

## 4. Environmental Setting

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### 4.1 INTRODUCTION

The purpose of this section is to provide, pursuant to provisions of the California Environmental Quality Act (CEQA) and the State CEQA Guidelines, a “description of the physical environmental conditions in the vicinity of the project, as they exist at the time the notice of preparation is published, from both a local and a regional perspective.” The environmental setting will provide a set of baseline physical conditions from which the lead agency will determine the significance of environmental impacts resulting from the Antelope Valley Area Plan (Proposed Project). In addition, subsections of Chapter 5, *Environmental Analysis*, provide a more detailed description of the local environment setting for the environmental topical areas.

### 4.2 REGIONAL ENVIRONMENTAL SETTING

#### 4.2.1 Regional Location

##### Los Angeles County

With approximately 4,083 square miles, Los Angeles County is geographically one of the largest counties in the country. Los Angeles County stretches along 75 miles of the Pacific Coast of Southern California and is bordered to the southeast by Orange County and San Bernardino County, to the north by Kern County, and to the west by Ventura County. Los Angeles County also includes two offshore islands, Santa Catalina Island and San Clemente Island. Los Angeles County includes 88 cities and unincorporated areas. The unincorporated areas of Los Angeles County comprise approximately 2,656 square miles and over one million people.

##### Project Area

The Project Area is the northernmost part of Los Angeles County. It includes portions of the Antelope Valley, the San Gabriel Mountains, and adjacent areas. As shown in Figure 3-1, *Regional Vicinity Map*, (in Chapter 3, *Project Description*), it borders San Bernardino County to the east, Ventura County to the west, and Kern County to the north. Other portions of Los Angeles County, including the San Fernando Valley, Santa Clarita Valley, and San Gabriel Valley, are located to the south of the Project Area.

The Project Area covers approximately 1,800 square miles, or 44 percent of Los Angeles County. It surrounds the City of Palmdale and City of Lancaster and includes over two dozen communities. Unincorporated areas in the Project Area include large amounts of sparsely populated land and include the Angeles National Forest, part of the Los Padres National Forest, and part of the Mojave Desert.

## 4. Environmental Setting

### 4.2.2 Regional Planning Considerations

#### Southern California Association of Governments

The Southern California Association of Governments (SCAG) is a federally recognized Metropolitan Planning Organization (MPO) that represents the counties of Los Angeles, Orange, Ventura, Imperial, San Bernardino, and Riverside, and 190 cities, and encompasses over 38,000 square miles. SCAG is a regional planning agency and a forum for addressing regional issues concerning transportation, the economy, community development, and the environment. SCAG is also the regional clearinghouse for projects requiring environmental documentation under federal and state law. In this role, SCAG reviews proposed development and infrastructure projects to analyze their impacts on regional planning programs. As the Southern California region's MPO, SCAG cooperates with the South Coast Air Quality Management District (SCAQMD), Antelope Valley Air Quality Management District (AVAQMD), Mojave Desert Air Quality Management District (MDAQMD), the California Department of Transportation (Caltrans), and other agencies in preparing regional planning documents.

SCAG divides Los Angeles County into nine SCAG subregions. The Project Area is located in the North Los Angeles County subregion.

#### Regional Transportation Plan/Sustainable Communities Strategy

On April 4, 2012, SCAG adopted the 2012 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) to help coordinate the development of the region's transportation improvements. The RTP is a long-range transportation plan that is developed and updated by SCAG every four years. The RTP provides a vision for transportation investments throughout the region. Using growth forecasts and economic trends that project out over a 20-year period, the RTP considers the role of transportation in the broader context of economic, environmental, and quality-of-life goals for the future, and identifies regional transportation strategies to address the region's mobility needs. The Proposed Project's consistency with the applicable 2012 RTP policies is analyzed in detail in Section 5.10, *Land Use and Planning*, of this Draft Environmental Impact Report (DEIR).

#### South Coast Air Quality Management District and Antelope Valley Air Quality Management District

The SCAQMD and AVAQMD are responsible for monitoring air quality as well as for planning, implementing, and enforcing programs designed to attain and maintain state and federal ambient air quality standards in the Project Area. The southern portion of the Project Area, including the San Gabriel Mountains, is in the South Coast Air Basin (SoCAB), which is managed by SCAQMD. The SCAQMD jurisdiction is approximately 10,743 square miles and includes all of Los Angeles County except for the Antelope Valley, which is covered by the AVAQMD. The SCAQMD and AVAQMD implement a wide range of programs and regulations that address point source pollution and mobile source emissions, and enforce air quality through inspections, fines, and educational training.

The air pollutants emitted into the ambient air by stationary and mobile sources are regulated by federal and state law. These regulated air pollutants are known as criteria air pollutants and are: carbon monoxide, volatile

## 4. Environmental Setting

organic compounds (VOC), nitrogen oxides (NO<sub>x</sub>), sulfur dioxide, coarse inhalable particulate matter (PM<sub>10</sub>), fine inhalable particulate matter (PM<sub>2.5</sub>), and lead. VOC and NO<sub>x</sub> are criteria pollutant precursors and go on to form secondary criteria pollutants, such as ozone (O<sub>3</sub>), through chemical and photochemical reactions in the atmosphere. Air basins are classified as attainment/nonattainment areas for particular pollutants, depending on whether they meet ambient air quality standards (AAQS) for that pollutant. The levels of ozone, particulate matter, and carbon monoxide in Los Angeles County continually exceed federal and state ambient air quality standards. The purpose of the 2012 Air Quality Management Plan (AQMP) for SoCAB is to set forth a comprehensive and integrated program that will lead SoCAB into compliance with the federal 24-hour PM<sub>2.5</sub> air quality standard, and to provide an update to SoCAB's commitments toward meeting the federal 8-hour ozone standards. It will also serve to satisfy recent United States Environmental Protection Agency (EPA) requirements for a new attainment demonstration of the revoked 1-hour ozone standard, as well as a vehicle miles traveled (VMT) emissions offset demonstration.

