5.17 UTILITIES AND SERVICE SYSTEMS

This section of the Draft Environmental Impact Report (DEIR) evaluates the potential for implementation of the Proposed Antelope Valley Area Plan and associated actions (Proposed Project) to impact utilities and service systems.

5.17.1 Wastewater Treatment and Collection

5.17.1.1 ENVIRONMENTAL SETTING

Regulatory Background

Federal

Wastewater treatment before effluent is discharged to Waters of the United States is required by the federal Clean Water Act (CWA), United States Code, Title 33, Sections 1251 et seq. The federal Clean Water Act (CWA) is described in further detail in Section 5.9, *Hydrology and Water Quality*, of this DEIR.

State

In California, State Water Resources Control Board (SWRCB) is responsible for ensuring the highest reasonable quality of waters of the State, while allocating those waters to achieve the optimum balance of beneficial uses. The SWRCB's current challenge is exacerbated by California's rapid population growth, and the continuing struggle over precious water flows. It faces tough new demands which include fixing ailing sewer systems; building new wastewater treatment plants; and tackling the cleanup of underground water sources impacted by the very technology and industry that has catapulted California into global prominence. Additionally, the SWRCB will continue to focus on its most vexing problem of nonpoint source pollution, or polluted runoff, which is difficult to categorize, isolate and resolve.

The 1969 Porter-Cologne Water Quality Control Act, codified in the California Water Code, authorizes the SWRCB to implement programs to control polluted discharges into State waters. This law essentially implements the requirements of the CWA. Pursuant to this law, the local Regional Water Quality Control Board (RWQCB) is required to establish the wastewater concentrations of a number of specific hazardous substances in treated wastewater discharge.

Regional

Los Angeles County Sanitation Districts Connection Fees

Capital improvements to Los Angeles County Sanitation Districts (LACSD) water reclamation plants are funded from connection fees charged to new developments, redevelopments, and expansions of existing land uses. The connection fee is a capital facilities fee used to provide additional conveyance, treatment, and disposal facilities (capital facilities) required by new users connecting to the LACSD sewerage system or by existing users that significantly increase the quantity or strength of their wastewater discharge. The Connection Fee Program ensures that all users pay their fair share for any necessary expansion of the system (Raza 2013). Estimated wastewater

generation factors used in determining connection fees in the LACSD's 22 member Districts are set forth in the Connection Fee Ordinance for each respective District available on LACSD's website.

County of Los Angeles Grading Code

Requirements for erosion control and water quality for grading operations are set forth in Title 26 of the Los Angeles County (County) Code. National Pollutant Discharge Elimination System (NPDES) compliance is required for all projects within the Project Area.

For small residential construction sites with a disturbed, graded area less than one acre, stormwater pollution control measures/best management practices (BMPs) must be incorporated on the site during construction.

For all new non-residential projects consisting of a disturbed, graded area less than one acre, an Erosion and Sediment Control Plan (ESCP), which should include specific BMPs to minimize the transport of sediment and protect public and private property from the effects of erosion, flooding, or the deposition of mud, debris, or construction-related pollutants, is required prior to issuance of a grading permit by the County.

In addition to an ESCP, for construction sites with a disturbed, graded area of one acre or greater, a State Storm Water Pollution Prevention Plan (State SWPPP) must be prepared and a Notice of Intent (NOI) filed with the SWRCB. Filing of a NOI and attainment of a Waste Discharge Identification number from the State is necessary for projects of this magnitude prior to issuance of a grading permit by the County. State SWPPP's prepared in accordance with the Construction General Permit can be accepted as ESCPs.

All active grading projects with grading proposed within the rainy season, October 15 to April 15 of each calendar year, must update the ESCP on file with the County annually and have all BMPs installed prior to the beginning of the rainy season or as determined by the County's building official.

Los Angeles County Flood Control District Code

Chapter 21 of the County Flood Control District Code, *Stormwater and Runoff Pollution Control*, sets forth requirements regulating discharges to Los Angeles County Flood Control District (LACFCD) storm drains. The following discharges to County storm drains are prohibited:

- Discharges of stormwater containing pollutant concentrations which exceed or contribute to the exceedance of a water-quality standard.
- Nonstorm water discharges unless authorized by an NPDES Permit and by a permit issued by the Chief Engineer.
- Discharges of sanitary or septic waste or sewage from any property or residence, any type of recreational vehicle, camper, bus, boat, holding tank, portable toilet, vacuum truck or other mobile source, or any waste holding tank, container or device.
- Pollutants, leaves, dirt, or other landscape debris (County Flood Control District Code Sections 21.07 and 21.09).

Existing Conditions

Wastewater Treatment Process

Sanitary wastewater is treated in the following three phases:

- **Primary Treatment:** removal of solids using settling tanks;
- **Secondary Treatment:** reduction of organic matter using bacteria and oxygen; followed by further removal of solids; and
- **Tertiary Treatment:** filtration of wastewater to remove any solids remaining after the first two phases of treatment.

Most wastewater that undergoes tertiary treatment is disinfected after tertiary treatment. Disinfection methods include chlorine bleach and ultraviolet light. Tertiary-treated wastewater is often reused (i.e. recycled) for landscape and agricultural irrigation, groundwater recharge, and industrial uses.

Wastewater Treatment Facilities

Parts of the Antelope Valley, including some unincorporated areas and portions of the cities of Lancaster and Palmdale, are in LACSDs 14 and 20.

Each of the wastewater treatment facilities described below provides primary, secondary, and tertiary treatment; the facilities are mapped on Figure 5.17-1, *Wastewater Treatment Facilities*.

- **LACSD Lancaster Water Reclamation Plant (WRP),** near the intersection of Sierra Highway and Avenue D in the City of Lancaster, has a capacity of 17 million gallons per day (MGD) and treated average flows of 14 MGD in 2013 (LACSD 2014).
- **LACSD Palmdale WRP,** near the intersection of 30th Street East and Avenue P in the City of Palmdale, has a 12 MGD capacity and treated average flows of 8.7 MGD in 2013 (LACSD 2014).

Estimated Wastewater Generation, Existing Conditions

Estimated wastewater generation is 60 percent of estimated current water use of 166 gallons per day.[1] Thus, for the existing Project Area population of 93,490, wastewater generation is estimated as 9,311,604 gallons per day.

[1] 166 gallons per day is the baseline water use for the Antelope Valley region (AVRWMG 2013) estimated per the California 20x2020 Water Conservation Plan; see Section 5.17.2, *Water Supply and Distribution Systems*, below for further discussion.

Wastewater Collection

The Consolidated Sewer Maintenance District of Los Angeles County, administered by County Department of Public Works (DPW), operates and maintains more than 4,600 miles of sanitary sewers serving the unincorporated areas (except for Marina del Rey) and 40 cities.

Additionally, the LACSD owns, operates, and maintains about 1,400 miles of sewers ranging from 8 to 144 inches in diameter that convey 500 MGD to 11 wastewater treatment plants (LACSD 2014b).

The LACSD has two districts in the Antelope Valley:

- **County Sanitation District (CSD) No. 14** – This district serves most of Lancaster, adjacent unincorporated County areas, and portions of north Palmdale. CSD No. 14 owns, operates, and maintains the Lancaster WRP and approximately 72 miles of truck sewers ranging in diameter from 8 inches to 66 inches.

- **CSD No. 20** – This district serves most of Palmdale and adjacent unincorporated County areas. CSD No. 20 owns, operates, and maintains the Palmdale WRP and approximately 42 miles of truck sewers ranging in diameter from 8 inches to 48 inches.

5.17.1.2 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:

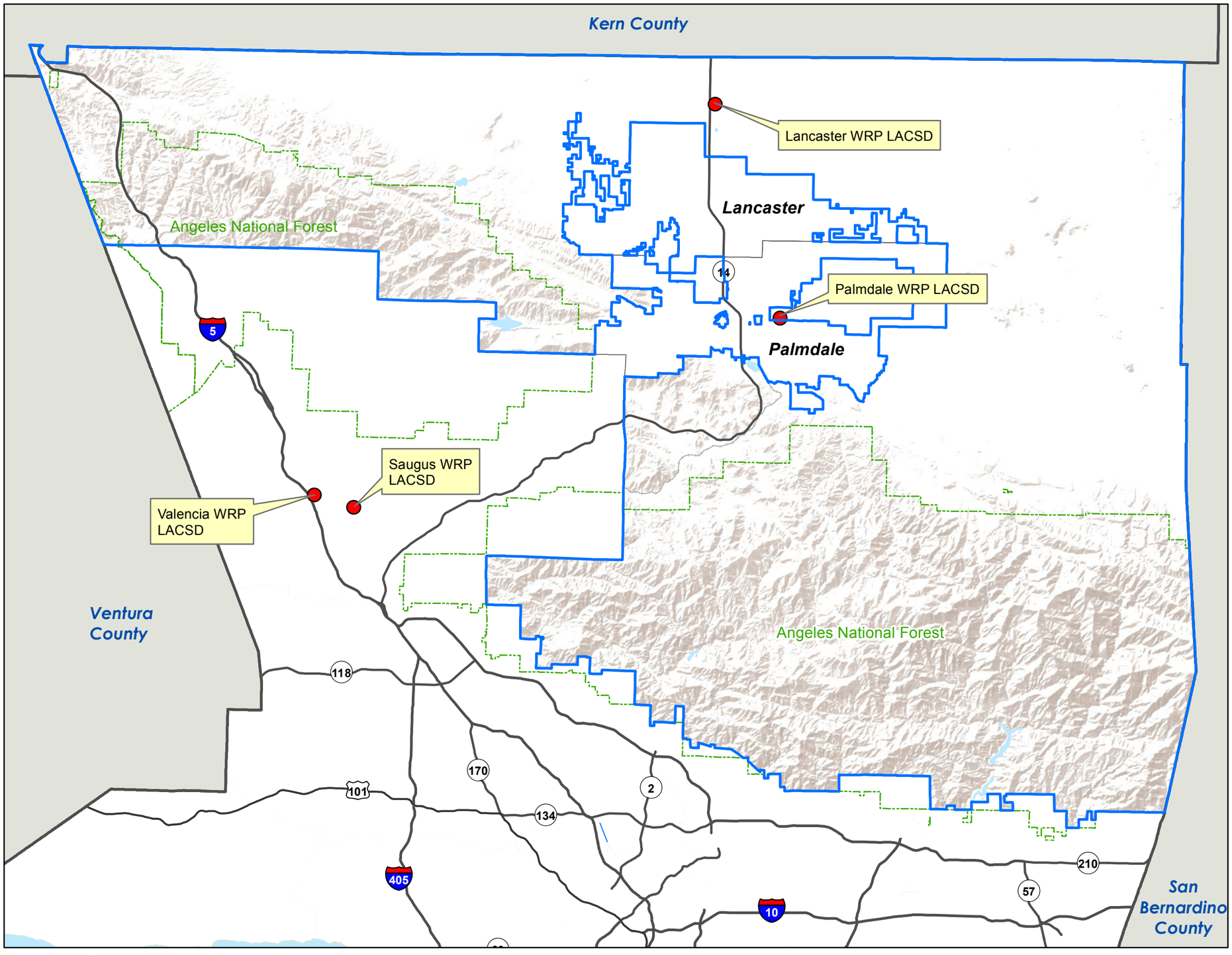
U-1 Would exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board.

