

## 5. Environmental Analysis

### 5.11 MINERAL RESOURCES

This section of the Draft Environmental Impact Report (DEIR) evaluates potential impacts to mineral resources in the Project Area that could result from implementation of the Proposed Project.

#### 5.11.1 Environmental Setting

Minerals are defined as any naturally occurring chemical elements or compounds formed from inorganic processes and organic substances. Movable minerals or an “ore deposit” is defined as a deposit of ore or mineral having a value materially in excess of the cost of developing, mining, and processing the mineral and reclaiming the project area.

##### 5.11.1.1 REGULATORY SETTING

###### State

*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 regulator of onshore surface mining in the State. It delegates specific regulatory authority to local jurisdictions. The act requires the State geologist (California Geological Survey) to identify all mineral deposits within the State and to classify them as: (1) containing little or no mineral deposits; (2) significant deposits; or (3) deposits identified, but further evaluation is needed. Lands where such deposits are identified are designated Mineral Resource Zone (MRZ) 1, 2, or 3, respectively. Local jurisdictions are required to enact specific procedures to guide mineral conservation and extraction at particular sites and to incorporate mineral resource management policies into their general plans. A particular concern of state legislators in enacting SMARA was the premature loss of minerals and protection of sites threatened by development practices that might preclude future mineral extraction.

###### *Mineral Resource Classification*

The California Geological Survey (CGS) Mineral Resources Project 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 the SMARA. Nonfuel mineral resources include metals such as gold, silver, iron, and copper; industrial metals such as boron compounds, rare-earth elements, clays, limestone, gypsum, salt, and dimension stone; and construction aggregate, including sand, gravel, and crushed stone. Development generally results in a demand for minerals, especially construction aggregate. Urban preemption of prime deposits and conflicts between mining and other uses throughout California led to passage of the SMARA, which requires all cities and counties to incorporate in their general plans the mapped designations approved by the State Mining and Geology Board.

The classification process involves the determination of Production-Consumption (P-C) Region boundaries, based on identification of active aggregate operations (Production) and the market area served (Consumption). The P-C regional boundaries are modified to include only those portions of the region that are

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urbanized or urbanizing and are classified for their aggregate content. An aggregate appraisal further evaluates the presence or absence of significant sand, gravel, or stone deposits that are suitable sources of aggregate. The classification of these mineral resources is a joint effort of the State and local governments. It is based on geologic factors and requires that the State Geologist classify the mineral resources area as one of the four MRZs, Scientific Resource Zones (SZ), or Identified Resource Areas (IRAs), described below.

- **MRZ-1:** A Mineral Resource Zone where adequate information indicates that no significant mineral deposits are present or likely to be present.
- **MRZ-2:** A Mineral Resource Zone where adequate information indicates that significant mineral deposits are present or a likelihood of their presence and development should be controlled.
- **MRZ-3:** A Mineral Resource Zone where the significance of mineral deposits cannot be determined from the available data.
- **MRZ-4:** A Mineral Resource Zone where there is insufficient data to assign any other MRZ designation.
- **SZ Areas:** Containing unique or rare occurrences of rocks, minerals, or fossils that are of outstanding scientific significance shall be classified in this zone.
- **IRA Areas:** County or CGS-identified areas where adequate production and information indicates that significant minerals are present.

As part of the classification process, an analysis of site specific conditions is utilized to calculate the total volume of aggregates within individually identified Resource Sectors. Resource Sectors are those MRZ-2 areas identified as having regional or statewide significance. Anticipated aggregate demand in the P-C Regions for the next 50 years is then estimated and compared to the total volume of aggregate reserves identified within the P-C Region.

#### *Department of Conservation, Division of Oil, Gas & Geothermal Resources*

The Division of Oil, Gas, and Geothermal Resources (DOGGR) is a subdivision of the California Department of Conservation. DOGGR oversees the drilling, operation, maintenance, and closing of oil, natural gas, and geothermal wells. The division is intended to protect the environment, prevent pollution, and ensure public safety (DOGGR 2013a). It functions as an information repository but also regulates oil and gas extraction activities consistent with state regulations that include Section 3000 et seq. of the State Public Resources Code and Title 14, Division 2, Chapter 4 of the California Code of Regulations. These codes include provisions regulating the distribution of oil wells.

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### Local

#### *County of Los Angeles*

Consistent with SMARA, Title 22 of the County Code includes provisions related to Surface Mining Permits. These outline permitting requirements, period review procedures, and reclamation plan requirements.

#### 5.11.1.2 EXISTING CONDITIONS

The CGS Mineral Resources Project designates P-C regions for the purpose of classifying mineral land resources. The Palmdale P-C Region is located within the Project Area and is roughly coterminous with the landform known as the Antelope Valley (the northern portion of the Project Area). It includes three areas with significant mineral deposits. Part of the western portion of the Project Area is in the Saugus-Newhall P-C Region (see Figure 5.11-1, *Aggregate Production-Consumption Regions*). This region is largely rural and mountainous and where it overlaps with the Project Area, it is generally limited to land within the Angeles National Forest. Portions of the Saugus-Newhall P-C Region located in the Project Area are not identified by the CGS Mineral Resources Project as containing significant mineral deposits. The remaining portion of the Project Area is located in the San Gabriel Mountains and is not in a P-C region.

#### Mineral Resource Zones

There are three MRZ-2 areas in the Palmdale P-C Region that amount to a total of 15,882 acres. The MRZ-2 areas are shown in Figure 5.11-2, *Mineral Resource Zone-2 Areas*. From west to east, they consist of the Little Rock Wash, the Big Rock Wash/Rock Creek area, and the Mescal Creek area. As shown, Little Rock Wash is mostly in the City of Palmdale and partly in the Project Area while Big Rock Wash/Rock Creek and Mescal Creek are entirely in the Project Area to the east of the City of Palmdale. The Big Rock Wash/Rock Creek area is entirely vacant except for the Big Rock Creek Mine, which is an active mine west of 165th Street and south of the Union Pacific railroad tracks. The Mescal Creek area is completely vacant (see Figure 5.11-3, *Existing Conditions of MRZ-2 Areas*).

