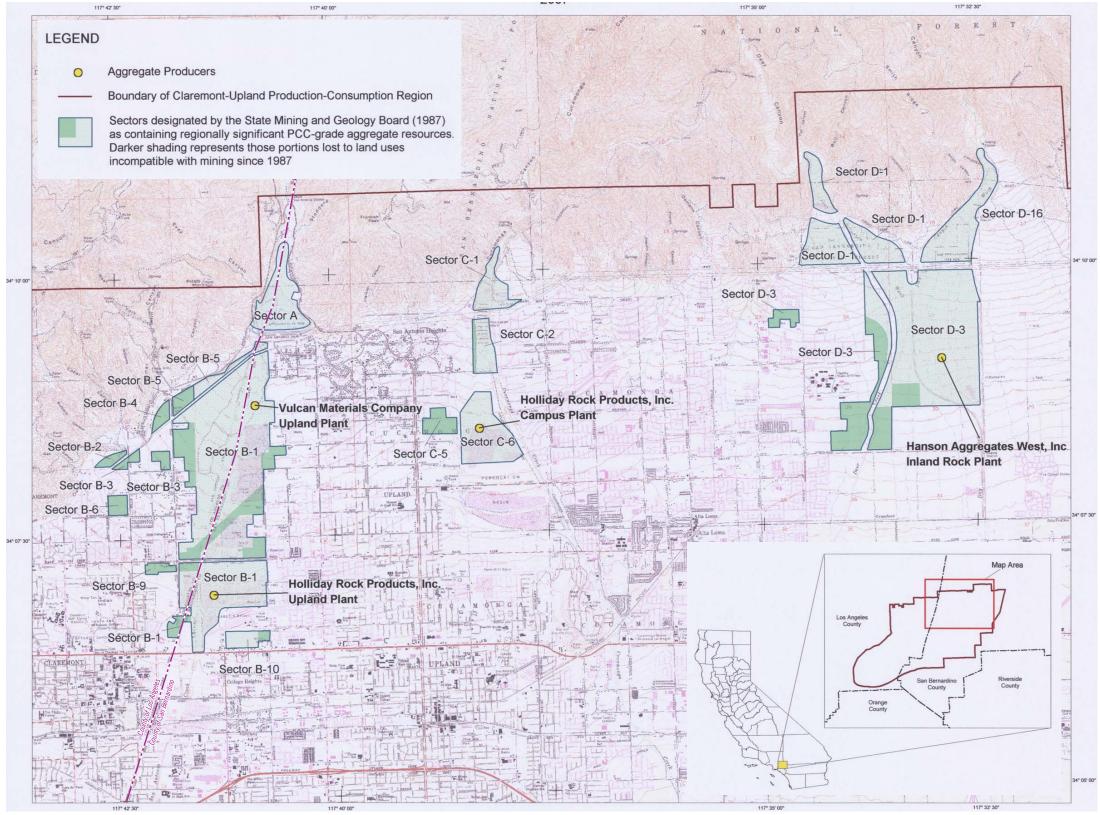


Date: 10/30/2018 Created by PlaceWorks | Source: State Mining and Geology Board, 2013

5 - Environmental Analysis Fig. 5.11-3 Regional Significant Construction Aggregate Resource Areas in the San Bernardino Production-Consumption Region