U-2 Would require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

U-5 Would result in a determination by the wastewater treatment provider which serves or may serve the project that is has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments.

FIGURE 5.17-1

WASTEWATER TREATMENT FACILITIES



Wasterwater Facilites

Antelope Valley Project Area

NOTE:
LACSD: Los Angeles County Sanitation Districts

WRP: Water Reclamation Plant

Source: LACSD 2014, LABS 2014, LVMWD 2014

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PLACEWORKS

5. Environmental Analysis
UTILITIES AND SERVICE SYSTEMS

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5.17.1.3 RELEVANT AREA PLAN GOALS AND POLICIES

Following is a list of the goals and policies from the Proposed Project that are intended to reduce potentially significant adverse effects related to wastewater treatment and collection.

Conservation and Open Space Element

Goal COS 1: Growth and development are guided by water supply constraints.

- **Policy COS 1.2:** Limit the amount of potential development in areas that are not or not expected to be served by existing and/or planned public water infrastructure 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.

- **Policy COS 1.4:** Promote the use of recycled water, where available, for agricultural and industrial uses and support efforts to expand recycled water infrastructure.

Goal COS 2: Effective conservation measures provide an adequate supply of clean water to meet the present and future needs of humans and natural ecosystems.

- **Policy COS 2.2:** Require low-flow plumbing fixtures in all new developments.

- **Policy COS 2.3:** Require onsite stormwater infiltration in all new developments through the use of appropriate measures, such as permeable surface coverage, permeable paving of parking and pedestrian areas, catch basins, and other low impact development strategies.

- **Policy COS 2.6:** Support experiments in alternate forms of water provision and re-use, such as "air to water technology" and gray water systems.

Goal COS 3: A clean water supply untainted by natural and man-made pollutants and contaminants.

- **Policy COS 3.1:** Discourage the use of chemical fertilizers, herbicides and pesticides in landscaping to reduce water pollution.

- **Policy COS 3.2:** Restrict the use of septic systems in areas adjacent to aqueducts and waterways to prevent wastewater intrusion into the water supply.

- **Policy COS 3.3:** Require a public or private sewerage system for land use densities that would threaten nitrate pollution of groundwater if unsewered, or when otherwise required by County regulations.

- **Policy COS 3.4:** Support preservation, restoration and strategic acquisition of open space to preserve natural streams, drainage channels, wetlands, and rivers, which are necessary for the healthy functioning of ecosystems.

- **Policy COS 3.5:** Protect underground water supplies by enforcing controls on sources of pollutants.

5.17.1.4 ENVIRONMENTAL IMPACTS

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

Impact 5.17-1: Wastewater generated by buildout of the Proposed Project would not exceed wastewater treatment requirements of any of the four Regional Water Quality Control Boards having jurisdiction in Los Angeles County. [Threshold U-1].

Impact Analysis:

Individual development projects built pursuant to the Proposed Project would be subject to the following construction and operational requirements:

Stormwater

Discharges from Construction Operations

Wastewater treatment requirements for discharges to stormwater in the Lahontan RWQCB region are regulated under Sections J110 and J111 of Title 26 of the County Code, and with Chapter 21 of the Los Angeles County Flood Control District Code. SWPPPs, which estimate sediment risk from construction activities to receiving waters, and specify BMPs that would be used by the project to minimize pollution of stormwater, are required for construction sites with a disturbed, graded area of one acre or greater. SWPPPs are also required under the Statewide General Construction Permit for construction sites of one acre or greater area in the portions of the Project Area in the Los Angeles, and Central Valley RWQCB regions. Note that the great majority of the developed area in the Project Area is in the Lahontan RWQCB region; the portion of the Project Area in the Los Angeles RWQCB region is mostly uninhabited areas of the San Gabriel Mountains.

Discharges from Operation of Land Uses

Unauthorized waste discharges to Waters of the State are prohibited. Such waste discharges may be authorized under an Individual Permit.

Sanitary Wastewater

Discharge limits for concentrations of hazardous materials – and other substances that could interfere with wastewater treatment processes – discharged into sanitary sewers are set by wastewater treatment agencies. Wastewater treatment facilities can treat sanitary wastewater meeting discharge limits. Implementation of the Proposed Project policies and required regulations would mitigate this impact and impacts would be less than significant.

Impact 5.17-2:	Sanitary wastewater generated by buildout of the Proposed Project could be adequately treated by the wastewater treatment providers serving the unincorporated areas. [Thresholds U-1, U-2 (part), and U-5]

Impact Analysis:

Wastewater Generation

Wastewater generation at Proposed Project buildout from all land uses is estimated as 76 gallons per capita per day (gpcd).[2] The forecast net increase in population due to Proposed Project buildout is 311,920. Therefore, forecast net increase in wastewater generation is about 23.7 million gallons per day.

Wastewater Generation Compared to Residual Wastewater Treatment Capacity

Residual wastewater treatment capacity is capacity that is currently unused and is available to accommodate future growth. The residual capacities reported below are calculated from capacities and average flows reported above in Section 5.17.1.1, *Environmental Setting*. The Lancaster WRP had residual capacity of 3 MGD in 2013, and the Palmdale WRP had residual capacity of 3.3 MGD, for a total capacity of 6.3 MGD in the Project Area. Currently there is not adequate residual wastewater treatment capacity in the Project Area to accommodate the projected net increase in wastewater generation due to Proposed Project buildout.

Funding for Capital Improvements to LACSD Water Reclamation Plants

Capital improvements to LACSD water reclamation plants are funded from connection fees charged to new developments, redevelopments, and expansions of existing land uses. The connection fee is a capital facilities fee used to provide additional conveyance, treatment, and disposal facilities (capital facilities) required by new users connecting to the LACSD's sewerage system or by existing users who significantly increase the quantity or strength of their wastewater discharge. The Connection Fee Program ensures that all users pay their fair share for any necessary expansion of the system (Raza 2013). Estimated wastewater generation factors used in determining connection fees in the LACSD's 22 member Districts are set forth in the Connection Fee Ordinance for each respective District available on LACSD's website.

Projects developed pursuant to the Proposed Project would pay connection fees to the LACSD as applicable. Payments of such fees would reduce adverse impacts to wastewater generation capacity in the Project Area.

5.17.1.5 CUMULATIVE IMPACTS

As discussed in Section 4.4, *Assumptions Regarding Cumulative Impacts,* the cumulative impact area for the Proposed Project is SCAG's North Los Angeles County Subregion, which includes all unincorporated areas of Los Angeles County located within the Antelope Valley and Santa Clarita Valley areas, as well as the incorporated cities of Palmdale, Lancaster, and Santa Clarita.

[2] The wastewater generation factor, 76 gpcd, is from the Los Angeles County Climate Action Plan (LACDPW 2014a).

Cumulative forecasted wastewater generation for the Proposed Project and future cumulative development are shown below in Table 5.17-1. As discussed above, total wastewater treatment capacity in the Project Area is 29 MGD, and the combined residual treatment capacity at the two WRPs is 6.3 MGD.

Table 5.17-1 Cumulative Wastewater Generation Existing, 2035, and Post–2035

	Existing		2035[2]		Post–2035[1]	
	Population	Wastewater Generation (gpd)	Population	Wastewater Generation (gpd)	Population	Wastewater Generation (gpd)
Project Area	93,490[1]	9,311,604	N/A	N/A	405,410	30,811,160
North Los Angeles County Subregion	651,929[2]	49,546,604	946,557	71,938,332	N/A	N/A

Notes:
The Proposed Project will not be built out within the SCAG RTP/SCS horizon of 2035.
N/A = Data not available.
Gpd =gallons per day.
[1] County of Los Angeles 2014.
[2] SCAG 2012–2035 RTP/SCS.

The LACSD provides wastewater treatment in the Santa Clarita Valley at two water reclamation plants:

- The **Valencia WRP** has 21.6 MGD capacity; and in 2013 had average wastewater flows of 14.5 MGD and residual capacity of 7.1 MGD.
- The **Saugus WRP** has 6.2 MGD capacity; and in 2013 had average wastewater flows of 5.2 MGD and residual capacity of 1.0 MGD.

The total residual capacity of the four WRPs serving the Project Area and the Santa Clarita Valley in 2013 was 14.4 MGD.

The impacts of the buildout of the Santa Clarita Valley Area Plan on wastewater treatment capacity were thoroughly analyzed in the certified Program EIR for the Santa Clarita Valley Area Plan. Impacts were identified as less than significant in the certified Santa Clarita Valley Area Plan Program EIR. The analysis and less than significant impact conclusion is incorporated by reference in this DEIR.

Cumulative wastewater generation for the North Los Angeles County Subregion is projected to be approximately 71.9 MGD in 2035. Total wastewater treatment capacity in the Project Area and the Santa Clarita Valley area is 56.8 MGD, which is inadequate to serve the projected population for 2035. New and/or expanded wastewater treatment facilities would be required to meet such demands. However, cumulative impacts would be less than significant since cumulative development projects would pay connection fees to the LACSD as applicable. Payments of such fees would fund treatment plant expansions necessary to serve future development. Therefore, cumulative impacts related to wastewater treatment are not considered significant.

5.17.1.6 EXISTING REGULATIONS AND STANDARD CONDITIONS

Federal

- Clean Water Act

State

- Porter-Cologne Water Quality Control Act
- Statewide General Construction Permit

Regional

- Los Angeles County Sanitation Districts Connection Fees
- Los Angeles County Grading Code (County Code of Ordinances Title 26)
- Los Angeles County Flood Control District Code Chapter 21

5.17.1.7 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Upon implementation of regulatory requirements and standard conditions of approval, the following impacts would be less than significant: Impact 5.17-1 and 5.17-2. This determination applies to both direct and cumulative impacts.

5.17.1.8 MITIGATION MEASURES

No mitigation measures are required.

5.17.1.9 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Impacts would be less than significant. This determination applies to both direct and cumulative impacts.

5.17.2 Water Supply and Distribution Systems

5.17.2.1 ENVIRONMENTAL SETTING

Regulatory Background

Federal

Safe Drinking Water Act

Passed in 1974 and amended in 1986 and 1996, the Safe Drinking Water Act (SDWA) gives the U.S. Environmental Protection Agency (USEPA) the authority to set drinking water standards. Drinking water standards apply to public water systems, which provide water for human consumption through at least 15

service connections, or regularly serve at least 25 individuals for 60 days of the year. There are two categories of drinking water standards: the National Primary Drinking Water Regulations (NPDWR) and the National Secondary Drinking Water Regulations (NSDWR). The NPDWR are legally enforceable standards that apply to public water systems. NPDWR standards protect drinking water quality by limiting the levels of specific contaminants that can adversely affect public health and are known or anticipated to occur in water.