#### Mineral Resource Sectors

Mineral Resource Sectors are areas where mineral resources of regional or statewide significance are considered to be present or likely to be present and that have existing land uses deemed compatible with potential mining. Mineral resource sectors in the Project Area and adjacent cities are described below in Table 5.11-1. As shown in Figure 5.11-3, mineral resource sectors further divide up the land contained in MRZ-2 areas.

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**Table 5.11-1 Mineral Resource Sectors within the Project Area and Adjacent Cities**

Production-Consumption Region and Map Date	Mineral Resource Sectors		
	Number of Sectors and Locations	Mapped as Urbanized, Urbanizing, or Zoned Urban	Active Mines mapped
Palmdale 1994	10 sectors: 2 sectors and parts of 2 additional sectors are in the City of Palmdale; the balance of the sectors is in unincorporated Los Angeles County.	Parts of 4 sectors mapped or zoned for urban development; part of 1 sector mapped as urbanized or urbanizing. Urban, urbanizing, and zoned urban areas are in both the City of Palmdale and in unincorporated Los Angeles County.	Parts of 2 sectors, in the City of Palmdale, mapped as owned or controlled by aggregate producers.

Sources: CGS 1994b.

### Active and Inactive Mines

There are currently a total of 10 mines operated by 7 companies within the Project Area and the adjacent cities. All 10 mines are currently active. The mines are detailed in Table 5.11-2, *Active Mines in the Project Area and Adjacent Cities*.

**Table 5.11-2 Active Mines in the Project Area and Adjacent Cities**

Mine Name <sup>1</sup> Mine ID	Lead Agency <sup>2</sup>	Operator	Production
Holliday-Palmdale 91-19-0001	City of Palmdale	Holliday Rock Company, Inc.	Sand and gravel
Antelope Valley Aggregate, Inc. 91-19-0002	City of Palmdale	Holliday Rock Company, Inc.	Sand and gravel
Littlerock 91-19-0008	City of Palmdale	Granite Construction Company	Sand and gravel
Palmdale 91-19-0020	City of Palmdale	Calmat Company	Sand and gravel
Big Rock Creek 91-19-0021	<b>Los Angeles County</b>	Calmat Company	Sand and gravel
Little Rock Quarry 91-19-0026	City of Palmdale	Hi-Grade Materials Co.	Sand and gravel
Palmdale 91-19-0033	City of Palmdale	Robertson's Ready Mix	Sand and gravel
Lane Quarry 91-19-0040	City of Palmdale	Lane Quarry	Decomposed granite
Big Rock Creek (Newly Permitted) 91-19-0046	<b>Los Angeles County</b>	Granite Construction Company	Sand and gravel
75th Street Quarry (Newly Permitted) 91-19-0049	City of Palmdale	JV Aggregate Processing, LLC	Sand and gravel

Source: California State Office of Mine Reclamation, 2013.

<sup>1</sup> All mines listed are active except the two noted as newly permitted.

<sup>2</sup> Active mines in unincorporated areas are indicated by **Los Angeles County** in boldface in the Lead Agency column.