COUNTYWIDE PLAN Environmental Impact Report



0.5 0 1

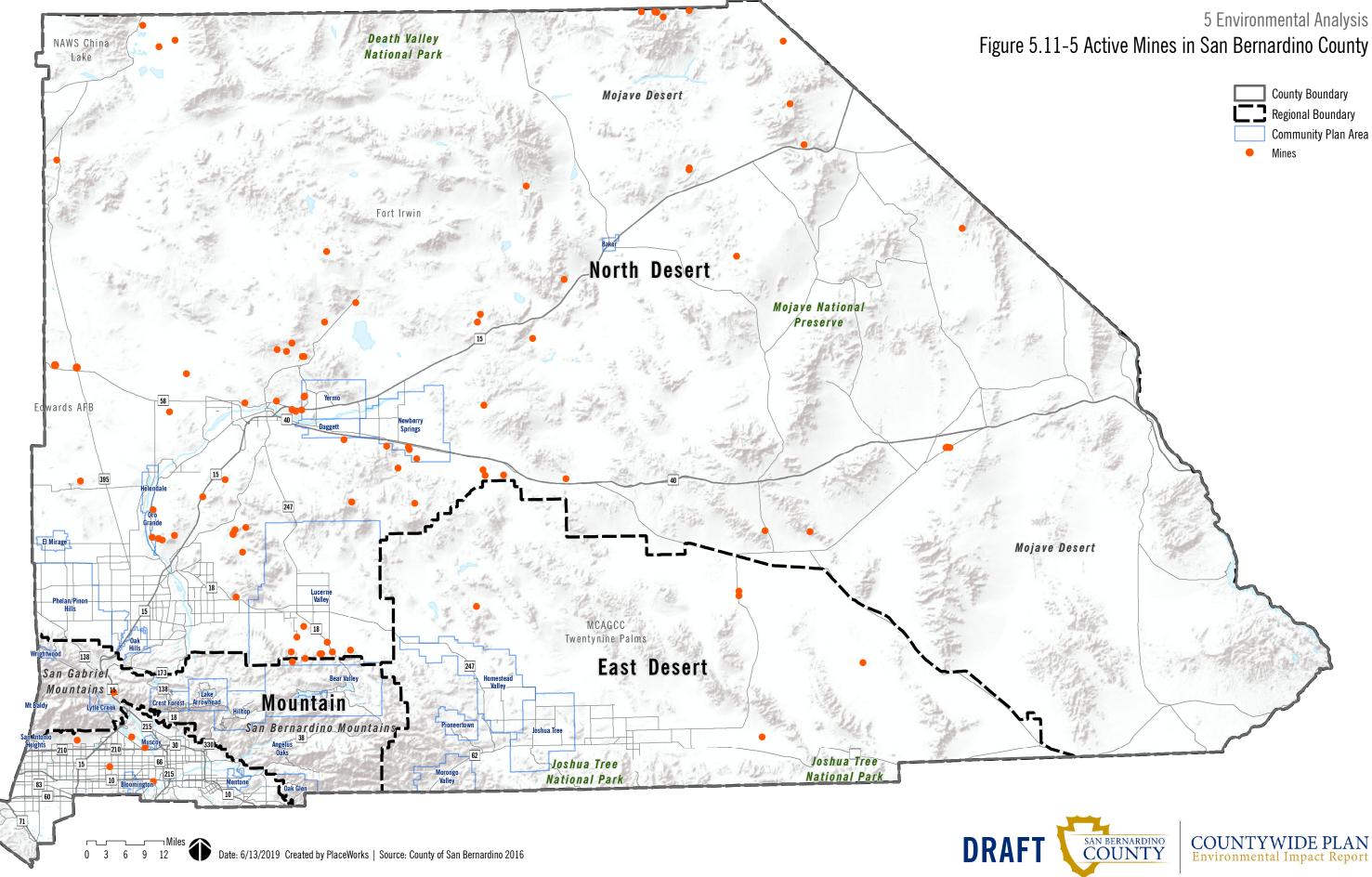
Date: 10/30/2018 Created by PlaceWorks | Source: California Geological Survey, 2007

Note: The State Mining and Geology Board (SMGB) identifies areas ("sectors") containing construction aggregate resources of regional or statewide significance. The latest SMGB map of this area is dated 1988 and is obsolete (it doesn't show some sectors lost to urbanization). Thus the map used here is a 2007 California Geological Survey map that also shows mineral resource sectors.



5 - Environmental Analysis Fig. 5.11-4 Mineral Resource Sectors in the Claremont-Upland **Production-Consumption Region**

COUNTYWIDE PLAN Environmental Impact Report



5 Environmental Analysis



COUNTYWIDE PLAN Environmental Impact Report

Minerals Production

The California Geological Survey designates 12 districts related to crushed stone, sand, and gravel mining; San Bernardino County is in District 9, which extends north from Imperial County to Alpine County in east-central California. Minerals production information for specific counties is not available. Total production of construction sand and gravel in District 9 in 2013, the latest year for which data are available, was 23 million metric tons valued at \$220,000 (USGS 2017).¹

Aggregate production in the San Bernardino Production-Consumption Region in 2016, the latest year for which data are available, averaged 1 million tons (CGS 2018). Aggregate production in the Claremont-Upland Production-Consumption Region in 2016 averaged 2.25 million tons (CGS 2018).