Federal Water Pollution Control Act, 1972

In 1948, the Federal Water Pollution Control Act was enacted to address water pollution problems. After amendments in 1972, this law was dubbed the CWA. Thereafter, it allowed for the regulation of discharges of pollutants into the waters of the U.S. by the USEPA. Under the CWA, the USEPA can implement pollution control programs and set water quality standards. Additionally, the CWA makes it unlawful for any person to discharge any pollutant from a point source into navigable waters, unless a permit is obtained under its provisions.

State

Urban Water Management Planning Act

The Urban Water Management Planning Act of 1983, California Water Code Sections 10610 et seq., requires preparation of a plan that:

- Plans for water supply and assesses reliability of each source of water, over a 20-year period, in 5-year increments.
- Identifies and quantifies adequate water supplies, including recycled water, for existing and future demands, in normal, single-dry, and multiple-dry years.
- Implements conservation and the efficient use of urban water supplies. Significant new requirements for quantified demand reductions have been added by the Water Conservation Act of 2009 (Senate Bill 7 of Special Extended Session 7 (SBX7-7)), which amends the act and adds new water conservation provisions to the Water Code.

20x2020 Water Conservation Plan

The 20x2020 Water Conservation Plan, issued by the Department of Water Resources (DWR) in 2010 pursuant to SBX7-7, established a water conservation target of 20 percent reduction in water use by 2020 compared to a baseline use as defined in the adopted 20x2020 Water Conservation Plan.

Senate Bills 610 and 221

To assist water suppliers, cities, and counties in integrating water and land use planning, the State passed Senate Bill (SB) 610 (Chapter 643, Statutes of 2001) and SB 221 (Chapter 642, Statutes of 2001), effective January 1, 2002. SB 610 and SB 221 improve the link between information of water-supply availability and certain land use decisions made by cities and counties. SB 610 and SB 221 are companion measures that promote more collaborative planning between local water suppliers, and cities and counties. Both statutes

require detailed information regarding water availability to be provided to city and county decision makers prior to approval of specified large development projects. This detailed information must be included in the administrative record as the evidentiary basis for an approval action by the city or county on such projects. The statutes recognize local control and decision making regarding the availability of water for projects and the approval of projects. Under SB 610, water supply assessments (WSA) must be furnished to local governments for inclusion in any environmental documentation for certain projects subject to CEQA, as defined in Water Code Section 10912[a]. Under SB 221, approval by a city or county of certain residential subdivisions requires an affirmative verification of sufficient water supply. SB 221 is intended as a fail-safe to ensure collaboration on finding the needed water supplies to serve a new large subdivision before construction begins.

The Urban Water Management Planning Act states that every urban water supplier that provides water to 3,000 or more customers or provides over 3,000 acre-feet (AF) of water annually should make every effort to ensure the appropriate level of reliability in its water service to meet the needs of its various categories of customers during normal, dry, and multiple dry years. Both SB 610 and SB 221 identify the urban water management plan (UWMP) as a planning document that can be used by a water supplier to meet the standards in both statutes. Thorough and complete UWMPs are foundations for water suppliers to fulfill the specific requirements of these two statutes, and they are important source documents for cities and counties as they update their general plans. Conversely, general plans are source documents as water suppliers update the UWMPs. These planning documents are linked, and their accuracy and usefulness are interdependent (DWR 2008).

Governor's Drought Declaration

California Governor Edmund Brown Jr. declared a drought state of emergency on January 17, 2014, asking Californians to voluntarily reduce water use by 20 percent. 2013 was the driest year in recorded history in many parts of California. The extreme drought is continuing in 2014: statewide, between October 1 2013 and June 30 2014, precipitation was 50 percent of average, runoff was 35 percent of average, and reservoir storage 60 percent of average (DRW 2014). Initially, the DWR announced on January 31, 2014, that if current dry conditions persist, customers would receive no deliveries from the State Water Project (SWP) in 2014, except for small carryover amounts from 2013. Later, DWR increased the SWP allocation to 5 percent and deliveries would start in August 2014. Almost all areas served by the SWP also have other sources of water, such as groundwater and local reservoirs (DWR 2014). Additionally, deliveries from the Central Valley Project in 2014 were cut to zero for agriculture users south of the Sacramento-San Joaquin Delta.

Local

Green Building Program

In 2008, the County adopted the Green Building Program, which included the Drought-Tolerant Landscaping, Green Building, and Low Impact Development Ordinances (the Ordinances), and created an Implementation Task Force and Technical Manual. In November 2013, in response to the mandates set forth in CALGreen (2010 California Green Building Standards Code), the Board of Supervisors adopted the Los

Angeles County Green Building Standards Code (Title 31)., which together with Title 12 Chapter 12.84 comprise the County's primary green building and low impact development standards.

Existing Conditions

Integrated Regional Water Management

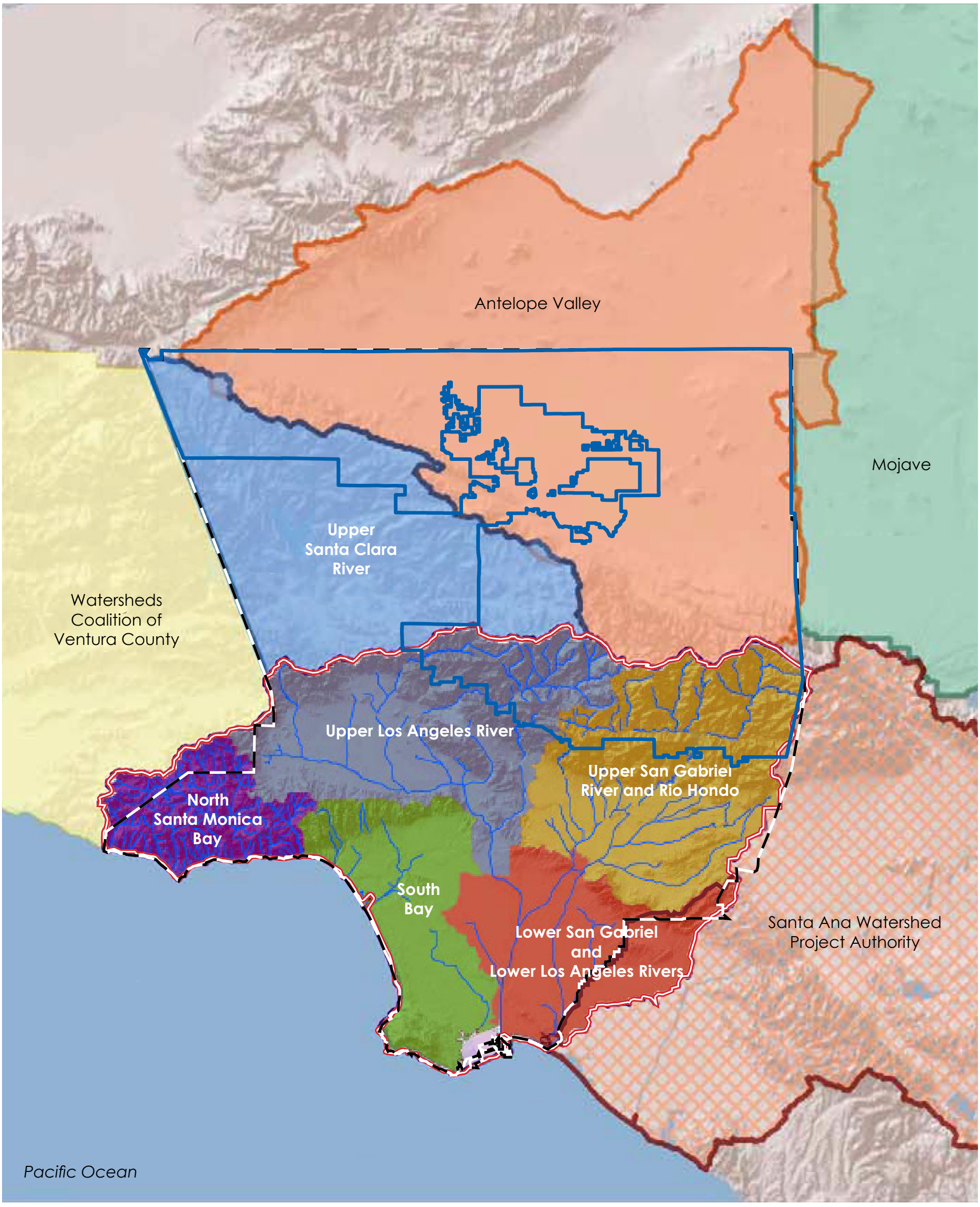
Integrated Regional Water Management (IRWM) is a collaborative effort to manage all aspects of water resources in a region. IRWM differs from traditional approaches to water resource management by integrating all facets of water supply, water quality, wastewater treatment, and flood- and storm- water management. IRWM crosses jurisdictional, water-shed, and political boundaries; involves multiple agencies, stakeholders, individuals, and groups; and attempts to address the issues and differing perspectives of all the entities involved through mutually beneficial solutions.

IRWM is an example of integrated resource planning, which began in the late 1980s in the electric power industry as a comprehensive approach to resource management and planning. When applied to water management, integrated resource planning is a systems approach that explores the cause-and-effect relationships between different aspects of water resource management, with an understanding that changes in the management of one aspect of water resources are often not confined to the boundaries of a single, water-management agency. A consensus-based, cross-jurisdictional, regional approach provides an opportunity to formulate comprehensive solutions to water resource issues within a region.

The methods used in the IRWM include a range of water-resource management strategies, which relate to water supply, water quality, water-use efficiency, operational flexibility, and stewardship of land and natural resources. The IRWM regions serving the Project Area are shown on Figure 5.17-2.

Antelope Valley Integrated Regional Water Management (IRWM) Plan

Several years ago, leaders and agencies in the Antelope Valley Region recognized the need for regional cooperation and planning. In an effort to represent the broad interests within the Antelope Valley Region, a number of organizations joined to form a Regional Water Management Group (RWMG) to work together and create this IRWM Plan (IRWMP). Members of the RWMG include the Antelope Valley-East Kern Water Agency (AVEK), Antelope Valley State Water Contractors Association (AVSWCA), City of Lancaster, City of Palmdale, Littlerock Creek Irrigation District, LACSD Nos. 14 and 20, Los Angeles County Waterworks District No. 40 (LACWD 40), Palmdale Water District (PWD), Quartz Hill Water District (QHWD), and Rosamond Community Services District (RCSD). These 11 public agencies signed a Memorandum of Understanding (MOU) to define what their roles and responsibilities are in developing and moving forward with implementation of the Antelope Valley IRWMP. The decision making structure of the MOU provides the RWMG with the responsibility to make formal decisions regarding the scope and content of the Antelope Valley IRWMP. These agencies agreed to contribute funds to help develop the Antelope Valley IRWMP, provide and share information, review and comment on drafts, adopt the final Antelope Valley IRWMP, and assist in future grant applications for the priority projects identified in the Antelope Valley IRWMP.