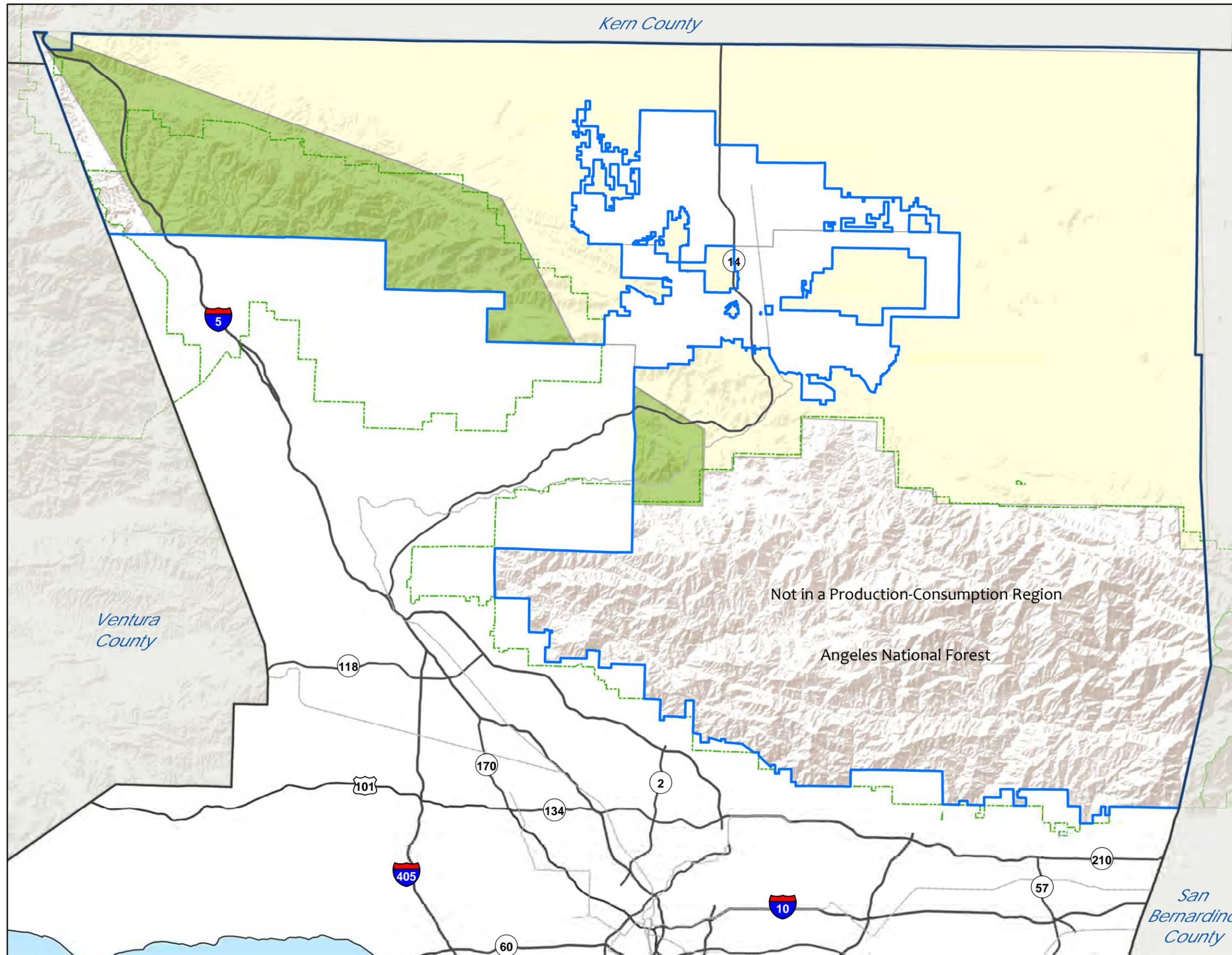
Kern County

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FIGURE 5.11-1

## AGGREGATE PRODUCTION-CONSUMPTION REGIONS

- Antelope Valley Project Area
- Saugus Newhall P-C Region
- Palmdale P-C Region



Not in a Production-Consumption Region

Angeles National Forest

Ventura County

San Bernardino County

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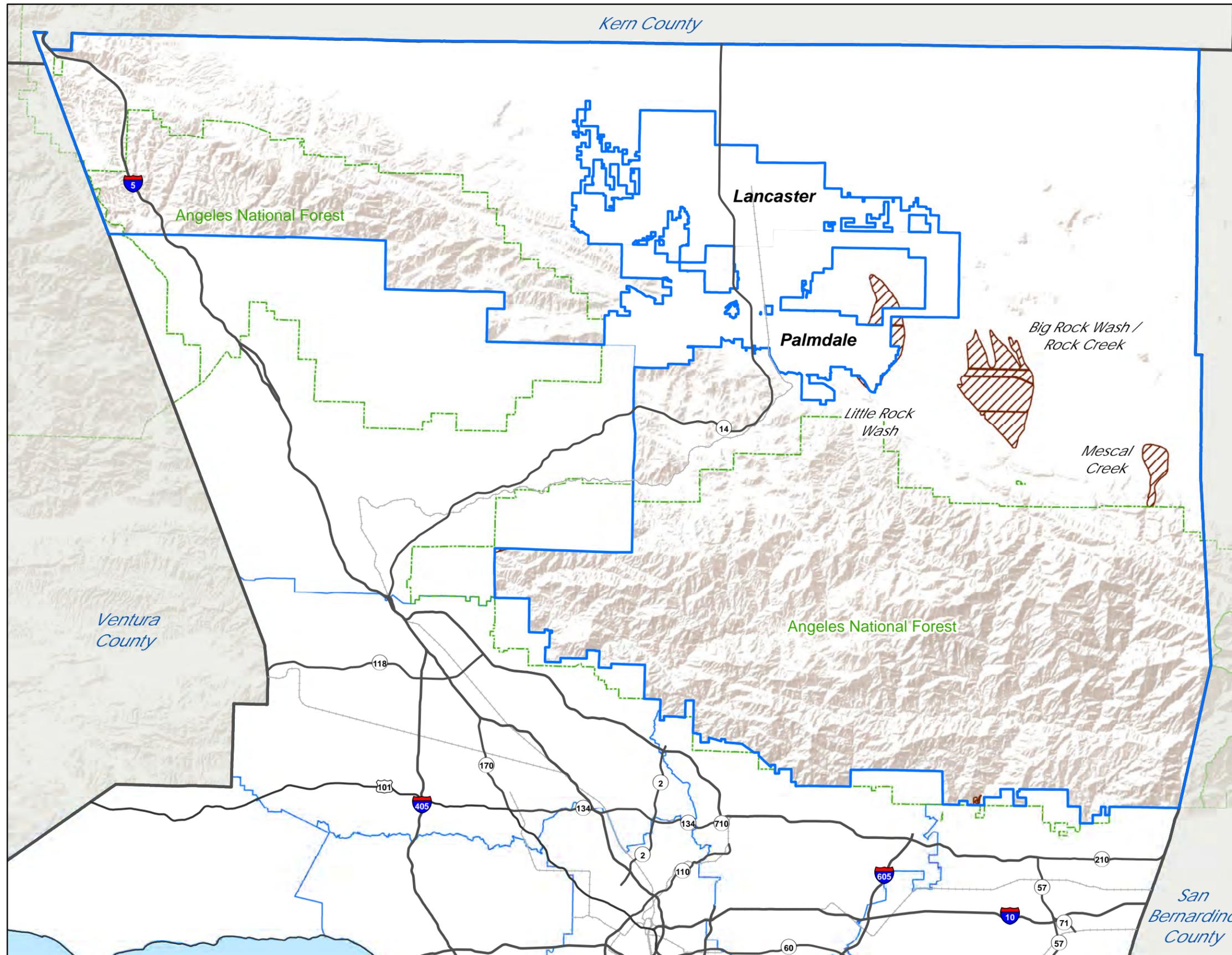
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FIGURE 5.11-2

MINERAL RESOURCE ZONE-2 AREAS

-  Antelope Valley Project Area
-  Mineral Resources



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Source: California Geological Survey, 2013