Production of oil and gas countywide in July 2017 totaled 744 barrels of oil and 90,000 cubic feet of gas, very small compared to statewide totals of 14.6 million barrels of oil and 14 billion cubic feet of gas (DOGGR 2017a). The only oil and gas fields in San Bernardino County mapped on DOGGR's "Well Finder" are the Chino-Soquel and Mahala fields on the southwest county boundary in the Valley Region (DOGGR 2017b).

5.11.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

- M-1 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.
- M-2 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.

5.11.3 Regulatory Requirements and General Plan Policies

5.11.3.1 REGULATORY REQUIREMENTS

- RR-MIN-1 **Public Resources Code Section 2762:** Within 12 months of receiving the mineral information described in Section 2761, and also within 12 months of the designation of an area of statewide or regional significance within its jurisdiction, a lead agency shall, in accordance with state policy, establish mineral resource management policies to be incorporated in its general plan
- RR-MIN-2 **Public Resources Code Section 2763:** If an area is designated by as an area of regional significance, and the lead agency either has designated that area in its general plan as having important minerals to be protected pursuant to subdivision (a) of Section 2762, or otherwise has not yet acted pursuant to subdivision (a) of Section 2762, then prior to permitting a use which would threaten the potential to extract minerals in that area, the lead agency shall

¹ One metric ton is 2,205 pounds.

prepare a statement specifying its reasons for permitting the proposed use, in accordance with the requirements set forth in subdivision (d) of Section 2762.

5.11.3.2 POLICY PLAN

The Natural Resource Element of the proposed San Bernardino Countywide Plan provides guidance regarding the conservation and protection of mineral resources

Goal NR-6	Mineral Resources. Mineral resource zones that allow extraction industries to continue supporting the regional and national economy while minimizing negative impacts on the public and natural environment.
Policy NR-6.1	Mineral resource areas. We prioritize the conservation of land area with mineral resources by prohibiting or discouraging development of land that would substantially preclude the future development of mining facilities in areas classified as Mineral Resource Zone (MRZ) 2a, 2b, or 3a.
Policy NR-6.2	Mining operations and reclamation. We require and monitor mineral extraction activities to ensure that the operation and reclamation of mined lands is consistent with the State Surface Mining and Reclamation Act of 1975 (SMARA).
Policy NR-6.3	Conservation of construction aggregate. We encourage the continued operation of existing mining facilities and streamline the permitting of new mining facilities (consistent with the Policy Plan and other local, state, and federal regulations) to establish aggregate resources that are sufficient to satisfy 50 years of County demand
Policy PP-4.2	Critical and essential facility operation. We ensure that critical and essential County facilities remain operational during emergencies. ²

5.11.4 Environmental Impacts

The following impact analysis addresses thresholds of significance for which the Notice of Preparation disclosed potentially significant impacts. The applicable thresholds are identified in brackets after the impact statement.

Most population growth due to Countywide Plan buildout would be in two areas: the Bloomington CPA in the Valley Region, and future master planned communities in the Town of Apple Valley SOI in the Desert Region. Employment growth would be focused in the unincorporated portions of the Valley Region, particularly in the Fontana SOI, East Valley Area Plan, and Bloomington CPA (see Section 5.0 for further discussion). Thus, impacts are analyzed in some detail for the four areas where most growth would occur, and much more generally for the rest of the unincorporated areas of the county.

² During emergencies, decades of aggregate can get used up in a short period of time and cement plants are identified as critical facilities.

Impact 5.11-1: Project implementation would result in the loss of availability of a known mineral resource. [Thresholds M-1 and M-2]

Mineral Resource Zones and Regionally Significant Resource Areas

Valley Region

Most development in the Valley Region under the Countywide Plan would occur in the Bloomington CPA, the City of Fontana SOI (west), and the East Valley Area Plan area. The three entire growth areas are mapped a combination of MRZ-2 and MRZ-3, as shown in Table 5.11-2. Approximately 64 acres, or 1.2 percent, of the Fontana SOI are also mapped in three Mineral Resource Sectors by the State Geologist and recognized by the State Mining and Geology Board. Note that the total acreages of each of the three areas in Table 5.11-4 reflect total areas, and thus differ from acreages presented elsewhere in this Draft PEIR, which are based on parcelized data, and thus omit nonparcelized areas such as roadways and some flood control areas.