Note: Integrated water supply management (IRWM) regions are regional planning areas respecting water supplies. IRWM regions are based on watersheds; some IRWM regions consist of portion of a watershed (e.g. Upper Santa Clara River, part of the Santa Clara River watershed); while other IRWM regions are combinations of two or more watersheds, or parts of two or more watersheds (e.g. South Bay IRWM region consisting of Dominguez Channel watershed and part of the Santa Monica Bay watershed).

0 10
Scale (Miles)

Source: LACDPW 2013; AVEK 2013; CLWA 2014

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In January 2007, the RWMG and other community participants (the Stakeholders) set about developing a broadly supported water resource management plan that defines a meaningful course of action to meet the expected demands for water within the entire Antelope Valley Region through 2035. They chose to create the Antelope Valley IRWMP consistent with the State sponsored IRWM Program that makes grant funds available to support sound regional water management.[3] In 2012, the RWMG completed an IRWMP Update to incorporate changes to the Region's water resources that have occurred since 2007. The Antelope Valley IRWMP contains information to help take action to meet shared objectives for long-term water management for the entire region.

Water Supply

Water supply for the Antelope Valley Region comes from three primary sources: SWP, surface water stored in the Littlerock Reservoir, and the Antelope Valley Groundwater Basin. The Antelope Valley Region's SWP contractual Table A Amount is 165,000 acre-feet per year (AFY).[4] With proper treatment, SWP water is generally high quality water well-suited for municipal and industrial (M&I) uses; however, the reliability of the SWP water supply is variable and has decreased in recent years due to drought emergency. Surface water stored at the Littlerock Reservoir, which has a storage capacity of 3,325 AF, is used directly for agricultural uses and for M&I purposes following treatment.

The Antelope Valley Groundwater Basin (Basin) is comprised of the upper principal aquifer that yields most of the current groundwater supplies, and the lesser used lower deep aquifer. Groundwater levels in some areas have declined significantly since the early 1900s due to over-extraction. Groundwater quality is excellent within most of the principal aquifer but degrades toward the northern portion of the dry lakes areas. High levels of arsenic, fluoride, boron, and nitrates are a problem in some areas of the Basin. The groundwater in the Basin is currently supplied to both agricultural and M&I uses.

Recycled water and stormwater are secondary sources of water supply. A portion of the recycled water from the Antelope Valley Region's two large water reclamation plants, LACSD plants in Palmdale and Lancaster, are used for maintenance of Piute Ponds wetlands, agricultural irrigation, landscape irrigation, and a recreational lake at Apollo Park. The expansion of recycled water use continues in the Region.

Surface flows (i.e., storm water runoff) from the surrounding San Gabriel Mountains, Tehachapi Mountains, and hills cross alluvial fans and flow through deeply excised washes. The flows make their way from the wash headwaters, filling vernal pool clay pan depressions and wetlands such as Piute Ponds, before either percolating into sand dune areas where water is sequestered for summer use or flowing to the lowest points in the Antelope Valley at Rosamond, Buckhorn, and Rogers dry lakebeds. As the surface flow makes its way to the lakebeds it allows the larger sediments to settle out first and transports smaller silty clay further into the Valley interior. The surface flow and silty clay helps to fill in and re-establish the soil surface structure, which

[3] Integrated regional water planning was authorized under Senate Bill 1672 (California Water Code Sections 10530 et seq.) passed in 2002. IRWM is financed through grants funded from three bond measures: Proposition 50 (2002) and Propositions 84 and 1E (2006) (WEF 2013).
[4] Antelope Valley Regional Water Management Group (AVRWMG). 2013. Antelope Valley Integrated Regional Water Management Plan 2013 Update. http://www.avwaterplan.org/.

protects the lakebed areas from wind erosion, sustains the surficial strength of the lakes [important to the operational mission of Edwards Air Force Base(Edwards AFB)], and sustains local habitats. Some surface flows ultimately evaporate.

- Historically, water supplies within the Antelope Valley Region had been used primarily for agriculture; however, due to population growth beginning in the mid-1980s, water demands from residential and industrial uses have increased significantly and this trend is expected to continue.

The expected continuation of growth in the Antelope Valley Region will affect water demand and increase the need for management of additional imported water, recycled water and urban runoff. More residents will also lead to higher demand for water-based recreation. Increasing demands coupled with periodic curtailments of SWP deliveries have intensified the competition for available water supplies. This competition has often limited the water available for natural habitats within the Antelope Valley. In addition, growth in the Valley will likely be influenced by climate change.

Water Agencies: Descriptions

The water agencies serving the Project Area are shown on Figure 5.17-3 and further described below:

Metropolitan Water District of Southern California

The Metropolitan Water District (MWD) serves a vast area of California's southern coast region, from the Oxnard to Mexico's border, and supplies water to most of the southern portion of the County. MWD wholesales water to its member agencies, who in turn distribute the water to end users. Twenty-seven member agencies contract with MWD and together serve approximately 300 cities and unincorporated areas in Southern California.

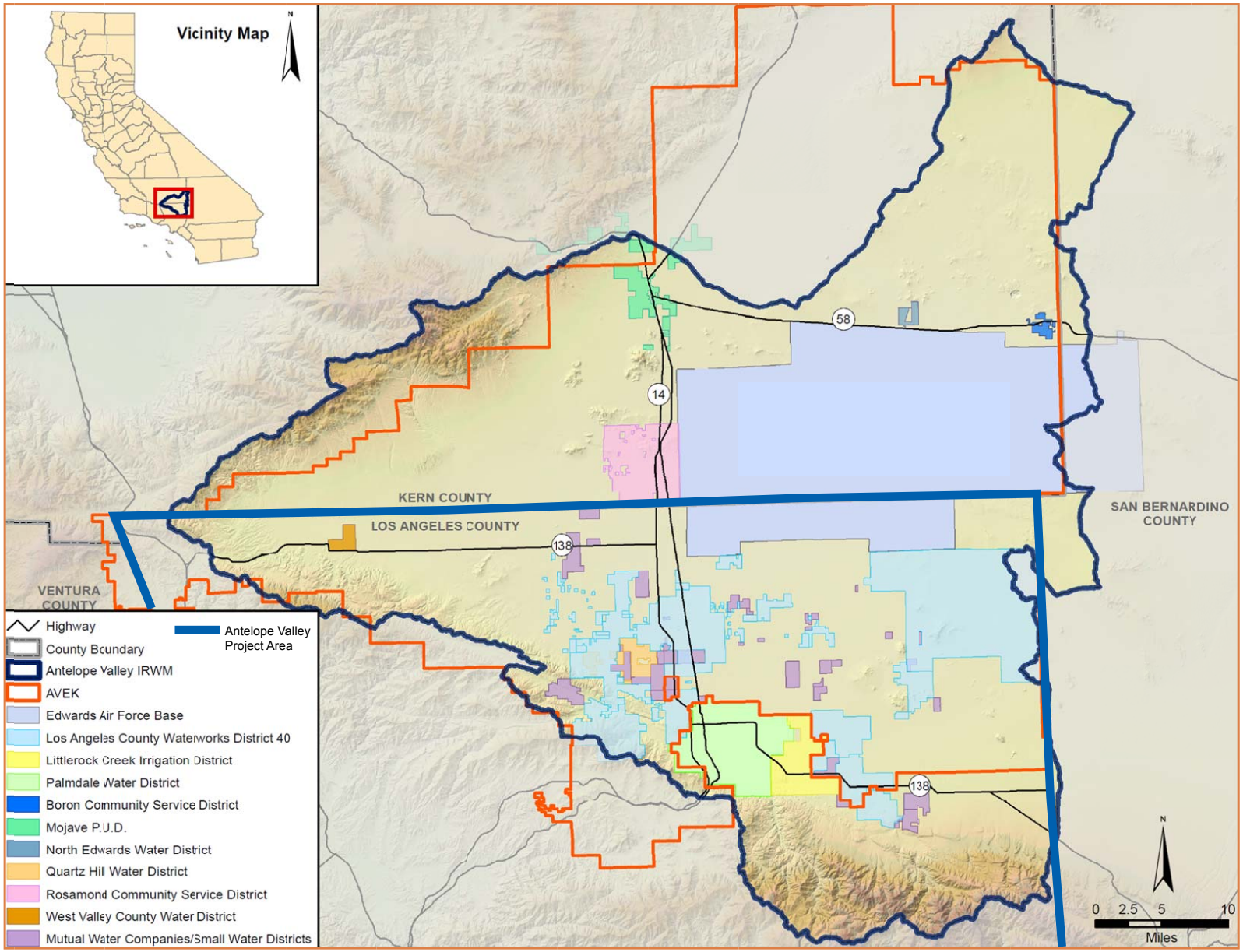
The MWD is responsible for purchasing much of Southern California's water from the Colorado River and SWP to meet the region's growing demand. The MWD is Southern California's primary water wholesaler, supplying member cities and water districts with approximately two million AF, or 650 billion gallons of water, annually. (MWD 2010) MWD also owns and operates several reservoirs and a transmission pipeline network.

Antelope Valley-East Kern Water Agency

AVEK holds the third largest entitlement to water from the SWP; only the MWD and Kern Water Company have higher entitlements. AVEK's district boundaries extend 2,300 square miles in the Antelope Valley in Los Angeles County and Kern County. Since 1953, AVEK has brought water to major consumers, including farmers and Edwards AFB. AVEK imports up to 144,844 AFY into its service area. Recent demand for water in the Antelope Valley is higher than current imported water delivery allocations due to drought. Other water sources, including groundwater, surface water, and recycled water, are used within AVEK's service area. (AVEK 2011)

ANTELOPE VALLEY WATER AGENCIES SERVICE AREAS

FIGURE 5.17-3



Source: AVRWMG 2013

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Littlerock Creek Irrigation District

The Littlerock Creek Irrigation District (LCID) is a public entity that was created in the late 1880s. LCID was instrumental, along with the Palmdale Water District, in constructing the Littlerock Dam. The completion of Littlerock Dam in 1924 made it possible to store water runoff from the Angeles National Forest.

Palmdale Water District

The Palmdale Water District is one of the oldest water districts in the Antelope Valley. It began in the late 1800s as a water provider for agricultural irrigation. What started as a wooden trestle carrying creek water for farms is now an underground canal feeding Palmdale Lake with water from the Littlerock Dam. Much of this water supplies the expanding urban population in the Antelope Valley. In 1963, the Palmdale Water District began purchasing water from the SWP to supplement groundwater and water from Littlerock Dam.