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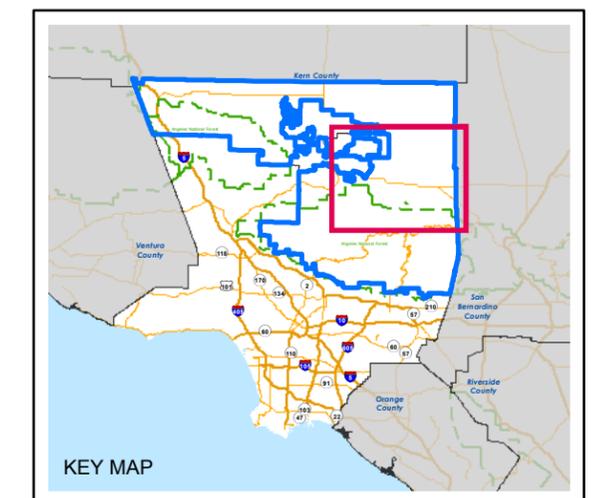
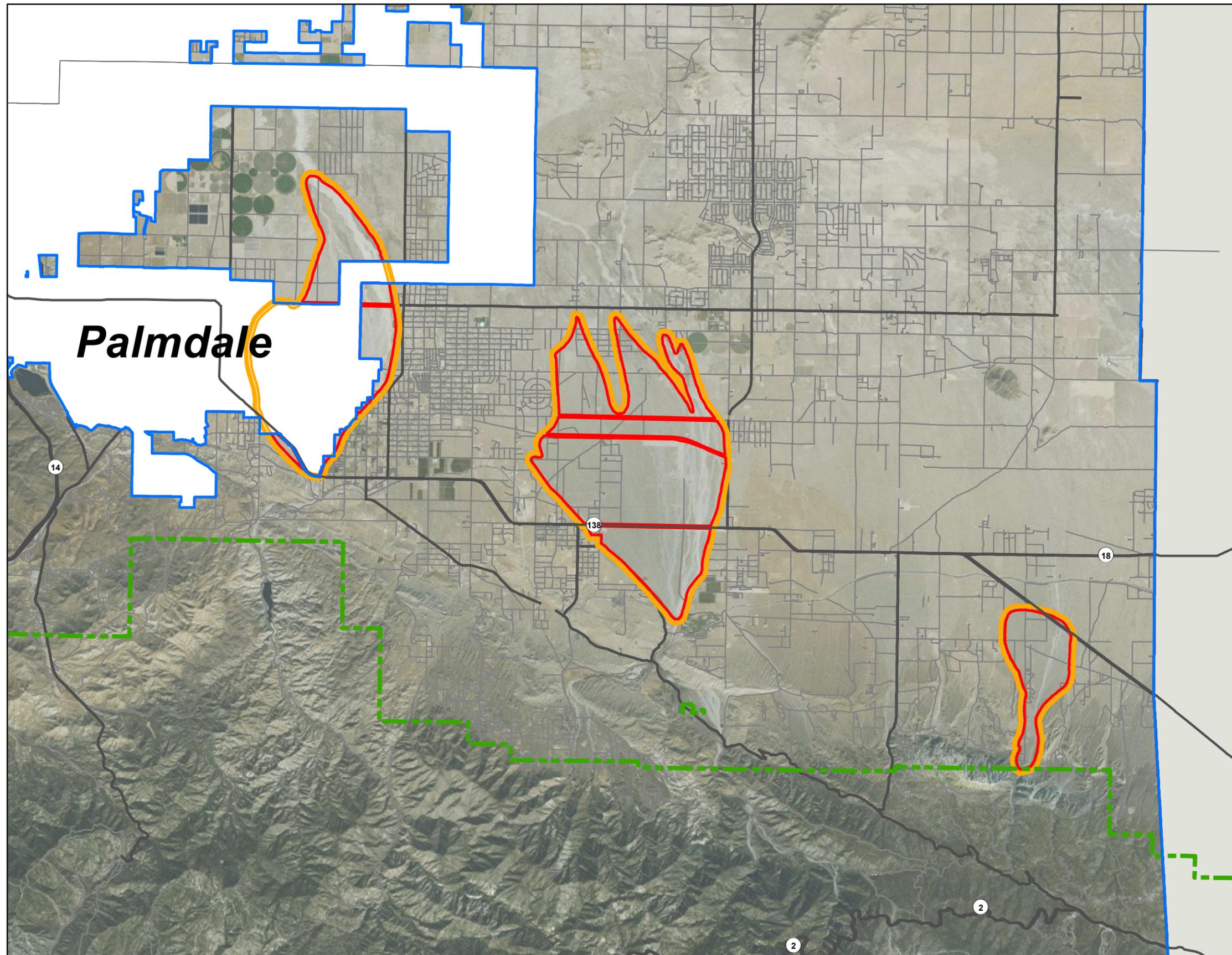
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FIGURE 5.11-3

EXISTING CONDITIONS,  
UNINCORPORATED MRZ-2 AREAS

-  Antelope Valley Project
-  Aggregate Resource Sectors in Project Area
-  MRZ-2 Areas



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### Aggregate Mining Sites Identified in the Adopted Area Plan

The Adopted Area Plan identifies major sand and gravel extraction sites within the Project Area in the Little Rock and Big Rock washes.

### Aggregate Supplies and Demands

Aggregate reserves are aggregate that has been determined to be acceptable for commercial use, that exists within properties owned or leased by aggregate producing companies, and for which permits have been granted to allow mining and processing of the material. Aggregate resources include reserves as well as all potentially usable aggregate materials that may be mined in the future, but for which no permit allowing mining has been granted, or for which marketability has not been established. PCC-Grade aggregate reserves and resources for the Palmdale P-C Region are shown in Table 5.11-3, below.

Projections of aggregate demand for the Project Area through the year 2044 were made based upon population projections and an average per capita consumption rate. These projections are compared to existing aggregate reserves and resources in Table 5.11-3.