Future developments under the Countywide Plan would be required to identify known and likely significant mineral resources in their project sites. Projects would comply with Countywide Plan policies by designating MRZ-2 and MRZ-3 areas for land uses compatible with future mining, such as open space, to the greatest extent feasible.

MRZ-2	MRZ-3	Total, MRZ-2 and MRZ-3	Sector	Sector Area (acres)
2,391	1,520	3,911	none	none
680	420	1,100	none	none
1,684	3,390	5,074	A-19a	49
			A-16a	11
			A-16b	4
			Total	64
	2,391 680	2,391 1,520 680 420	MRZ-2 MRZ-3 MRZ-3 2,391 1,520 3,911 680 420 1,100	MRZ-2 MRZ-3 MRZ-3 Sector 2,391 1,520 3,911 none 680 420 1,100 none 1,684 3,390 5,074 A-19a A-16a A-16b A-16b

 Table 5.11-2
 MRZ-2 and MRZ-3 Areas in Growth Areas in the Valley Region

Desert Region

Most development in the Desert Region under the Countywide Plan would be in two areas of the Town of Apple Valley SOI: the potential annexation area (PAA) and the Hacienda Fairview Valley Specific Plan (HFVSP) area. Approximately 910 acres in the western and central parts of the HFVSP area—or about 58 percent—are mapped MRZ-3a, that is, areas containing known minerals of unknown resource significance (CGS 1994a) (see Figure 5.11-6, *MRZ-3a Area in Apple Valley SOI*). The MRZ-3a area is designated for gold and silver deposits (CGS 1994b). The remainder of the HFVSP area is mapped MRZ-4, that is, areas of no known mineral occurrences where geologic information does not rule out either the presence or the absence of significant mineral resources (CGS 1994a). About 183 acres along the northwest margin of the PAA are mapped MRZ-3a. No mines are mapped in that part of the PAA. Of the four nearest historical mines to that area—about 1

to 1.5 miles to the northwest—three were clay and one was stone (CGS 1994b). No mines, either active or closed, are mapped in or near either the HFVSP area or the PAA on the Mines Online map (OMR 2018).

Future developments in the HFVSP area under the Countywide Plan would be required to identify known and likely significant mineral resources in their project sites. Projects would comply with Countywide Plan policies by designating MRZ-2 and MRZ-3 areas for land uses compatible with future mining, such as open space, to the greatest extent feasible.

Impacts on Oil and Gas Fields

The two oil fields in San Bernardino County are in the City of Chino Hills in the southwest corner of the Valley Region. Countywide Plan implementation would not impact the oil fields.

Implementation of the proposed Countywide Plan may result in actions that could adversely affect mineral resources. As discussed above, implementation of the proposed Countywide Plan policies would avoid, minimize, and/or mitigate impacts to mineral resources by requiring the protection and preservation of such resources. Absent implementation of the proposed Countywide Plan policies, potential impacts to mineral resources from implementation of the proposed Countywide Plan would be significant.