Water Supplies by IRWM Region

Antelope Valley

Projected water supplies by source in the Antelope Valley IRWM Region are shown below in Table 5.17-2. The Antelope Valley IRWMP 2013 Update forecasts that the population within that IRWM Region will increase to 547,000 in 2035 from a 2010 US Census count of about 390,000, which is a net increase of 201,000 (AVRWMG 2013).

Table 5.17-2 Population Projections, Antelope Valley IRWM Region

			2010	2035
Antelope Valley IRWMP	Los Angeles County	Incorporated (Palmdale and Lancaster)	296,000	407,000
		Unincorporated	63,000	99,000
		Subtotal	359,000	506,000
	Kern County (all)		31,000	41,000
	Total		390,000	547,000

Planned Water Supplies

Water agencies in the Antelope Valley IRWM Region are pursuing several options for increasing water supplies; no specific projects have yet been selected.

- Imported Water (Development Fee): AVEK and water retailers within its service area, including LACWD 40 established a New Water Supply development fee to fund acquisition of additional imported water supplies.
- Groundwater Banking: Water banking involves storing water available in wet years for recovery during droughts and/or periods of high demand. Groundwater banking is not accounted for in planned supplies, as it stores water rather than increases overall supplies.

- The proposed Antelope Valley Water Bank in eastern Kern County next to the Los Angeles County boundary would be capable of 100,000 AFY each of recharge and recovery, and at full build-out would have 500,000 AF of total storage capacity. (AVRWMG 2013)

Upper Santa Clara River

The southwest portion of the Project Area is located within the Upper Santa Clara River IRWM Region. Projected water supplies by source in the Upper Santa Clara River IRWM Region are shown below in Table 5.17-3. The Environmental Impact Report for the Santa Clarita Valley Area Plan concluded that water supplies would be adequate for buildout of the Santa Clarita Valley Area Plan for the portions of within the service area of the Castaic Lake Water Agency and/or within the East Subbasin of the Santa Clara River Valley Groundwater Basin after implementation of mitigation measures. However, impacts were identified as significant and unavoidable outside of those two areas.

Table 5.17-3 Projected Water Supplies, Upper Santa Clara River IRWM Region, Acre-Feet per Year

	2015	2020	2025	2030	2035
Existing Supplies					
Local Groundwater	67,225	68,225	68,225	68,225	68,225
Imported Water	79,397	77,817	77,517	77,317	77,232
Water Banking	39,950	39,950	24,950	24,950	24,950
Subtotal	186,572	185,992	170,692	170,492	170,407
Planned Supplies					
Groundwater	1,375	1,375	1,375	1,375	1,375
Recycled Water	975	2,725	5,225	7,775	10,275
Water Banking	0	0	10,000	10,000	20,000
Subtotal	2,350	4,100	16,600	19,150	31,650
TOTAL	188,922	190,092	187,292	189,642	202,057

Source: CLWA 2014.

Upper Los Angeles River Subregion

Projected water supplies by source in the Upper Los Angeles River IRWM Subregion are shown below in Table 5.17-4.

Table 5.17-4 Projected Water Supplies, Upper Los Angeles River IRWM Subregion, Acre-Feet per Year

	2015	2020	2025	2030	2035
Groundwater	52,306	108,106	123,306	119,206	122,211
Imported Water	336,385	289,948	278,272	285,974	276,774
Recycled Water	17,719	21,009	22,432	23,854	25,140
Local Surface Water	952	952	952	952	952
Conservation	9,224	17,811	25,789	33,583	40,081
Stormwater Capture and Direct Use	1,160	3,480	5,800	9,280	14,500
Water Transfers	23,200	23,451	23,451	23,451	23,451
TOTAL	440,946	464,757	480,001	496,299	503,109

Source: LACDPW 2014b

Upper San Gabriel and Rio Hondo Subregion

Projected water supplies by source in the Upper San Gabriel and Rio Hondo IRWM Subregion are shown below in Table 5.17-5.

Table 5.17-5 Projected Water Supplies, Upper San Gabriel River and Rio Hondo IRWM Subregion, Acre-Feet per Year

	2015	2020	2025	2030	2035
Groundwater	207,696	217,764	218,766	221,376	222,609
Imported Water	120,442	118,371	121,568	125,114	126,887
Recycled Water	12,356	15,621	17,217	18,903	20,572
Local Surface Water	18,380	18,341	18,341	18,341	18,341
Conservation	22,691	24,718	27,563	30,016	32,258
Stormwater Capture and Direct Use	1,428	0	0	0	0
Water Transfers	(34)	0	0	0	0
TOTAL	382,993	394,816	403,456	413,751	420,668

Existing Water Demands

Existing water demands for IRWM Regions serving the Project Area are shown below in Table 5.17-6.

Table 5.17-6 Existing Water Demands by IRWM Region/Subregion in Acre-Feet per Year

IRWM Region/Subregion	2015	2020	2025	2030	2035
Antelope Valley	187,000	195,000	200,000	205,000	210,000
Upper Santa Clara River	94,553	94,218	102,647	109,674	118,203
Upper Los Angeles River	439,111	462,331	477,376	493,481	500,228
Upper San Gabriel and Rio Hondo	325,122	341,951	349,647	357,392	363,856
Total	1,045,786	1,093,500	1,129,670	1,165,547	1,192,287

Sources: AVRWMG 2013, CLWA 2014, LACDPW 2014b

Water Treatment Facilities

Water treatment facilities filter and/or disinfect water before it is delivered to customers.

Imported water to the Antelope Valley Region is generally SWP water that is released from Lake Oroville into the Feather River where it then travels down the river to its convergence with the Sacramento River, the state's largest waterway. Water flows down the Sacramento River into the Sacramento-San Joaquin Delta. From the Delta, water is pumped into the California Aqueduct. The Antelope Valley Region is served by the East Branch of the California Aqueduct. Water taken from the California Aqueduct by local SWP Contractors is then treated before distribution to customers.

AVEK currently treats SWP water with four Water Treatment Plants (WTPs) that are capable of treating approximately 132,280 AFY of imported water. The main WTP, Quartz Hill WTP, is capable of producing 65 MGD. The Eastside WTP, expanded in 1988, provides a treatment capacity of 10 MGD (11,210 AFY). Rosamond WTP is a 14 MGD (15,695 AFY) capacity treatment plant. The fourth AVEK plant, Acton WTP, has a capacity of 4 MGD (4,484 AFY) and is located outside of the Antelope Valley Region boundaries. LACWD 40, QHWD, and RCSD all receive treated water from AVEK.

PWD's water treatment plant capacity is 35 MGD (39,235 AFY), but it is limited to treating 28 MGD (31,390 AFY). (PWD 2014) PWD is also in the preliminary design stage for a new water treatment plant with an initial capacity of 10 MGD.

LCID has an agreement with PWD to provide treatment for LCID's raw SWP water.

Principles Governing CEQA Analysis of Water Supply

In *Vineyard Area Citizens for Responsible Growth, Inc., v. City of Rancho Cordova* (53 Cal. Rptr. 3rd. 821; February 1, 2007), the California Supreme Court articulated the following principles for analysis of future water supplies for projects subject to CEQA:

To meet CEQA's informational purposes, the EIR must present sufficient facts to decision makers to evaluate the pros and cons of supplying the necessary amount of water to the project.

CEQA analysis for large, multiphase projects must assume that all phases of the project will eventually be built and the EIR must analyze, to the extent reasonably possible, the impacts of providing water to the entire project. Tiering cannot be used to defer water supply analysis until future phases of the project are built.

CEQA analysis cannot rely on "paper water." The EIR must discuss why the identified water should reasonably be expected to be available. Future water supplies must be likely, rather than speculative.

When there is some uncertainty regarding availability of future water supply, an EIR should acknowledge the degree of uncertainty, include a discussion of possible alternative sources, and identify the environmental impacts of such alternative sources. Where a full discussion still leaves some uncertainly about the long-term water supply's availability, mitigation measures for curtailing future development in the event that intended sources become unavailable may become a part of the EIR's approach.

The EIR does not need to show that water supplies are definitely assured because such a degree of certainty would be "unworkable, as it would require water planning to far outpace land use planning." The requisite degree of certainty of a project's water supply varies with the stage of project approval. CEQA does not require large projects, at the early planning phase, to provide high degree of assurances of certainty regarding long-term future water supplies.

The EIR analysis may rely on existing, UWMPs, so long as the project's new demand was included in the water management plan's future demand accounting.

The ultimate question under CEQA is not whether an EIR establishes a likely source of water, but whether it adequately addresses the reasonably foreseeable impacts of supplying water to the project.

Water Supply Reliability: Imported Water

The Southern California region faces a challenge satisfying its water requirements and securing firm water supplies. Increased environmental regulations and competition for water from outside the region have resulted in reduced supplies of imported water. Continued population and economic growth correspond to increase water demands in the region, putting an even larger burden on local supplies. A number of important factors affecting delivery reliability are discussed below. Major sources of uncertainty include Sacramento Delta pumping restrictions, organism decline, climate change and sea level rise, and levee vulnerability to floods and earthquakes.

MWD's 2010 Regional Urban Water Management Plan. MWD's 2010 Regional UWMP reports on its water reliability and identifies projected supplies to meet the long-term demand within its service area. It presents MWD's supply capacities from 2015 through 2035: single dry year, multiple dry years, and average year.

Colorado River Supplies. The Colorado River Aqueduct (CRA) supplies include water from existing and committed programs and from implementation of agreements to transfer water from agricultural agencies to urban uses. The Colorado River has the potential to supply additional water up to the CRA capacity of 1.25 million AF per year on an as-needed basis.

State Water Project Supplies. MWD's SWP supplies have been impacted in recent years by restrictions on SWP operations in accordance with the biological opinions of the US Fish and Wildlife Service and National Marine Fishery Service issued on December 15, 2008, and June 4, 2009, respectively. In dry, below-normal conditions, MWD has increased the supplies received from the California Aqueduct by developing flexible Central Valley/SWP storage and transfer programs. The goal of the storage/transfer programs is to develop additional dry-year supplies that can be conveyed through the available pumping capacity to maximize deliveries through the California Aqueduct during dry, hydrologic conditions and regulatory restrictions.

In June 2007, MWD's Board approved a Delta Action Plan, which provides a framework for staff to pursue actions with other agencies and stakeholders to build a sustainable Delta and reduce conflicts between water supply conveyance and the environment. The Delta Action Plan aims to prioritize immediate short-term actions to stabilize the Sacramento River Delta while an ultimate solution is selected and midterm steps to maintain the Bay-Delta while the long-term solution is implemented.

State and federal resource agencies and various environmental and water user entities are currently engaged in the development of the Bay Delta Conservation Plan, which is aimed at addressing Delta ecosystem restoration, water supply conveyance, flood control protection, and storage development. In evaluating the supply capabilities for the 2010 Regional UWMP, MWD assumed a new Delta conveyance is fully operational by 2022 that would return supply reliability similar to 2005 conditions, prior to supply restrictions.