### *Antelope Valley Air Quality Management District*

The desert portion of Los Angeles County broke away from SCAQMD and established a new air district as of July 1, 1997. The Antelope Valley portion of the Mojave Desert Air Basin (MDAB) is bounded by Kern County to the north, San Bernardino County to the east, and has a jagged southwest boundary that runs roughly from the Gorman area in the northwest to the San Bernardino County line in the Angeles Forest in the southeast. The AVAQMD portion of the MDAB covers approximately 1,300 square miles and includes the cities of Lancaster and Palmdale. AVAQMD is the agency responsible for assuring that the National and California AAQS are attained and maintained in the Antelope Valley portion of the MDAB.

### *Mojave Desert Air Basin*

The MDAB is an assemblage of mountain ranges interspersed with long broad valleys that often contain dry lakes. Many of the lower mountains that dot the vast terrain rise from 1,000 to 4,000 feet above the valley floor (AVAQMD 2011). Elevations in the Antelope Valley portion of the MDAB range from 2,300 to over 8,000 feet (AVAQMD 2008). Prevailing winds in the MDAB are out of the west and southwest. These prevailing winds are due to the proximity of the MDAB to coastal and central regions and the blocking nature of the Sierra Nevada to the north; air masses pushed onshore in Southern California by differential heating are channeled through the MDAB. The MDAB is separated from the Southern California coastal and central California valley regions by mountains (highest elevation approximately 10,000 feet) whose passes form the main channels for these air masses. The Antelope Valley is bordered in the northwest by the Tehachapi Mountains, separated from the Sierra Nevada in the north by the Tehachapi Pass (3,800 feet elevation). The Antelope Valley is bordered to the south by the San Gabriel Mountains, bisected by Soledad Canyon (3,300 feet) (AVAQMD 2011).

### **State Water Resources Control Board**

Under the Porter-Cologne Water Quality Act, California's water quality control law, the State Water Resources Control Board (SWRCB) has ultimate control over water quality policy and allocation of state water resources. The SWRCB, through its nine Regional Water Quality Control Boards (RWQCBs), carries out the

## 4. Environmental Setting

regulation, protection, and administration of water quality in each region. Each regional board is required to adopt a water quality control plan or basin plan.

The Project Area is in the Los Angeles Water Quality Control Board Region (Region 4) and the Lahontan Water Quality Control Board Region (Region 6). A small part of the northwest corner of Los Angeles County is in the Central Valley Region (Region 5). The Water Quality Control Plan for Region 4 was adopted in 1994; for Region 6 in 1995. These Basin Plans give direction on the beneficial uses of the state waters within the two regions, describe the water quality that must be maintained to support such uses, and provide programs, projects, and other actions necessary to achieve the standards established in the Basin Plans.

### California Air Resources Board

Assembly Bill 32 (AB 32), the Global Warming Solutions Act, was passed by the California state legislature on August 31, 2006, to place the state on a course toward reducing its contribution of greenhouse gas (GHG) emissions. AB 32 follows the first tier of emissions reduction targets established in Executive Order S-3-05, signed on June 1, 2005, which requires the state's global warming emissions to be reduced to 1990 levels by the year 2020. Pursuant to the requirements of AB 32, the state's reduction in global warming emissions will be accomplished through an enforceable statewide cap on global warming emissions. In order to effectively implement the cap, the California Air Resources Board (CARB) adopted the Scoping Plan in December 2008 that identified the GHG emissions reduction targets and reduction strategies for the various emission sectors within the state. Projected GHG emissions in California identified in the 2008 Scoping Plan are estimated at 596 million metric tons (MMT) of CO<sub>2</sub>-equivalent (CO<sub>2</sub>e) pollutants. CARB approved a 2020 emissions limit of 427 MMT of CO<sub>2</sub>e for the state (CARB 2008). Since the release of the 2008 Scoping Plan, CARB has updated the statewide GHG emissions inventory to reflect GHG emissions in light of the economic downturn and measures that had not been previously considered within the 2008 Scoping Plan baseline inventory. The updated forecast predicts emissions to be 507 MMT by 2020. The new inventory identifies that an estimated 80 MMT of reductions are necessary to achieve the statewide emissions reduction of AB 32 by 2020, or 15.7 percent of the projected emissions compared to business as usual in year 2020 (i.e., 15.7 percent of 507 MMT) (CARB 2012).

### California Department of Transportation

Caltrans is the state agency responsible for the maintenance of freeways and highways. The County coordinates with Caltrans on mobility and land use decisions that may affect state transportation facilities.

### US Fish and Wildlife Service and the California Department of Fish and Wildlife

Sensitive biological resources are habitats or individual species that have special recognition by federal, state, or local conservation agencies and organizations as endangered, threatened, and/or rare. This is due to the species' declining or limited population sizes, which usually results from habitat loss. Watch lists of such resources are maintained by the California Department of Fish and Wildlife (CDFW), the United States Fish and Wildlife Service (USFWS), and special groups, such as the California Native Plant Society (CNPS). The Project Area contains multiple habitats as well as plant and animal species that have been accorded special recognition.