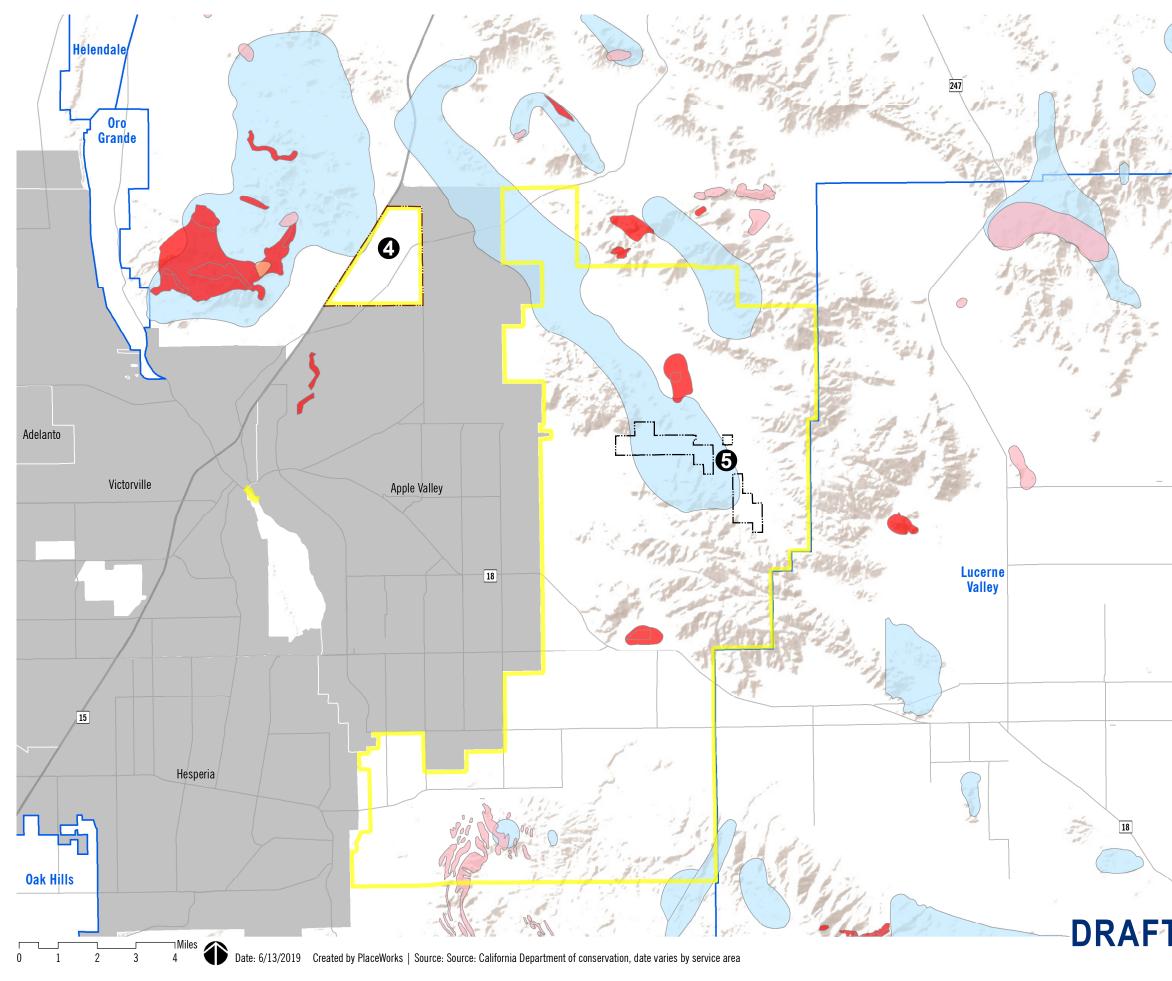
Level of Significance Without Mitigation: Impact 5.11-1 would be significant.

5.11.5 Cumulative Impacts

The area considered for cumulative impacts to mineral resources is San Bernardino County—incorporated and unincorporated areas—and portions of the two P-C regions overlapping San Bernardino County and extending into other counties: the Claremont-Upland P-C region extends into Los Angeles County, and the San Bernardino P-C region encompasses most of western Riverside County. Some other projects in the referenced areas would likely be proposed within MRZ-2 and MRZ-3 areas. Development of such projects could cause loss of availability of known mineral resources valuable to the region. Los Angeles County is in District 11 for stone, sand, and gravel production; production in District 11 in 2013 totaled 15.4 million metric tons valued at \$182 million. Riverside County and San Bernardino County are both in District 9. Total production of construction sand and gravel in District 9 in 2013 was 23 million metric tons, valued at \$220,000 (USGS 2017). Other projects would be subject to independent CEQA review, including analysis of impacts to MRZ areas and mining sites. Implementation of all feasible mitigation measures would be required to reduce any significant impacts identified.

5.11.6 Level of Significance Before Mitigation

Without mitigation, Impact 5.11-1 would be potentially significant.