Storage. Storage is a major component of MWD's dry year resource management strategy. The likelihood of having MWD adequate supply capability to meet projected demands without implementing its water supply allocation plan (WSAP) is dependent on its storage resources. In developing the supply capabilities for the 2010 Regional UWMP, MWD assumed a simulated median storage level going into each of five-year increments based on the balances of supplies and demands.

Supply Reliability. MWD evaluated supply reliability by projecting supply and demand conditions for the single- and multiyear drought cases based on conditions affecting the SWP (MWD's largest and most variable supply). For this supply source, the single driest year was 1977 and the driest three-year period was 1990 to 1992. The region can provide reliable water supplies not only under normal conditions but also under the single driest year and the multiple dry year conditions. (MWD 2010)

Water Supply Allocation Plan. Due to drought conditions and the uncertainty regarding future pumping operations from the SWP, MWD adopted a WSAP in 2008 that allocates water to members, based on the regional shortage level in MWD's service area.

Water Supply Reliability: Groundwater

Basin-wide Characteristics

The Antelope Valley is located in the southwest portion of the Mojave Desert in Southern California, about 40 miles north of the city of Los Angeles. Approximately two-thirds of the Valley is located in northern Los Angeles County, and the remainder is located in southeastern Kern County. The Valley is bound on the south and west by the San Gabriel and Tehachapi Mountains, on the north by the Rosamond and Bissell Hills, and on the east by the Hi Vista area buttes and alluvial fan. The Fremont Valley is located to the north and the Victor Valley to the east of the Antelope Valley Groundwater Basin (LACDRP 2010).

The Antelope Valley is considered to be a closed hydrologic basin because water drains into, but not out of the valley. It extends over approximately 1,390 square miles. The Antelope Valley is comprised of relatively flat valley land and dry lake beds, with coalescing alluvial fans and scattered buttes around the periphery. The basin is topographically closed on the north and northwest by the Garlock Fault at the base of the Tehachapi Mountains, and on the south and southwest by the San Andreas Fault at the base of the Transverse Ranges, including the San Gabriel Mountains. Surface elevations in the Valley range from about 2,300 feet to nearly 3,500 feet above mean sea level. Several creeks, including the perennial Big Rock and Little Rock Creeks, drain the surrounding mountains, cross the alluvial fans, and become dry washes within the Valley. The Los Angeles Aqueduct traverses the western end of the Valley, and the California Aqueduct runs along the Valley's southern edge, flanking the San Gabriel Mountains (LACDRP 2010).

Urban centers in the Antelope Valley Region include the cities of Lancaster and Palmdale along State Route (SR) 14, as well as a large portion of Edwards AFB in the Valley's northeast corner. The Palmdale and Lancaster urbanized area has grown rapidly since the 1980s and has a current population of approximately 280,000 residents. Agricultural lands occupy various areas near the cities and Edwards AFB, and comprise approximately 25,000 acres (LACDRP 2010).

The Basin comprises two primary aquifers: (1) the principal aquifer and (2) the deep aquifer. The principal aquifer is an unconfined aquifer. The basin is principally recharged by deep percolation of precipitation and runoff from the surrounding mountains and hills. Separated from the principal aquifer by clay layers, the deep aquifer is generally considered to be confined. In general, the principal aquifer is thickest in the southern portion of the Valley near the San Gabriel Mountains, while the deep aquifer is thickest in the vicinity of the dry lakes on Edwards AFB . The Basin is divided into 12 subunits: Finger Buttes, West Antelope, Neenach, Willow Springs, Gloster, Chaffee, Oak Creek, Pearland, Buttes, Lancaster, North Muroc, and Peerless.

Substantial groundwater pumping in the Antelope Valley began in the early 1900s and peaked in the 1950s. In some localized areas, the rate of decline has slowed. Groundwater levels have increased slightly in the rural western and far northeastern areas of the region (LACDRP 2010).

Antelope Valley Groundwater Basin Adjudication

In approximately 1999, agricultural interests in the Antelope Valley initiated litigation in state court seeking to determine certain rights to groundwater. In approximately 2005, certain public water supplies, including LACWD 40, filed a cross-action seeking an adjudication of groundwater rights within the basin. Other agencies and parties have filed separate actions concerning groundwater rights in the Antelope Valley Area of Adjudication (AVAA). The Court has coordinated and consolidated the actions in one action in Los Angeles Superior Court. Four phases of the trial have been completed in the adjudication during which the court has defined the adjudication area boundary (i.e., the AVAA)and determined that the total safe yield of the AVAA is 110,000 AFY, that the AVAA has been in a state of overdraft for over 50 years. The action will result in a judgment (by trial and/or stipulation) containing a final allocation of groundwater rights and a long-term groundwater management system for the AVAA. It is unknown how long it will take to complete the adjudication.

Reliability

According to the AVRWMG 2013 Update, long-term recharge is expected to be stable, it is anticipated that groundwater pumping, and hence supply, will be reliable even in short-term and multiple year droughts (AVRWMG 2013 Update). Thus groundwater is considered a reliable supply for the Antelope Valley Region. However, the pending adjudication will affect how much groundwater can physically be pumped in the Antelope Valley Region in the future. It is important to note that the supplemental yield from imported water return flows depends upon demand and may fluctuate with changes in demand. The imported water return flow estimates are meant to indicate a sense of the impact of return flows to the groundwater basin.

5.17.2.2 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:

U-2 Would require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

U-4 Would not have sufficient water supplies available to serve the project from existing entitlements and resources, and new and/or expanded entitlements would be needed.

5.17.2.3 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 on water supply.

Conservation and Open Space Element

Goal COS 1: Growth and development are guided by water supply constraints.

- **Policy COS 1.1:** Require that all new development proposals demonstrate a sufficient and sustainable water supply prior to approval.
- **Policy COS 1.2:** Limit the amount of potential development in areas that are not or not expected to be served by existing and/or planned public water infrastructure 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.
- **Policy COS 1.3:** Limit the amount of potential development in groundwater recharge 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.
- **Policy COS 1.4:** Promote the use of recycled water, where available, for agricultural and industrial uses and support efforts to expand recycled water infrastructure.

Goal COS 2: Effective conservation measures provide an adequate supply of clean water to meet the present and future needs of humans and natural ecosystems.

- **Policy COS 2.1:** Require new landscaping to comply with applicable water efficiency requirements in the County Code.
- **Policy COS 2.2:** Require low-flow plumbing fixtures in all new developments.
- **Policy COS 2.3:** Require onsite stormwater infiltration in all new developments through the use of appropriate measures, such as permeable surface coverage, permeable paving of parking and pedestrian areas, catch basins, and other low impact development strategies.
- **Policy COS 2.4:** Discourage water intensive recreational uses, such as golf courses, unless recycled water is used to sustain these uses.
- **Policy COS 2.5:** Discourage the use of potable water for washing outdoor surfaces.

- **Policy COS 2.6:** Support experiments in alternate forms of water provision and re-use, such as "air to water technology" and gray water systems.
- **Policy COS 2.7:** Limit use of groundwater sources to their safe yield limits.
- **Policy COS 2.8:** Coordinate with federal, state, regional and local agencies to develop and implement new technologies in water management.

Goal COS 3: A clean water supply untainted by natural and man-made pollutants and contaminants.

- **Policy COS 3.1:** Discourage the use of chemical fertilizers, herbicides and pesticides in landscaping to reduce water pollution.
- **Policy COS 3.2:** Restrict the use of septic systems in areas adjacent to aqueducts and waterways to prevent wastewater intrusion into the water supply.
- **Policy COS 3.3:** Require a public or private sewerage system for land use densities that would threaten nitrate pollution of groundwater if unsewered, or when otherwise required by County regulations.
- **Policy COS 3.4:** Support preservation, restoration and strategic acquisition of open space to preserve natural streams, drainage channels, wetlands, and rivers, which are necessary for the healthy functioning of ecosystems.
- **Policy COS 3.5:** Protect underground water supplies by enforcing controls on sources of pollutants.

5.17.2.4 ENVIRONMENTAL IMPACTS

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

Impact 5.17-3: Water supply and delivery systems are not adequate to meet Proposed Project's requirements in the Project Area beyond 2035. [Thresholds U-2 (part) and U-4]

Impact Analysis:

Water Demands

Although four IRWM Regions serve the Project Area, only the Antelope Valley IRWM contains land use designations that would allow future development. As a result, the following impact analysis focuses on the ability of the Antelope Valley IRWM to serve the Proposed Project at buildout. The projected net increase in water demands due to Proposed Project buildout is approximately 42 million gallons per day, as shown below in Table 5.17-7.

Table 5.17-7 Estimated Water Demand due to Proposed Project Buildout

	Existing (2013)		Area Plan Buildout		
	Population	Water Demands (estimated as 166 gallons per capita per day)[1]	Population	Water Demands (estimated as 142 gallons per person per day)[1]	Net Increase, Water Demands
Antelope Valley	93,490	15,519,340	405,410	57,568,220	42,048,880

Estimated water demands include demands by all land uses, residential and nonresidential; and including potable water and nonpotable water.
[1] Source: LACDPW 2014a

Impacts on Water Supplies

Antelope Valley IRWM Region

Total water supplies in the Antelope Valley IRWM Region in 2035 are forecast to be approximately 210,600 afy, which is adequate for the projected 2035 population of 547,000 people for the whole Antelope Valley IRWM Region including the incorporated cities of Palmdale and Lancaster, unincorporated areas, and part of Kern County. (AVRWMG 2013) No estimate of supply beyond 2035 is available for the Antelope Valley IRWM Region. Therefore, even with planned future water supplies under consideration by Antelope Valley water agencies, water supplies in the Project Area would not be adequate to serve the buildout of the Proposed Project which is anticipated to be beyond 2035. New and/or expanded water supplies would be required to meet such demands. This impact would be significant.

Projects Identified in the Antelope Valley IRWMP

Table ES-4 in the Antelope Valley IRWM Plan lists the projects and actions that the Stakeholders believe will help meet the Regional objectives. In total, over 70 projects were submitted for inclusion in the IRWMP, and include implementation projects, plans and studies, and conceptual projects. All projects included in the IRWMP will help the Region to meet its goals and objectives. Implementation projects are programs or construction projects that have had some planning completed, such as facilities planning or cost analyses, and could potentially be implemented in the near future. Finally, conceptual projects are those projects identified by stakeholders that could contribute to meeting the Region's IRWM objectives but may not yet be developed enough to include in the IRWM Plan as an implementation project.

Implementing the IRWM projects will require focused effort, broad community support, political resolve, and funding. The Stakeholders are actively pursuing financial assistance through several grant programs designed to help leverage local investments. The RWMG is also working to establish a secure and long-lasting approach to coordinate resources to meet the growing needs of the entire Antelope Valley Region.