## 4. Environmental Setting

### United States Forest Service

The Angeles National Forest and a small portion of the Los Padres National Forest encompass nearly 650,000 acres of land within the Project Area. The Angeles National Forest stretches across Los Angeles County in two sections encompassing the San Gabriel Mountain Range, and is 1,018 square miles, or 25 percent of the land area of Los Angeles County. The US Forest Service is responsible for managing public forest lands. Its mission is the stewardship of forest lands and resources through programs that provide recreation and multiple uses of natural resources, wilderness areas, and significant habitat areas. The US Forest Service prepares and periodically updates the Land and Resource Management Plan as a policy guide for the use of lands in the national forests. Within the boundaries of the national forests, nearly 40,000 acres are privately owned. For these parcels, commonly referred to as in-holdings, the County retains responsibility for land use regulation.

### Bureau of Land Management

The US Bureau of Land Management (BLM) owns thousands of acres of open space land. These primarily desert lands serve to preserve federally listed endangered and threatened species, and where compatible, provide recreational, agricultural, energy, and mining activities.

### US Department of Defense

The US Department of Defense is responsible for thousands of acres within the Project Area, including a portion of Edwards Air Force Base. Coordination between the County and Department of Defense is important to ensure compatibility between military installations and operation areas, and adjacent land uses. Military Operation Areas (MOAs) are three-dimensional airspace designated for military training and transport activities that have a defined floor (minimum altitude) and ceiling (maximum altitude). Within Los Angeles County, there are several MOAs used by military aircraft to practice high and low altitude training exercises and travel routes between military installations. Additionally, in and around MOAs, testing is conducted to maintain military readiness. In guiding growth and development in the unincorporated areas, it is important to consider the critical role of MOAs in support of national defense.

## 4.3 LOCAL ENVIRONMENTAL SETTING

The Project Area covers 1,800 square miles, or 44 percent of the 4,083 square miles in Los Angeles County. The Project Area surrounds the City of Palmdale and City of Lancaster and borders San Bernardino County to the east, Ventura County to the west, and Kern County to the north. The existing Antelope Valley Area Plan (Adopted Area Plan) was adopted on December 4, 1986.

### 4.3.1 General Plan and Zoning

#### Existing General Plan Framework

The County's efforts to prepare a General Plan for the unincorporated areas began in the 1970s with the creation of the Environmental Development Guide. In 1973, the County adopted its first General Plan,

## 4. Environmental Setting

followed by a comprehensive update in 1980. The existing General Plan defines policy for all unincorporated areas. Due to the size and complexity of the County, a single plan cannot adequately meet the needs of all the County's communities. As a result, the Existing General Plan consists of two major components: (1) Countywide chapters and elements that set the Countywide policy framework; and (2) areawide and community plans that deal with local issues of unincorporated communities. These community-based plans include area plans, community plans, neighborhood plans, and local coastal land use plans, which address neighborhood and/or community-level policy issues. All community-based plans are components of the General Plan and must be consistent with General Plan goals and policies

The County's adopted General Plan and community-based plans can be found online at <http://planning.lacounty.gov/plans/adopted>.

### Antelope Valley Areawide General Plan

The existing Antelope Valley Areawide General Plan (Adopted Area Plan) was adopted by the Los Angeles County Board of Supervisors on December 4, 1986. It contains regional goals and policies pertaining to land use, housing, community revitalization, community design, human resources, circulation, public services and facilities, governmental services, environmental resource management, noise abatement, seismic safety, public safety, and energy conservation.

The Adopted Area Plan identifies the types of land uses allowed in the Project Area and identifies where those uses may be located. Previous Table 3-1, *Buildout Statistics for the Adopted Area Plan*, shows the breakdown of the unincorporated areas by major land use category. Table 3-1 also estimates how many housing units, people, square feet of nonresidential space, and jobs would be located in the Project Area at theoretical buildout of the Adopted Area Plan. See Previous Figure 3-3, *Adopted Area Plan Land Use Policy Map (1986)*, for geographic placement of land use designations discussed in the Adopted Area Plan.

### Existing Zoning

The Los Angeles County Code, including Title 21, Subdivisions, and Title 22, Planning and Zoning, provide the basis for current zoning in the unincorporated areas. For each zone, the County Code provides development standards that govern such things as permitted land uses, minimum lot area, maximum height limit, required parking, yard requirements, and other standards as appropriate.

### Existing Land Use

Table 4-1 provides a summary of existing land uses within Project Area, including total acres, density, units, population, and employment.

## 4. Environmental Setting

**Table 4-1 Existing Land Uses in the Project Area**

Land Use Category	Acres	Units	Population	Bldg. Sq. Footage (in thousands)	Jobs
Commercial	2,070	0	0	2,148	4,076
Industrial	3,512	0	0	1,273	1,609
Open Space	15,484	0	0	99	300
Other	1,010,848	0	0	7,050	21,903
Public / Semi-Public	856	0	0	1,956	3,950
Residential	103,839	24,739	93,490	80,600	0
<b>Total</b>	<b>1,136,609</b>	<b>24,739</b>	<b>93,490</b>	<b>93,125</b>	<b>31,838</b>

Source: DRP 2013.

### 4.3.2 Descriptions of the Environmental Setting

The following is a broad overview of the Project Area’s existing environmental setting. Subsections of Chapter 5, *Environmental Analysis*, provide a more detailed description of the local environmental setting for specific topical areas.

#### Agriculture

Farmland in the Project Area is primarily located in the Antelope Valley and around the community of Acton. Important farmland, as defined and mapped by the state, is concentrated in the northwest Antelope Valley and in the central Antelope Valley east of Lancaster and Palmdale. The top five agricultural commodities by dollar value in 2012 in Los Angeles County were nursery production, vegetable crops, field crops, fruit and nut crops, and livestock production. These commodities are representative of those in the Project Area.