**Table 5.11-3 Aggregate Resources, Reserves, and Demands**

	Palmdale P-C Region	Los Angeles County Total
Portland Cement Concrete (PCC)-Grade Aggregate Resources	1,769 million tons	11,929 million tons
PCC-Grade Aggregate Reserves	207 million tons	750 million tons
50-Year Demand, All Aggregate	Not Available	2,009 million tons
50-Year Demand, PCC-Grade Aggregate	Not Available	1,105 million tons
Estimated Depletion, PCC-Grade Aggregate Reserves	Not Available	2016

Source: CGS 2012.

The above projections show that an estimated two billion tons of aggregate will be needed to satisfy the future demand through the year 2044 in the area supplied by aggregate produced in Los Angeles County. Of this total, 55 percent, or 1.1 billion tons must be of PCC grade. Existing PCC-grade reserves total roughly 750 million tons and are expected to be depleted by 2016.

### Aggregate Production

California is divided into 12 districts for the purpose of reporting minerals production statistics in the Minerals Yearbook published by the US Geological Survey. The most recent yearbook available is for 2009, published in August 2013. District 11 comprises Los Angeles County (including the Project Area), Ventura County, and Orange County. Minerals production in District 11 in 2009 is summarized in Table 5.11-4.

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**Table 5.11-4 Mineral Production, District 11, 2009**

Mineral Type	Production, Metric Tons	Production, dollar value
Concrete aggregate and concrete products	5,580,000	\$68,700,000
Asphaltic concrete aggregates and road base materials	575,000	\$3,910,000
Other miscellaneous uses	302,000	\$3,000,000
Unspecified	4,960,000	\$59,000,000
Other Production Materials	184,000	\$2,340,000
<b>Total</b>	<b>11,601,000</b>	<b>\$136,950,000</b>

Source: USGS 2013a.  
 One metric ton is 2,205 pounds.

### Oil and Natural Gas Resources

Mineral resource areas also include oil and natural gas resources. Oil production still occurs in many parts of Los Angeles County, including areas in the southern and central Los Angeles Basin and in the Santa Clarita Valley (see Figure 5.11-4, *Oil and Gas Fields*). However, there are no oil or natural gas resource areas in the Project Area.

### 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 Relevant Area Plan Goals and Policies

The following is a list of the goals and policies of the Proposed Project that would reduce potentially adverse effects concerning mineral resources.

#### Land Use Element

**Goal LU 2:** A land use pattern that protects environmental resources.

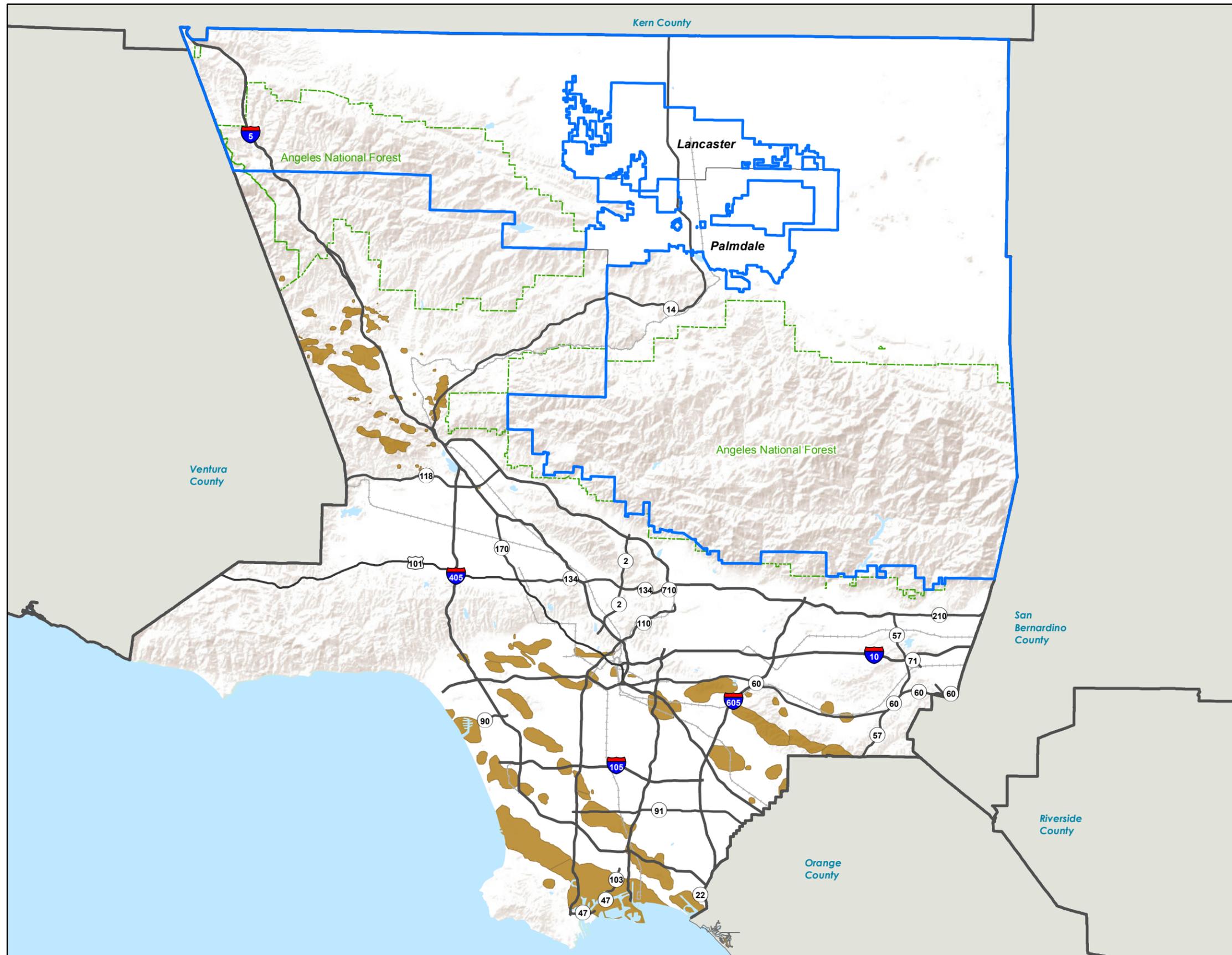
- Policy LU 2.4: Limit the amount of potential development in Mineral Resource Areas, through appropriate land use designations with very low residential densities, as indicated in the Land Use Policy Map (Map 2.1) of this Area Plan.