In terms of supply, the implementation and conceptual projects proposed will allow the Region to maintain adequate supply and demand in average years. The IRWM projects identify approximately 30,000 AFY of new supply, while also identifying up to approximately 600,000 AFY of water bank storage capacity. These projects, if implemented, would help the Region to meet demands during single-dry years and multi-dry year periods, as well as during a plausible six month disruption of SWP deliveries. (AVRWMG 2013)

5.17.2.5 CUMULATIVE IMPACTS

As discussed in Section 4.4, *Assumptions Regarding Cumulative Impacts,* the cumulative impact area for the Proposed Project is SCAG's North Los Angeles County Subregion, which includes all unincorporated areas of Los Angeles County located within the Antelope Valley and Santa Clarita Valley areas, as well as the incorporated cities of Palmdale, Lancaster, and Santa Clarita.

As discussed above, projected water supplies in the Upper Santa Clara River IRWM Region are expected to be 202,057 AFY. The EIR for the Santa Clarita Valley Area Plan concluded that water supplies would be adequate for buildout of the Santa Clarita Valley Area Plan for the portions within the service area of the Castaic Lake Water Agency and/or within the East Subbasin of the Santa Clara River Valley Groundwater Basin after implementation of mitigation measures. However, impacts were identified as significant and unavoidable outside of those two areas.

As discussed above, no estimate of supply beyond 2035 is available for the Antelope Valley IRWM Region. Therefore, even with planned future water supplies under consideration by Antelope Valley water agencies, water supplies in the Project Area would not be adequate to serve the buildout of the Proposed Project. New and/or expanded water supplies would be required to meet such demands. This impact would be cumulatively significant.

5.17.2.6 EXISTING REGULATIONS AND STANDARD CONDITIONS

State

- California Water Code Sections 10610 et seq.: Urban Water Management Planning Act
- **SBX7-7 (2009):** Water Conservation Act of 2009
- Senate Bill (SB) 610 (Chapter 643, Statutes of 2001) and SB 221 (Chapter 642, Statutes of 2001): Water Supply Assessments

Local

- Los Angeles County Green Building Standards Code and Low Impact Development (Title 31 and Title 12.84).

5.17.2.7 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Water supply and delivery systems are not adequate to meet the Proposed Project's water demands in the Project Area beyond 2035.

5.17.2.8 MITIGATION MEASURES

Impact 5.17-3

Development Site Plans, Building Plans, and Landscaping Plans

USS-1 Support amendments to the County Building Code that would promote upgrades to water and energy efficiency when issuing permits for renovations or additions to existing buildings.

USS-2 Apply water conservation policies to all pending development projects, including approved tentative subdivision maps to the extent permitted by law. Where precluded from adding requirements by vested entitlements, encourage water conservation in construction and landscape design.

USS-3 Require new development to provide the infrastructure needed for delivery of recycled water to the property for use in irrigation, even if the recycled water main delivery lines have not yet reached the site, where deemed appropriate by the reviewing authority.

USS-4 Promote energy efficiency and water conservation upgrades to existing non-residential buildings at the time of major remodel or additions.

USS-5 Promote the use of permeable paving materials to allow infiltration of surface water into the water table.

USS-6 Seek methods to decrease impermeable site area where reasonable and feasible, in order to reduce stormwater runoff and increase groundwater infiltration, including use of shared parking and other means, as appropriate.

USS-7 On previously developed sites proposed for major alteration, provide stormwater management improvements to restore natural infiltration, as required by the reviewing authority.

USS-8 Encourage and promote the use of new materials and technology for improved stormwater management, such as pervious paving, green roofs, rain gardens, and vegetated swales.

USS-9 Evaluate development proposals for consistency with the County Green Building Standards Code.

USS-10 Evaluate development proposals for consistency with Low Impact Development Code on development sites, including but not limited to minimizing impervious surface area and promoting infiltration, in order to reduce the flow and velocity of stormwater runoff throughout the watershed.

Water Supply Planning and Water Conservation

USS-11 Require that all new development proposals demonstrate a sufficient and sustainable water supply prior to approval, consistent with County Department of Public Health requirements.

USS-12 Monitor growth, and coordinate with water districts as needed to ensure that long-range needs for potable and reclaimed water will be met.

USS-13 If water supplies are reduced from projected levels due to drought, emergency, or other unanticipated events, take appropriate steps to limit, reduce, or otherwise modify growth permitted by the Area Plan in consultation with water districts to ensure adequate long-term supply for existing businesses and residents.

USS-14 Upon the availability of non-potable water, discourage and consider restrictions on the use of potable water for washing outdoor surfaces.

USS-15 In cooperation with the Sanitation Districts and other affected agencies, expand opportunities for use of recycled water for the purposes of landscape maintenance, construction, water recharge, and other uses as appropriate.

5.17.2.9 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Adequate water supplies have been identified in the UWMP's for the Project Area for demand as projected through the year 2035. However, additional water supplies necessary to serve buildout of the Proposed Project, which is expected to occur beyond the year 2035, have not been identified for the Project Area. Considering current water supply constraints—including the record 2013–2014 California drought—it is uncertain whether the water districts serving the Project Area would be able to secure water supplies greater than those currently forecasted for 2035. Therefore, impacts of the Proposed Project buildout on water supplies are significant and unavoidable.

5.17.3 Storm Drainage Systems

Storm drainage systems, and impacts of Proposed Project buildout on such systems, are described in Section 5.9, *Hydrology and Water Quality*.

5.17.4 Solid Waste

5.17.4.1 ENVIRONMENTAL SETTING

Regulatory Background

State

Assembly Bill (AB) 939 (Integrated Solid Waste Management Act of 1989; Public Resources Code 40050 et seq.) established an integrated waste-management system that focused on source reduction, recycling,

composting, and land disposal of waste. AB 939 required every California city and county to divert 50 percent of its waste from landfills by the year 2000. Compliance with AB 939 is measured in part by comparing solid waste disposal rates for a jurisdiction with target disposal rates. Actual rates at or below target rates are consistent with AB 939. AB 939 also requires California counties to show 15 years of disposal capacity for all jurisdictions in the county or show a plan to transform or divert its waste.

AB 341 (Chapter 476, Statutes of 2011) established a State goal of not less than 75 percent of solid waste generated by source reduced, recycled, or composed by the year 2020. The law also mandates recycling for commercial and multifamily residential land uses as well as schools and school districts.

Section 5.408 of the 2013 California Green Building Standards Code (Title 24, California Code of Regulations, Part 11) requires that at least 50 percent of the nonhazardous construction and demolition waste from nonresidential construction operations be recycled and/or salvaged for reuse.

Local

Construction and Demolition Debris Recycling and Reuse Ordinance

The County Board of Supervisors adopted the Construction and Demolition Debris Recycling and Reuse Ordinance on January 4, 2005. The Ordinance added Chapter 20.87 to the County Code, which requires projects in the unincorporated areas to recycle or reuse 50 percent of the debris generated. Its purpose is to increase the diversion of construction and demolition debris from disposal facilities and will assist the County in meeting the State of California's 50 percent waste reduction mandate.

Los Angeles Countywide Siting Element

In 1997, the County prepared the Los Angeles Countywide Siting Element (Siting Element) which projects the amount of solid wastes generated in the future, as well as analyzes the extents to which factors such as recycling, developing alternative-to-landfill facilities, landfill expansions, and exporting trash could impact Countywide disposal capacity. The Siting Elements is a long-term planning document that describes how the County and the cities within the County plan to manage the disposal of their solid waste for a 15-year planning period. The Siting Element identifies DPW as the responsible agency to develop plans and strategies to manage and coordinate the solid waste generated in the unincorporated areas and to address the disposal needs of the County. In addition, the Siting Element contains goals and policies on a variety of solid waste management issues. The County will continue to meet its disposal capacity needs by implementing enhanced waste reduction and diversion programs and greater resource recovery efforts.

Existing Conditions

Solid Waste Collection

For many years, two-thirds of the unincorporated areas (primarily in the San Gabriel Valley and Antelope Valley), residential and commercial solid waste collection services were provided through an open-market system, whereby each resident/business directly arranged for trash collection services with no County involvement. Due to changes in federal and state laws regarding waste reduction, and changing public attitudes toward protecting the environment and increasing consumer demands for better service, the open-

market system was unable to fully adapt to these conditions. In response, beginning in 2007, DPW gradually implemented the following solid waste collection systems to replace the open-market system:

Residential Franchise System

In a residential franchise system, an agreement is awarded to an exclusive waste hauler to provide trash collection and recycling services to all single-family residences and duplexes within specific unincorporated communities. The franchise system provides benefits to establish quality service and promote cleaner neighborhoods through recycling services, environmental workshops, bulky item pick-ups, and annual clean-up events. The franchise system is designed to provide uniform service standards for haulers operating in each franchise area. The system provides each community with the flexibility needed to create services that will benefit area residents. These features are modified to reflect feedback received through survey cards, community meetings, and telephone calls. This interactive process allows the County to tailor each agreement to meet the needs voiced by each community. The franchise system also benefits the community by limiting the wear and tear on County streets, assists the County in meeting the State's waste reduction mandate, and reduces the need for new landfills. Currently, there are 21 residential franchise areas. DPW is considering replacing the remaining residential open-market system areas, including the Antelope Valley.

Commercial Franchise System

Effective July 1, 2012, all unincorporated area residents, businesses, and multifamily residents that utilize dumpster and/or roll-off trash collection service are served by a non-exclusive franchise system. In the non-exclusive franchise system, the County allows solid waste collection services to be provided by private waste haulers, but requires haulers to enter into a non-exclusive commercial waste collection franchise agreement with the County. The franchise agreement establishes minimum performance and customer service standards. Under this non-exclusive franchise system, customers enjoy free recycling services and on-site consultations, free bulky item and electronic waste collection, free holiday tree collection, graffiti removal, clean fuel collection trucks to reduce air pollution and noise, and customer dispute resolution. Along with these new benefits, customers will continue to have a choice of more than one waste hauler because the system is open to competition to all haulers that enter into the franchise agreement. The waste haulers deal directly with the public and businesses in competing for customers.

Landfills

In 2013 over 98 percent of the solid waste landfilled from the cities of Lancaster and Palmdale was disposed of at two facilities: the Antelope Valley Public Landfill and the Lancaster Landfill and Recycling Center (see Table 5.17-8 and Figure 5.17-4, *Landfills Serving the Project Area*, below). During the same year 60,062 tons of solid waste was landfilled in the two landfills from unincorporated areas of the County, 7.9 percent of the 764,300 tons landfilled from all of the unincorporated County. In 2013 the population in unincorporated parts of the Project Area was 8.8 percent of the population of all unincorporated areas in the County. Thus, it is assumed here that most of the solid waste landfilled from the Project Area is disposed of at the two aforementioned landfills.