#### Biological Resources

Because the vast expanse of the Project Area includes mountains, deserts, grasslands, and riparian areas, biological resources in the region vary widely. They include numerous habitat types and special-status species. Detailed information for biological resources in the Project Area, including plant communities and wildlife, is provided in Section 5.3, *Biological Resources*, of this DEIR. Primary issues associated with biological resources include 1) preserving biotic diversity, which is continually threatened by development; 2) periodically monitoring and reporting on the status of Significant Ecological Areas (SEAs), which continually evolve over time; and 3) balancing private property rights against impacts to irreplaceable biological resources.

#### Air Quality and Greenhouse Gas Emissions

The Project Area spans two air basins and air districts. The northern portions of the Project Area are within the MDAB. The southern portion of the Project Area, which consists of the Angeles National Forest, is within the SoCAB. Depending on which air basin a site lies within, land use is subject to the rules and

## 4. Environmental Setting

regulations imposed by the SCAQMD or the AVAQMD, as well as the California AAQS adopted by CARB and National AAQS adopted by the EPA.

The Global Warming Solutions Act of 2006 (AB 32) manages and reduces greenhouse gas emissions in California. The Sustainable Communities and Climate Protection Act of 2008 (SB 375), is one of many bills that implement AB 32, and requires MPOs such as SCAG to coordinate land use, transportation and housing strategies and prepare a Sustainable Communities Strategy (SCS) to reduce greenhouse gas emissions to 1990 levels by the year 2020. SCAG adopted its SCS as part of its 2012 Regional Transportation Plan.

Additional information regarding air quality and climate change regulation affecting the Project Area is provided in Section 4.2.2, *Regional Planning Considerations*, above. Existing climate and air quality conditions in the Project Area are also analyzed in Sections 5.3, *Air Quality*, and 5.7, *Greenhouse Gas Emissions*, of this DEIR. Main issues associated with air quality and climate change in the Project Area involve 1) coordinating land use, transportation, and air quality planning, particularly with respect to protecting sensitive receptors (i.e., residences, schools, daycare centers, etc.) from the impacts of air pollution and reducing transportation-related emissions; and 2) responding to climate change, with an emphasis on reducing fossil fuel emissions related to transportation uses.

### Geologic Setting

The Project Area is typified by a variety of distinctive landforms and topography, ranging from flat-lying areas of little topographic relief such as the playa lakes and broad alluvial plains of the high Mojave Desert, to tectonically incised valleys such as the Leona Valley and the neighboring Portal and Ritter Ridges, to rugged mountain terrain along the north flank of the San Gabriel Mountains. Elevations are similarly varied, ranging from elevations of 2,100 to 2,800 feet above mean sea level (amsl) near the main population centers of Palmdale and Lancaster to peaks in the nearby San Gabriel Mountains that exceed 9,000 feet.

The Project Area is one of the most historically active seismic settings in North America. The Project Area includes portions of the San Andreas and Garlock fault systems. The probability that a large earthquake will occur along the San Andreas Fault sometime during the next 30 years is currently estimated to be 40 percent or greater. Since 1800, over 90 significant earthquakes have jolted the Los Angeles region. There are over 50 active and potentially active fault segments, an undetermined number of buried faults, and at least four blind thrust faults capable of producing damaging earthquakes in Los Angeles County.

The California Alquist-Priolo Earthquake Fault Zoning Act of 1972 and Section 113 of the County Building Code prohibit the location of most structures for human occupancy across the traces of active faults and lessen the impacts of fault rupture. In addition, the California Seismic Hazards Mapping Act of 1990 regulates developments. Seismic Hazard Zone Maps depict areas where earthquake-induced liquefaction or landslides have historically occurred, or where there is a high potential for such occurrences.

Additional information describing the existing geologic setting for the unincorporated areas, including a description of each of the active faults, is found in Section 5.6, *Geology and Soils*, of this DEIR. The main issues in the Project Area associated with geology and landform include 1) seismic hazards and the associated effects and damage caused by earthquakes; and 2) geotechnical, or hillside, hazards, since more than

## 4. Environmental Setting

50 percent of the Project Area is in hilly or mountainous terrain. The vast majority of hillside hazards include mud and debris flows, active deep-seated landslides, hillside erosion, and human-induced slope instability.

### Hazards and Hazardous Materials

Hazardous materials refer generally to hazardous substances that exhibit corrosive, poisonous, flammable, and/or reactive properties and have the potential to harm human health and/or the environment. Hazardous materials are used in products (household cleaners, industrial solvents, paint, pesticides, etc.) and in the manufacturing of products (electronics, newspapers, plastic products, etc.). Hazardous materials can include petroleum, natural gas, synthetic gas, acutely toxic chemicals, and other toxic chemicals that are used in agriculture, commercial, and industrial uses; businesses; hospitals; and households. Accidental releases of hazardous materials have a variety of causes, including highway incidents, warehouse fires, train derailments, shipping accidents, and industrial incidents. Additional information describing the environmental setting for existing hazards and hazardous materials, including wildfire hazards, emergency response plans, airport hazards, and the regulatory framework for the Project Area, is found in Section 5.8, *Hazards and Hazardous Materials*, of this DEIR.

### Historic and Cultural

Historic, cultural, and paleontological resources include historic buildings, structures, artifacts, sites, and districts of historic, architectural, archaeological, or paleontological significance. The Project Area has many historical landmarks and points of historical interest in its jurisdiction. As discussed in Section 5.5 of this DEIR, there are seven designated historic resources within the Project Area. The Project Area also contains fossils, unique geologic features, and sites important to Native Americans.