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FIGURE 5.11-4

OIL AND GAS FIELDS

- Antelope Valley Project Area
- Oil and Gas Fields



Source: Los Angeles County Department of Public Works, 2014

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### Mineral Resources Element

**Goal COS 8:** Mineral resources are responsibly extracted.

- **Policy COS 8.1:** Allow new mineral resource extraction activities only in designated Mineral Resource Areas.
- **Policy COS 8.2:** Where new mineral resource extraction activities are allowed, ensure that applications undergo full environmental review and public noticing. Require site remediation after completion of mineral resource extraction activities.
- **Policy COS 8.3:** Provide strict enforcement of illegal or unpermitted mineral extraction activities.

### 5.11.4 Environmental Impacts

The following impact analysis addresses thresholds according to Appendix G of the CEQA Guidelines of significance. The applicable thresholds are identified in brackets after the impact statement.

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**Impact 5.11-1: Development in accordance with the Proposed Project would cause the loss of availability of known mineral resources in the Project Area. [Thresholds M-1 and M-2]**

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**Impact Analysis:** Buildout of the Proposed Project would change land use designations in the areas listed below that are identified as MRZ-2, mineral resource sectors, or active mines. Active aggregate mines are owned and/or controlled by aggregate producers, and are permitted by the cities or the County. Thus, changes in land use designations for active mines pursuant to the Proposed Project would not block continued mining at those sites.

#### *Proposed Land Use Designations in MRZ-2 Areas: Compatibility with Future Mining*

Proposed land use designations for areas mapped MRZ-2 are shown below in Table 5.11-5 and in Figure 5.11-5. Note that the total shown below is lower than the total mentioned above in *Existing Conditions* (15,882 acres). This is because some of the MRZ-2 area is located in public rights-of-way that would not have land use designations under the Proposed Project.

Three proposed land use designations—RL10, RL20, and IH (Heavy Industrial)—are considered compatible with future mining activities. Although the RL10 and RL20 designations allow residential uses, they would only allow residential development at extremely low densities, such as homesteads associated with grazing operations.

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**Table 5.11-5 Proposed Land Use Designations in MRZ-2 Areas: Compatibility with Future Mining**

Land Use Designation	Acres within MRZ-2 Areas
<b>Designations Compatible with Future Mining</b>	
IH – Heavy Industrial	614
RL10 – Rural Land 10	2,437
RL20 – Rural Land 20	10,221
<i>Subtotal</i>	13,272
<b>Designations Incompatible with Future Mining</b>	
CR – Rural Commercial	10
H2 - Residential 2	14
H5 – Residential 5	1
OS-BLM Managed by Bureau of Land Management	379
OS-C – Conservation	134
OS-NF - Open Space National Forest	121
OS-PR Open Space Parks and Recreation	6
P - Public and Semi-Public	1,609
RL1 – Rural Land 1	17
RL5 – Rural Land 5	28
<i>Subtotal</i>	2,319
<b>Total</b>	<b>15,591</b>

As shown in Table 5.11-5, about 85 percent of the MRZ-2 area in the Project Area would be designated for land uses considered compatible with future mining. Both of the active mines in unincorporated area within the Project Area would be designated RL20 under the Proposed Project and are in the Big Rock Wash/Rock Creek area. However, buildout of the Proposed Project would also result in the development of approximately 2,319 acres with land uses considered incompatible with mining, such as commercial, residential, and public uses. This acreage represents about 15 percent of the total MRZ-2 area in the Project Area. Nearly all of the incompatible designations are in the Little Rock Wash area. Availability of those resources would be lost at buildout. Therefore, this impact would be potentially significant.