5 Environmental Analysis Figure 5.11-6 MRZ-3a in Apple Valley SOI

	County Region
1	Community Planning Area
2	Incorporated City/Town Limits
11	Unincorporated City/Town Sphere of Influence
(i)	Growth Areas
7	4. Apple Valley Potential Annexation Area
	5. Hacienda Fairview Valley Specific Plan
	Magmatic Concent.(Rare Earth Element) MRZ Class
	2 - Known or Highly Likely Location
	3 - Moderate Potential or Possible Location
	Contact Metasomatic(Skarns) MRZ Class
	2 -Known or Highly Likely Location
	3 - Moderate Potential or Possible Location
	Industrial Minerals MRZ Class
	2 - Known or Highly Likely Location
	3 - Moderate Potential or Possible Location
	Hydrothermal Deposits MRZ Class
	2 - Known or Highly Likely Location
	3 - Moderate Potential or Possible Location
	Aggregate Resources MRZ Class
	2 - Known or Highly Likely Location
	3 - Moderate Potential or Possible Location
	North Desert
	W .
Т	SAN BERNARDINO COUNTYWIDE PLAN
	Environmental Impact Report

5.11.7 Mitigation Measures

Impact 5.11-1

- **MIN-1:** Prior to project approval for proposed development of properties classified as either MRZ-2a, 2b or MRZ-3a containing a specialty commodity, a mineral resource evaluation shall be conducted to determine the significance and economic viability of mining the resource. If development of a property would preclude future extraction of a significant mineral resource, in accordance with CEQA, the County shall make the appropriate findings and adopt a Statement of Overriding Considerations prior to permitting development of the property.
- **MIN-2:** Prior to approval of any project on lands classified as either MRZ-2a, 2b or MRZ-3a containing a specialty commodity, a report shall be prepared that analyzes the project's value in relation to the mineral values found onsite. The analysis shall consider the importance of construction aggregate mineral resource onsite to the market region as a whole, and not just the importance of the resources found within the San Bernardino County area. The report shall be submitted to the County, such that the County has adequate information to develop a statement of reasons for permitting the proposed land use to the California Department of Conservation, State Mining and Geology Board, for subsequent review, in accordance with SMARA, Article 2, Section 2762 and 2763 for areas designated of regional significance.

5.11.8 Level of Significance After Mitigation

Impact 5.11-1

Because significant mineral resources may potentially be developed under the CWP, particularly within the MRZ-2 and -3 area designations, impacts to mineral resources would remain significant and unavoidable.

5.11.9 References

California Geological Survey (CGS). 2018. Aggregate Sustainability in California, Fifty-Year Aggregate Demand Compared to Permitted Aggregate Reserves. https://www.calcima.org/files/MS52_California_Aggregates_Map_201807.pdf.

Division of Oil, Gas, and Geothermal Resources (DOGGR). 2017a, November 20. Monthly Oil and Gas Production and Injection Report: July 2017. ftp://ftp.consrv.ca.gov/pub/oil/monthly_production_reports/latestprod.pdf.

—. 2017b, November 20. DOGGR Well Finder. http://www.conservation.ca.gov/dog/Pages/WellFinder.aspx.

State Mining and Geology Board (SMGB). 2019. Guidelines for Classification and Designation of Mineral Land . https://www.conservation.ca.gov/smgb/Guidelines.

- 2013. Updated Designation in the Northern San Bernardino Production-Consumption (P-C) Region, San Bernardino and Riverside Counties, California. http://www.conservation.ca.gov/smgb/reports/Documents/Designation/SMARA_DR-14plt1_SanBernardino300dpi.pdf.
- Sylvester, Arthur Gibbs, and Elizabeth O'Black Gans. 2016. Roadside Geology of Southern California. Missoula, MT: Mountain Press.
- US Geological Survey (USGS). 2017a, June 6. 2012-13 Minerals Yearbook: California (Advanced Release). https://s3-us-west-2.amazonaws.com/prd-wret/assets/palladium/production/mineralpubs/state/2012_13/myb2-2012_13-ca.pdf
 - ——. 2017b, November 27. Mineral Resources Data System: Data for San Bernardino County, California. https://mrdata.usgs.gov/mrds/.