The County promotes cooperative efforts between public and private organizations to identify, restore, and conserve these resources. The County is guided in development decisions by federal, state, and local programs that officially recognize these resources, including programs administered and protected by the Los Angeles County Historical Landmarks and Records Commission, the California State Parks Department's Office of Historic Preservation, and the National Park Service, as well as by multiple legislative actions and codes including CEQA, the State Historical Building Code, the Archaeological Resources Protection Act of 1979, the Native American Heritage Act of 1992, and the National Historic Preservation Act of 1966. These agencies and measures coordinate and support public and private efforts to identify, evaluate, and protect the County's historic and archeological resources. Major issues associated with historic and cultural resources include 1) incompatible land uses and development on or adjacent to resources, 2) a lack of a local registry, and 3) the limitations of state and federal programs to protect resources. See DEIR Section 5.5, *Cultural Resources*, for additional information.

### Hydrology and Water Quality

The Project Area falls within the Antelope Valley, Santa Clara River, Los Angeles River, and San Gabriel River watersheds. The California and Los Angeles aqueducts also traverse the Project Area.

## 4. Environmental Setting

The County works with other stakeholders, including the Los Angeles County Flood Control District, in various ways to manage the function and health of its watersheds. In 1975, the Los Angeles RWQCB (Los Angeles Regional Board) adopted two basin plans: one for the Santa Clara Basin and another for the Los Angeles Basin. The Basin Plans designate beneficial uses for surface waters and establish water quality objectives and implementation programs and policies to protect those uses.

The National Pollutant Discharge Elimination System (NPDES) is a permitting program that establishes a framework for regulating municipal, industrial, and construction stormwater discharges into surface water bodies, including stormwater channels. The Los Angeles RWCQB and Lahontan RWCQB are responsible for implementing the federally mandated NPDES program in the Project Area. Consequently, the County has a Stormwater Ordinance that requires that the discharge, deposit, or disposal of any stormwater and/or runoff to storm drains must be covered by an NPDES Stormwater Permit. As part of its NPDES Program, the Los Angeles Regional Board adopted a new Municipal Separate Storm Sewer Permit (MS4 Permit) in 2012. The MS4 Permit imposes a number of basic programs in order to maintain a level of acceptable runoff conditions through the implementation of best management practices (BMPs) that mitigate stormwater quality problems.

Additional information describing the existing hydrology for the unincorporated areas is found in Section 5.9, *Hydrology and Water Quality*, of this DEIR.

### Mineral Resources

Mineral resources include existing surface mining activities and known deposits of commercially viable minerals and aggregate resources, as well as areas suitable for drilling and production of energy resources, including crude oil and natural gas.

The Los Angeles metropolitan area produces and consumes more construction aggregate than any other metropolitan area in the country. The County depends on the California Geological Survey (CGS) to identify deposits of regionally significant aggregate resources. In the Project Area, the CGS identifies three Mineral Resource Zone 2 (MRZ-2) areas, which are located in the Palmdale Production-Consumption Region. From west to east, they consist of the Little Rock Wash, the Big Rock Wash/Rock Creek area, and the Mescal Creek area. MRZ-2 zones cover areas where adequate information indicates that significant mineral deposits are present or likely and development should be controlled. There are currently 10 active mines in the Project Area, including two that are newly permitted. These mines produce sand, gravel, and decomposed granite. There are no known oil or natural gas resource areas in the Project Area.

The California Department of Conservation protects mineral resources to ensure adequate supplies for future production. The California Surface Mining and Reclamation Act of 1975 (SMARA) was adopted to encourage the production and conservation of mineral resources, prevent or minimize adverse effects to the environment, and protect public health and safety. In a joint regulatory effort, SMARA authorizes local governments to assist the state in issuing mining permits and monitoring site reclamation efforts. Title 22 of the County Code (Part 9 of Chapter 22.56) requires that applicants of surface mining projects submit a Reclamation Plan prior to receiving a permit to mine, which must describe how the excavated site will ultimately be reclaimed and transformed into another use. Major issues associated with mineral resources in

## 4. Environmental Setting

the County relate to the incompatible development of land near mineral resource extraction and production activities. See DEIR Section 5.11, *Mineral Resources*.

### Noise

The typical community noise environment is made up of background or “ambient noise,” and higher, “intrusive” levels of noise. In the Project Area, major sources of noise include transportation systems, such as commercial and private airports, rail and bus networks, and the regional freeway and highway system. Other major sources of noise have historically been identified with industrial uses, such as manufacturing plants.

A host of federal and regional agencies are tasked with addressing noise control and abatement in various capacities, depending on their jurisdiction, primarily related to transportation. These include the Occupational Safety and Health Administration (OSHA), the US Department of Transportation (DOT), the Federal Aviation Administration (FAA), the Federal Transit Administration (FTA), Federal Railroad Administration (FRA), the Federal Highway Administration (FHWA), and the County Airport Land Use Commission (ALUC).

Additional state and regional regulatory codes that relate to noise abatement include Title 24 of the Uniform Building Code, the Vehicle Code, the California Code of Regulations, and the County Noise Control Ordinance. Reducing noise impacts through coordinated land use and transportation planning is the primary issue associated with noise in the Project Area. See DEIR Section 5.12, *Noise*.

### Population and Housing

The County estimates that the existing population in the Project Area is 93,490 persons, representing 8.8 percent of Los Angeles County’s total population. The population within the Project Area grew from 66,800 to 73,590 between 2000 and 2010, or 10.1 percent. However, the majority of the population in Antelope Valley continues to be located in the incorporated cities of Palmdale and Lancaster (81 percent in 2010), which are not part of the Project Area.

According to US Census data, there were 21,803 housing units in the Project Area in 2000 and 26,962 housing units in 2010. The housing stock in the Project Area increased by 19.1 percent between 2000 and 2010. The Antelope Valley experienced a housing construction boom during the early- and mid-2000s. Although the majority of the development occurred within the cities of Lancaster and Palmdale, thousands of new units were constructed in the Project Area. For additional information, see Section 5.13, *Population and Housing*, of this DEIR.