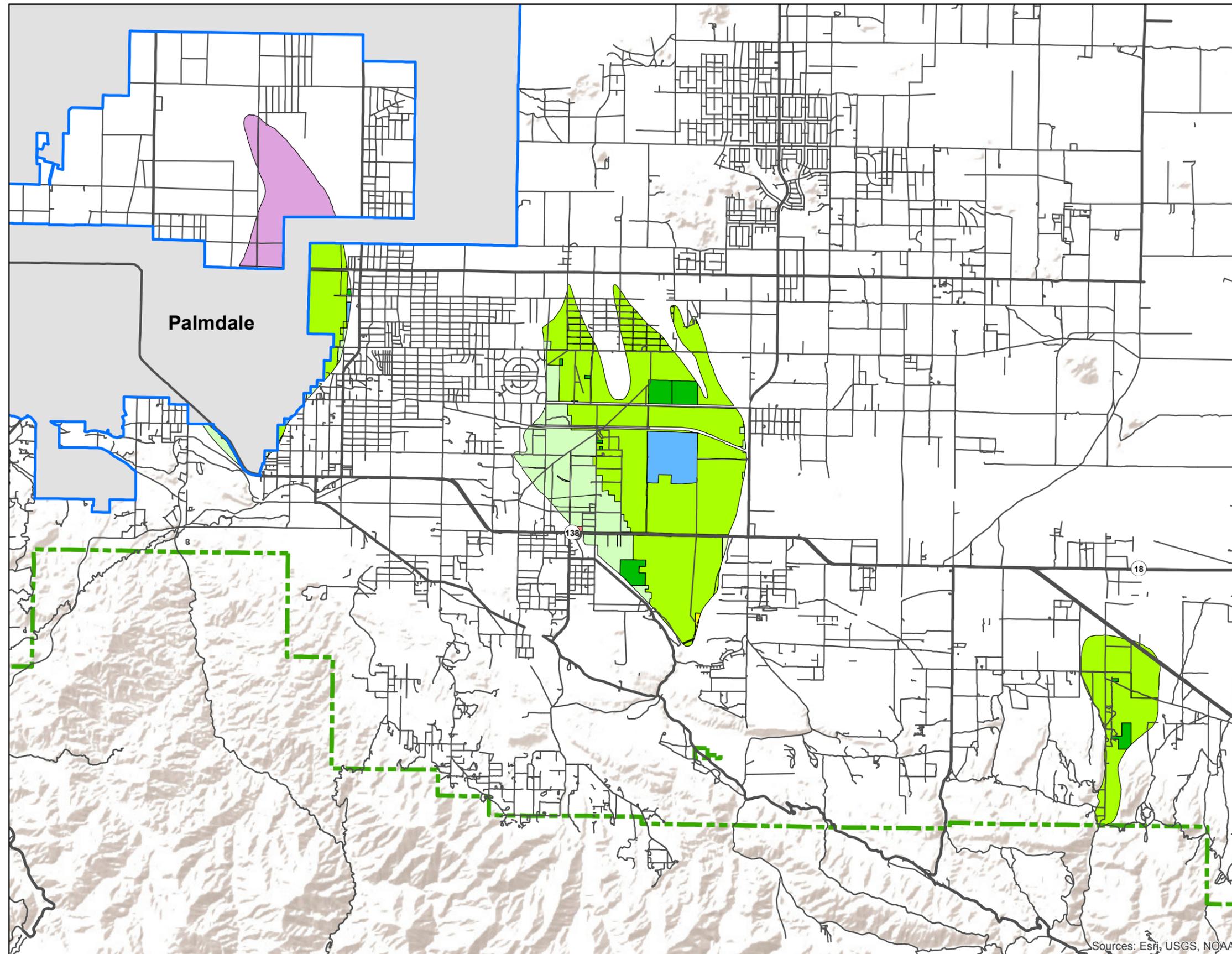
**Impact 5.11-2 Buildout of the Proposed Project would cause a loss of availability of mineral resources in the Little Rock Wash area, which is designated for mineral extraction in the Adopted Los Angeles County General Plan. [Threshold M-2]**

**Impact Analysis:** For reasons discussed under Impact 5.11-1, above, buildout of the Proposed Project would substantially reduce availability of mineral resources in one mineral extraction area: the Little Rock Wash area. This area is identified as a mineral extraction area in the Adopted Los Angeles Countywide General Plan. However, residential development would be allowed in the area under the Proposed Project. Residential uses, including very low-density residential uses, are considered incompatible with mining extraction activities. At buildout, residential uses in the area would prevent continued or expanded extraction of minerals. Therefore, buildout of the Proposed Project would conflict with an adopted land use plan related to locally important mineral resource recovery sites. This impact would be potentially significant.

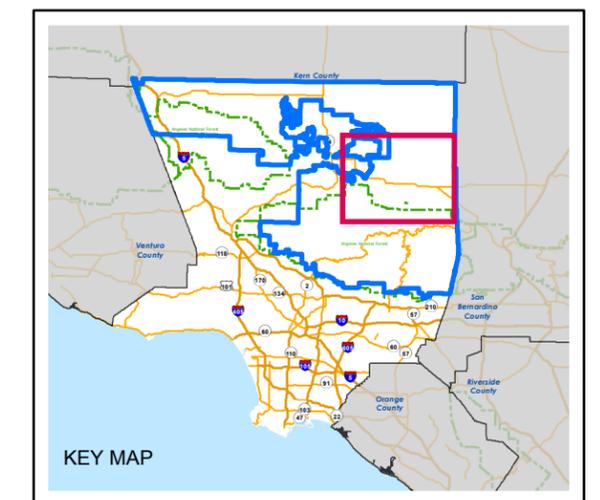
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FIGURE 5.11-5

## PROPOSED LAND USE DESIGNATIONS ON UNINCORPORATED MRZ-2 AREAS



- Antelope Valley Project Area
- RL1 - Rural Land 1 (1 du / 1 gross ac)
- RL5 - Rural Land 5 (1 du / 5 gross ac)
- RL10 - Rural Land 10 (1 du / 10 gross ac)
- RL20 - Rural Land 20 (1 du / 20 gross ac)
- H2 - Residential 2 (0-2 du / net ac)
- H5 - Residential 5 (0-5 du / net ac)
- CR - Rural Commercial
- IH - Heavy Industrial
- P - Public and Semi-Public
- OS-NF - Open Space National Forest
- OS-C - Open Space Conservation
- OS-PR - Open Space Parks and Recreation
- OS-BLM - Bureau of Land Management



### ANTELOPE VALLEY AREA PLAN UPDATE DRAFT EIR

Sources: Esri, USGS, NOAA

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**Impact 5.11-3 Buildout of the Proposed Project would not cause a loss of availability of oil and natural gas reserves in the Project Area. [Threshold M-1]**

**Impact Analysis:** Buildout of the Proposed Project would not result in development of land that is used for, or has the potential to be used for, extraction of fossil fuels such as oil and natural gas. As stated above, while oil and natural gas fields lie beneath large swaths of Los Angeles County, there are no oil or gas fields located in the Project Area. No impact would occur.