### Public Services and Utilities

Public services and facilities provide for drinking water, sanitary sewers, solid waste, utilities, public safety, education, and libraries.

## 4. Environmental Setting

### *Drinking Water*

The County provides a continuous supply of clean water for everyday uses in the Project Area through a complex water management system, which consists of numerous water providers, water control boards, and other agencies. A combination of local and imported water supplies is delivered through an intricate system of aqueducts, reservoirs, and groundwater basins. Water is imported into the County from three sources: the Colorado River, the Bay Delta in Northern California via the State Water Project, and the Owens Valley via the Los Angeles Aqueduct.

Water services are provided by a complex network of water districts, water wholesalers, and private companies that specialize in developing and improving water service for their customers. Most of the imported water utilized in the unincorporated areas is provided by the Metropolitan Water District, Castaic Lake Water Agency, Antelope Valley/East Kern Water Agency, Littlerock Creek Irrigation District, and the Palmdale Water District. In accordance with the California Urban Water Management Planning Act of 1983, every urban water supplier that annually serves 3,000 or more customers, or provides more than 3,000 acre-feet of water, must prepare and adopt an Urban Water Management Plan (UWMP) that evaluates and addresses water supplies, reclamation programs, and conservation activities.

The overall demand for water is projected to increase dramatically to 2035, and the cost, quality and availability of water will affect future development patterns. Major issues associated with drinking water include 1) the need for the Project Area to reduce its reliance on imported water sources (e.g., two-thirds of residential water use is attributed to landscape maintenance); and 2) the need to increase the water supply through recycling and desalination.

### *Sanitary Sewers*

The Sanitation Districts of Los Angeles County (LACSD), the Consolidated Sewer Maintenance District (CSMD), and municipal septic or wastewater systems all contribute to ensuring that the sanitary sewage system operates properly to protect public health. The LACSD, which are a confederation of 24 independent districts, serve the wastewater and solid waste management needs of approximately 5.2 million people, cover over 800 square miles, and service 78 cities and the unincorporated areas. As of 2005, the LACSD owned, operated, and maintained 1,340 miles of sewers that conveyed 510 million gallons per day (gpd) of wastewater—200 million gpd of which is recycled—to 11 wastewater treatment plants. The service areas for the County's sewer systems include the Joint Outfall System, which is a partnership of 17 of the 24 independent sanitation districts in the Santa Clarita Valley and Antelope Valley.

The County Department of Public Works (DPW), on behalf of the CSMD, maintains 4,600 miles of main line sewers, 155 pumping stations, and four sewage treatment plants. The DPW Environmental Programs Division also permits and inspects industrial waste discharge into local sewers. The Sewer System Management Plan (SSMP) controls and mitigates sewer overflows. Major issues associated with the County's sewer systems in the unincorporated areas are their age and need for upgrades.

## 4. Environmental Setting

### *Solid Waste*

The County has the largest solid waste management system in the country. There are seven major solid waste landfills, four minor solid waste landfills and two waste-to-energy facilities in Los Angeles County. In 2012, the County generated, on average, approximately 59,000 tons per day (tpd) of solid waste. Assembly Bill 939, also known as the California Integrated Waste Management Act of 1989, mandates local jurisdictions to meet a diversion goal of 50 percent by 2000 and thereafter. Major issues identified with respect to solid waste include 1) the growing amounts of waste being generated and disposed of; 2) a shortage of solid waste processing facilities; 3) strong public opposition for new solid waste management facilities; 4) promoting alternative technologies; and 5) trash hauling. Most solid waste generated in the Project Area is disposed at the Antelope Valley Public Landfill in Palmdale and the Lancaster Landfill and Recycling Center in Lancaster.

### *Utilities*

The County's utility infrastructure, information, and communication networks are layered with utility rights-of-way and properties that contain tower structures, substations, generating plants, pipelines, storage fields, valve stations, wells, radio and television studios, and other equipment facilities. In the Project Area, most electric, natural gas, or telecommunication services are delivered by private service providers. Major issues associated with utility services in the unincorporated areas include 1) the need to upgrade the power grid and service capabilities and educate the public on energy conservation; 2) problems associated with the region's substantial population growth outpacing the development of new natural gas supplies, much of which is imported from out of state; and 3) land use compatibility in siting infrastructure facilities that are necessary for the delivery of energy and information resources, especially finding locations with specific geologic conditions to ensure efficiency and reliability.

### *Education*

The Project Area is served by 17 school districts. The County's role in developing and managing educational facilities and programs is limited. However, the Los Angeles County Office of Education (COE), which is the country's largest regional education agency, serves as an intermediary between the local school districts and the California Department of Education. The COE is guided by a seven-member County Board of Education, which is appointed by the Board of Supervisors. The COE provides a vision statement and strategic opportunities for educational facility development to coordinate the assessment of facility needs and the construction of schools that fall to individual school districts. Another role that the County plays in coordinating public school facilities is through the County subdivision approval process, in which developers are required to assess the need for, and in some cases provide, land for the construction of public schools within their development. Development impact fees, based on the size of a development, are distributed to the appropriate school district for the construction of school facilities before the County issues any building permits. Issues associated with educational facilities involve 1) the effective coordination between land use planning and school facilities planning—providing the benefit of joint-use agreements to benefit communities and create operational and economic efficiencies; and 2) the shortage of early care and education facilities in the unincorporated areas.

## 4. Environmental Setting

### *Libraries*

Library services in the Project Area are provided by the County. There are four public libraries in the Project Area: the Acton-Agua Dulce, Littlerock, Lake Los Angeles, and Quartz Hill libraries.

The County of Los Angeles Public Library is one of the largest public library systems in the country. In fiscal year 2011–2012, the Library staff circulated 16.5 million items to 3.1 million cardholders; answered over 8 million reference questions; provided 18,000 programs to 500,000 children, teens, and adults; and assisted the public with three million internet sessions on the Library's public access computers. The library system is a specially funded County department operating under the direction of the Board of Supervisors. The County applies a library facilities mitigation fee to new residential developments in unincorporated areas. This fee is intended to mitigate the significant adverse impacts of increased residential development on the library system.

The majority of the County's 86 libraries are undersized and understocked to meet the service needs of current and projected populations served by the Library system. A study conducted by the Library in April 2001 determined that many of the County's libraries do not meet basic facility and service planning guidelines. In addition, the study determined that by 2020, 77 percent of existing libraries will not meet the Library's current service level planning guideline of 2.75 items (books and other library materials) per capita. Many existing County libraries are located in areas with little or no new residential development, and therefore, there are no mitigation fees or other reliable sources of capital funding available to replace or expand them.

### *Sheriff*

LASD is the largest sheriff's department in the country. In addition to specialized services, the LASD is divided into 10 divisions, including the Office of Homeland Security, which focuses on potential threats related to local homeland security issues, such as terrorism or bioterrorism. In addition to proactive enforcement of criminal laws, LASD also provides investigative, traffic enforcement, accident investigation, and community education functions. LASD also maintains mutual aid agreements across jurisdictional boundaries for emergency response needs that exceed local resources.

LASD's Field Operation Regions are centered on 25 patrol stations that are dispersed throughout Los Angeles County. The Project Area is almost entirely located within Field Operation Region I. The Antelope Valley is served from Sheriff's stations located in Lancaster and Palmdale.

### *Fire*

The Los Angeles County Fire Department (LACoFD) provides fire, safety, and emergency medical services in the Project Area. There are three major geographic regions in the LACoFD service area, which are divided into 9 divisions and 22 battalions. The Project Area is primarily located in the service area of Division 5. LACoFD operates multiple divisions including Air and Wildland, Fire Prevention, Forestry, and Health Hazardous Materials. LACoFD is a special district and receives most of its revenue from the unincorporated areas from a portion of the ad valorem property tax paid by the owners of all taxable properties. Major issues

## 4. Environmental Setting

associated with fire hazards include 1) the increase in the frequency and duration of wild fires and the increasing cost and danger to residents, property, and the environment; and 2) urban fire considerations due to the intensity of development, the number of potentially affected populations, and the difficulties of containment.

### *Parks*

The County owns and operates parks and recreational facilities in unincorporated areas of Los Angeles County, including the Project Area. The County's park system, including facilities that are owned, operated, and maintained by the County totals nearly 70,000 acres. The system includes local parks (i.e., community parks, neighborhood parks, pocket parks, and park nodes), regional parks (i.e., community regional parks, regional parks, and special use facilities), trails, as well as other facilities such as multi-benefit parks, school sites, city parks and facilities, private recreational facilities, and greenways. These facilities serve the local needs of communities in the unincorporated areas, as well as regional needs countywide. The County Department of Parks and Recreation (DPR) offers a wide variety of recreation programs to meet the diverse needs of residents, ranging from organized sports, tournaments, scheduled classes, and special events, to more individualized, casual leisure activities such as family picnics and walking. The County pays for its parks and recreational resources through the collection of fees through the California Quimby Act, Proposition A, the California Landscaping and Lighting District assessments, and Mello-Roos Districts. Major issues associated with parks include the need to 1) plan for a diversity of needs and users; 2) acquire and develop additional parkland in underserved areas; 3) improve and expand the multi-use trail system; 4) protect important historical and natural resources; and 5) design and implement sustainable practices.

### *Flood Control*

Federal, state, and local agencies share and coordinate responsibilities for flood protection in Los Angeles County. The two main federal agencies include the US Army Corps of Engineers, which implements federal flood protection policies, and the Federal Emergency Management Agency (FEMA). The California Department of Water Resources is responsible for managing the state's waterways. Locally, the DPW and the Los Angeles County Flood Control District work to reduce flood risk in Los Angeles County. Since 1980, the County has been a voluntary participant in the FEMA National Flood Insurance Program (NFIP). As a participant, the County is responsible for regulating development in Flood Hazard Zones and planning for floodplain management activities that promote and encourage the preservation and restoration of the natural state of the floodplain.

Additional information describing the existing provision of services and utilities in the Project Area is found in Sections 5.14, *Public Services*, 5.15, *Recreation*, and 5.17, *Utilities and Service Systems*, of this DEIR.

### **Scenic Features**

Scenic resources in the unincorporated areas consist of designated scenic highways and corridors (or routes), hillsides, viewsheds, and ridgelines. The Project Area contains one designated state scenic highway and one eligible highway. Scenic viewsheds vary by location and community and include mountains, ridgelines, unique rock outcroppings, unusual or scenic landforms, and long-range views of the Mojave Desert. Major issues

## 4. Environmental Setting

associated with scenic resources involve 1) their protection from human activities; and 2) regulation of hillsides and hillside development. The existing County hillside management area (HMA) regulations apply to all unincorporated areas that contain terrain with a natural slope of 25 percent or greater. The goal of the provisions is to protect resources contained in hillside management areas from incompatible development, which may result in or have the potential for environmental degradation and/or destruction of life and property. The purpose of the ordinance is not to preclude development, but ensure to the extent possible that the natural topography, resources and amenities of hillside management areas are maintained and where possible, enhanced. See DEIR Section 5.1, *Aesthetics*. The County's existing SEA regulations also maintain the Project Area's scenic features by identifying them for protection.