**5.11.5 Cumulative Impacts**

Cumulative projects could cause significant cumulative impacts if they caused a loss of availability of a known mineral resource valuable to the region and/or state or caused a loss of availability of an important mining site delineated in an adopted land use plan. Construction and operation of cumulative growth identified in Section 4.4, *Assumptions Regarding Cumulative Impacts*, would have the potential to result in the loss of availability of known mineral resources. Urbanization and growth in the City of Palmdale would potentially result in land uses that are incompatible with mining and resource recovery and would result in a cumulative loss of available resources. Similar to portions of the Project Area, the CGS has classified land within the City of Palmdale and the Santa Clarita Valley as MRZ-2. The Land Use and Environmental Resources Elements of the Palmdale General Plan contain policies aimed at protecting these and other mineral resources. The Santa Clarita Valley Area Plan also contains policies aimed at protecting mineral resources. However, planned and projected growth in the region would result in a reasonably foreseeable loss of mineral resources due to the encroachment of incompatible uses that would limit future areas from being permitted for mining operations. Cumulative impacts would be potentially significant.

**MRZ-2 Areas**

*Cities of Lancaster and Palmdale*

Acres for MRZ-2 areas in the Project Area and adjacent cities are shown in Table 5.11-6. As shown in the table, 74.3 percent (15,882 acres) of areas designated MRZ-2 are in the Project Area.

**Table 5.11-6 MRZ-2 Areas in the Project Area and Adjacent Cities**

Within Cities	Acres		Percentage	
	Within the Project Area	Total	Within Cities	Within the Project Area
5,506	15,882	21,388	25.7	74.3

*Santa Clarita Valley*

In addition to the Project Area and the cities of Lancaster and Palmdale, the North Los Angeles County Subregion includes the Santa Clarita Valley. There were 9,745 acres of MRZ-2 areas mapped in the Santa Clarita Valley Planning Area in 2013 (CGS 2013). There were 16 mineral resource sectors in the Santa Clarita Valley Planning Area in 1994: eight in unincorporated Los Angeles County, seven in the City of Santa Clarita,

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and one in both jurisdictions (CGS 1994). Four active mines are located in the Santa Clarita Valley Planning Area, all in unincorporated areas. Implementation of the Santa Clarita Valley Area Plan would convert 952 acres of MRZ-2 areas to land uses incompatible with mining.

The Certified EIR for the Santa Clarita Valley Area Plan concluded that implementation of the Area Plan policies would limit impacts on mineral resources to less than significant, and no mitigation measures for impacts to mineral resources were required.

#### Active Mines

Of the 10 active mines listed in Table 5.11-2, 8 are within the City of Palmdale. Active mines are owned and/or controlled by aggregate producers and are permitted by the relevant jurisdiction. Development of urban land uses on existing mining sites in Palmdale, such as new residential or commercial uses, is generally neither permitted nor feasible. Therefore, even if mines both within and outside the Project Area ended operation, those sites would likely remain accessible should mining be commercially viable in the future. Furthermore, Los Angeles County has numerous aggregate mining sites; the loss of availability of a substantial portion of these mines during the planning period of the Proposed Project is unlikely.<sup>1</sup> For these reasons, cumulative impacts to active aggregate mines are not anticipated.

#### Oil and Natural Gas Resources

Although there are oil and natural gas resources in the Santa Clarita Valley, there are no such resource areas in the Project Area. Therefore, the Proposed Project would not contribute to a cumulative impact related to oil and natural gas resources.

#### Conclusion

Cumulative projects in combination with buildout of the Proposed Project would contribute to a significant cumulative impact in the North Los Angeles County Subregion. No mitigation measures are available that would reduce this impact to less than significant. Therefore, this impact would remain significant and unavoidable.

### 5.11.6 Existing Regulations and Standard Conditions

- California Code of Regulations, Title 14, Division 2, Chapter 4: Development, Regulation, and Conservation of Oil and Natural Gas Resources
- California Public Resources Code
  - Sections 2710 et seq.: Surface Mining and Reclamation Act
  - Sections 3000 et seq.: Oil and Gas Conservation

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<sup>1</sup> 24 active mines in the County are listed on the Office of Mine Reclamation's *Mines Online* database (OMR 2013).

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### 5.11.7 Level of Significance Before Mitigation

Upon compliance with regulatory requirements and standard conditions, Impact 5.11-3 would be less than significant. Without mitigation, the following impact would be **potentially significant**:

- **Impact 5.11-1:** Buildout of the Proposed Project would cause a loss of availability of known mineral resources within the Project Area related to the mineral extraction area in the Little Rock Wash area.
- **Impact 5.11-2:** Implementation of the Proposed Project would cause a substantial loss of availability of mineral resources in one mineral extraction area identified in the Adopted General Plan: the Little Rock Wash area.

### 5.11.8 Mitigation Measures

No mitigation measures are available that would reduce impacts of Proposed Project buildout to less than significant. Mineral resources are limited, nonrenewable, and cannot be increased elsewhere to compensate for a loss of availability due to buildout of the Proposed Project. Compensatory mitigation outside of the region is also infeasible; such mitigation would not reduce the loss of availability of mineral resources in the Project Area due to the very high cost of transporting aggregate.

### 5.11.9 Level of Significance After Mitigation

#### Impact 5.11-1

Future development pursuant to the Proposed Project could cause a loss of availability of known mineral resources within the Project Area. No mitigation measures are available that would reduce this impact to less than significant. Mineral resources are limited and nonrenewable and cannot be increased elsewhere to compensate for the loss of availability of mineral resources due to the buildout of the Proposed Project. Compensatory mitigation outside of the region is also infeasible. Such mitigation would not reduce the loss of availability of mineral resources in the Project Area due to the very high cost of transporting aggregate. Impact 5.11-1 would be significant and unavoidable.

#### Impact 5.11-2

Implementation of the Proposed Project would cause a substantial loss of availability of mineral resources in one mineral extraction area identified in the Adopted General Plan: the Little Rock Wash area. No mitigation measures are available that would reduce this impact to less than significant. Impact 5.11-2 impact would be significant and unavoidable.

### 5.11.10 References

California Geological Survey (CGS).2012. Map Sheet 52, Aggregate Sustainability in California.  
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