### Traffic and Circulation

The Antelope Valley has a backbone of two major freeways, the Golden State Freeway (I-5) and the Antelope Valley Freeway (SR-14). State Route 138, a major highway, connects the two freeways across the northern edge of Los Angeles County and continues across the southern Antelope Valley to Victorville and I-15 in San Bernardino County. Caltrans is the state agency responsible for the maintenance of freeways and highways. The County is responsible for the design, construction, operation, maintenance, and repair of roads in the unincorporated areas.

Public transit in the Project Area is provided by Amtrak (bus), the Antelope Valley Transit Authority, and Metrolink. The Transportation Division of DPW coordinates with these agencies to ensure that transportation in the Project Area is efficient and safe.

There are two public-use airports/airfields within the region: General William J. Fox Airfield (Fox Airfield) in Lancaster and Palmdale Regional Airport in Palmdale. Neither of these airports is located within the Project Area. However, the airport influence area for both airports extends into the Project Area.

Major issues associated with circulation and mobility include the need to 1) provide streets that accommodate all users; 2) create a multimodal transportation system; 3) coordinate transportation and land use planning; 4) ensure a safe and efficient movement of goods; and 5) reduce impacts of transportation on natural and community resources. See DEIR Section 5.16, *Transportation and Traffic*.

## 4.4 ASSUMPTIONS REGARDING CUMULATIVE IMPACTS

Section 15355 of the CEQA Guidelines defines cumulative impacts as “two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.” Cumulative impacts are the change caused by the incremental impact of an individual project compounded with the incremental impacts from closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.

Section 15130 of the CEQA Guidelines states that cumulative impacts shall be discussed when the project's incremental effect is considerable. It further states that this discussion of cumulative impacts shall reflect the severity of the impacts and the likelihood of occurrence, but the discussion need not provide as great detail

## 4. Environmental Setting

as is provided for the effects attributable to the project alone. The CEQA Guidelines (Section 15130 [b][1]) state that the information utilized in an analysis of cumulative impacts should come from one of two sources:

- 1) A list of past, present and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency; or
- 2) A summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or areawide conditions contributing to the cumulative impact. Any such planning document shall be referenced and made available to the public at a location specified by the lead agency.

The cumulative impact analysis contained in this DEIR uses method No. 2.

On April 4, 2012, SCAG adopted the 2012 RTP/SCS to help coordinate development of the region's transportation improvements. The RTP is a long-range transportation plan that is developed and updated by SCAG every four years. The RTP provides a vision for transportation investments throughout the region. Using growth forecasts and economic trends that project out over a 20-year period, the RTP considers the role of transportation in the broader context of economic, environmental, and quality-of-life goals for the future, identifying regional transportation strategies to address mobility needs.

For all topic areas besides traffic/transportation, this DEIR uses growth projections calculated by SCAG for the North Los Angeles County subregion. These growth assumptions were calculated as part of the RTP/SCS. The subregion includes the Project Area, Santa Clarita Valley, and the cities of Lancaster, Palmdale, and Santa Clarita. Cumulative growth projections for the North Los Angeles County subregion are shown below in Table 4-2.

**Table 4-2 Cumulative Growth Projections Existing, 2035, and Post-2035**

	Existing	2035 <sup>2</sup>	Post-2035 <sup>1</sup>	Projected Growth Rate
<b>Project Area</b>				
Housing Units	24,739 <sup>1</sup>	N/A	106,180	76.8%
Population	93,490 <sup>1</sup>	N/A	405,410	77.0%
Employment	31,838 <sup>1</sup>	N/A	134,351	76.4%
Jobs/Housing Ratio	1.3		1.3	
<b>North Los Angeles County Subregion</b>				
Housing Units	200,636 <sup>2</sup>	304,241	N/A	34.1%
Population	651,929 <sup>2</sup>	946,557	N/A	31.1%
Employment	213,899 <sup>2</sup>	321,743	N/A	33.6%
Jobs/Housing Ratio	0.94	0.94		
<b>Project Area as a Percent of Total</b>				
Housing Units	12.3%		34.9%	
Population	14.3%		42.8%	
Employment	14.9%		41.8%	

Notes: The Proposed Project will not be built out within the SCAG RTP/SCS horizon of 2035. N/A = Data not available.

<sup>1</sup> County of Los Angeles 2014.

<sup>2</sup> SCAG 2012-2035 RTP/SCS.

## 4. Environmental Setting

Potential cumulative impacts related to traffic, air quality, greenhouse gas emissions and noise, which have the potential for impacts beyond the boundaries of the Project Area, have been addressed through use of a traffic model. To assess the effects of potential land use changes on the transportation system, the regional travel demand model based on SCAG's regional traffic model has been applied. The North Los Angeles County Subarea Traffic Model includes the North Los Angeles County SCAG subregion discussed above as well as regional traffic from southern Kern County. Thus, the model is the appropriate tool to test changes in land uses with the Proposed Project, and to also take into account changes and growth in the surrounding cities. The SCAG model includes a 2012 base year and a 2035 future horizon year. Both models were used for this analysis. The 2012 model is used for the "Existing plus Project" analysis for purposes of CEQA review, and the future 2035 model was also reviewed to understand future buildout of land uses at 2035.

Regional growth outside of the Project Area has accounted for traffic, air quality, and noise impacts through use of this model, which is a socioeconomic traffic model that uses regional growth projections to calculate future traffic volumes. The growth projections developed by the County, along with growth for the surrounding area, are used for the cumulative impact analyses of this DEIR. Please refer to Chapter 5 of this DEIR for a discussion of the cumulative impacts associated with development and growth within the unincorporated areas and the Los Angeles region.