Table 5.17-8 Landfills Serving the Antelope Valley Region

Landfill and Location	Current Remaining Capacity, Cubic Yards	Estimated Close Date (based on current SWFP)	Maximum Daily Load (tons)	Average Daily Disposal, 2012 (tons)	Residual Daily Disposal Capacity (tons)
Antelope Valley Public Landfill City of Palmdale	19,952,000	2042	1,800	832	968
Lancaster Landfill and Recycling Center, City of Lancaster	14,491,000	2044	3,000	690	2,310
Total[1]	34,443,000	Not applicable	4,800	1,522	3,278

Sources: CalRecycle 2014a; CalRecyle 2014b; CalRecycle 2014c; CalRecycle 2014d; Los Angeles County Department of Public Works.
Each landfill is open six days per week, Monday through Saturday, except for certain holidays.
[1] Some of the landfills described above have statutory limits as to what areas they can accept waste from. Therefore, the totals are for comparison/information only and do not indicate disposal capacity for any specific region.

Total disposal of solid waste from unincorporated portions of the Project Area in 2013 is estimated at about 420,700 pounds per day based on 4.5 pounds of solid waste disposal per resident.

Recycling and Solid Waste Diversion

There are 50 solid waste diversion programs serving unincorporated areas, including composting, material-recovery facilities, household hazardous-waste collection, public education, recycling, source reduction, special-waste materials (e.g. tires and concrete/asphalt/rubble), and waste-to-energy programs (CalRecycle 2014e).

5.17.4.2 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:

U-6 Would be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs.

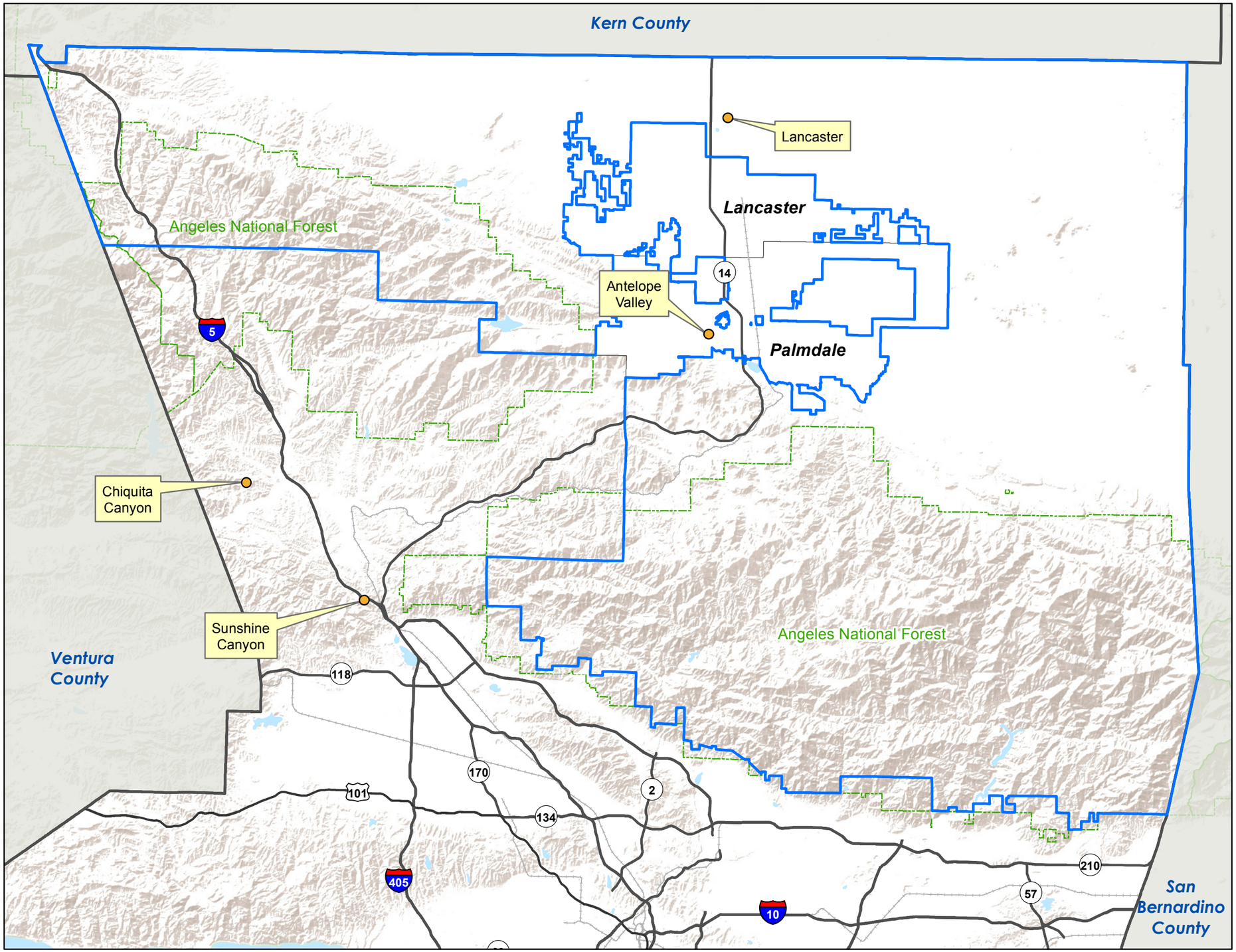
U-7 Would not comply with federal, state, and local statutes and regulations related to solid waste.

5.17.4.3 RELEVANT AREA PLAN GOALS AND POLICIES

The following is a list of applicable goals and policies of the Proposed Project that are intended to reduce potentially significant adverse effects concerning waste management.

FIGURE 5.17-4

LANDFILLS SERVING THE PROJECT AREA



Landfill

Antelope Valley Project Area

ANTELOPE VALLEY AREA PLAN UPDATE

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PLACEWORKS

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Conservation and Open Space Element

Air Quality

Goal COS 9.4:. Improved air quality in the Antelope Valley.

- **Policy COS 9.4:** Promote recycling and composting throughout the Antelope Valley to reduce air quality impacts from waste disposal activities and landfill operations.

Green Building

Goal COS 17: Buildings are sustainable, conserving energy, water, and other resources, and limiting greenhouse gas emissions.

- **Policy COS 17.9:** Require reduction, reuse, and recycling of construction and demolition debris.

5.17.4.4 ENVIRONMENTAL IMPACTS

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

Impact 5.17-4: Existing and/or proposed facilities would be able to accommodate project-generated solid waste and comply with related solid waste regulations. [Thresholds U-6 and U-7]

Impact Analysis:

Generation of solid waste would increase as the population increases with buildout of the Proposed Project. Correspondingly, there would be a need for additional landfill capacity and related support facilities.

Forecasted Solid Waste Generation

Buildout of the Proposed Project is forecast to result in a net increase in population in the Project Area of 311,920; and total population at buildout of 405,410. The Proposed Project buildout would allow for: 106,180 residential dwelling units; 130,226,370 square feet of nonresidential land uses; and employment of 134,351. Buildout of the Proposed Project would result in 81,441 additional residential dwelling units compared to existing land uses.

Solid waste generation is estimated as 4.5 pounds of solid waste per person per day. Thus, the net increase in solid waste generation by Proposed Project buildout is about 1.40 million pounds per day – that is, about 700 tons per day; and total solid waste generation in the Project Area at Proposed Project buildout is estimated at about 1.82 million pounds per day, or about 910 tons per day. Both the forecasted net increase in of about 700 tons per day, and the forecast total solid waste generation of about 910 tons per day, are well within the total 3,278 tons daily residual disposal capacity of the two landfills described in Table 5.17-8. The County would maintain 15 years' identified disposal capacity in conformance with AB 939. Proposed Project buildout would not require construction of new or expanded landfills, and impacts would be less than significant.

5.17.4.5 CUMULATIVE IMPACTS

As discussed in Section 4.4, *Assumptions Regarding Cumulative Impacts,* the cumulative impact area for the Proposed Project is SCAG's North Los Angeles County Subregion, which includes all unincorporated areas of Los Angeles County located within the Antelope Valley and Santa Clarita Valley, as well as the incorporated cities of Palmdale, Lancaster, and Santa Clarita.

Cumulative forecasted solid waste generation for the Proposed Project and future cumulative development are shown below in Table 5.17-9. As discussed above, total daily solid waste disposal capacity in the Project Area is 4,800 tons per day, and the combined residual disposal capacity at the two landfills in the Project Area is 3,278 tons per day.

Table 5.17-9 Cumulative Solid Waste Generation Existing, 2035, and Post–2035

	Existing		2035[2]		Post–2035[1]	
	Population	Solid Waste Generation (ppd)	Population	Solid Waste Generation (ppd)	Population	Solid Waste Generation (ppd)
Project Area	93,490[1]	420,705	N/A	N/A	405,410	1,824,345
North Los Angeles County Subregion	651,929[2]	2,933,681	946,557	4,259,507	N/A	N/A

Notes:
The Proposed Project will not be built out within the SCAG RTP/SCS horizon of 2035.
N/A = Data not available.
[1] County of Los Angeles 2014.
[2] SCAG 2012–2035 RTP/SCS.

Forecast solid waste generation from the entire North County Subregion in 2035 is about 4.26 million pounds per day – or 2,130 tons per day – and forecast solid waste generation from the Project Area at Proposed Project buildout is about 1.82 million pounds per day, or 910 tons per day.

In 2013 about 95 percent of the solid waste from the City of Santa Clarita was disposed of at two landfills: the Chiquita Canyon Sanitary Landfill in the Community of Castaic in unincorporated County in the Santa Clarita Valley area, and the Sunshine Canyon City/County Landfill in the Community of Sylmar, City of Los Angeles on the border between the Santa Clarita Valley and San Fernando Valley (CalRecycle 2014a). Disposal information by landfill is not available for unincorporated areas in subregions of Los Angeles County; it is assumed here that most landfilled solid waste from unincorporated areas in the Santa Clarita Valley area is disposed of at the same two landfills. Capacities and estimated closing dates for the two landfills are shown below in Table 5.17-10. As shown in Table 5.17-10, the two landfills have combined residual daily disposal capacity of 7,909 tons. The total residual daily disposal capacity of the four landfills serving the Antelope Valley and Santa Clarita Valley areas is 11,187 tons.

Table 5.17-10 Landfills Serving Santa Clarita Valley area

Landfill and Location	Current Remaining Capacity, Cubic Yards	Estimated Close Date (based on current SWFP)	Maximum Daily Load (tons)	Average Daily Disposal, 2012 (tons)	Residual Daily Disposal Capacity (tons)
Chiquita Canyon Sanitary Landfill Community of Castaic, unincorporated Los Angeles County	6,020,000	2019	6,000	2,970	3,030
Sunshine Canyon City/County Landfill Community of Sylmar, City of Los Angeles	96,393,000	2037	12,100	7,221	4,879
Total	102,413,000	Not applicable	18,100	10,191	7,909

Sources: CalRecycle 2014a; CalRecycle 2014d; CalRecyle 2014f; CalRecycle 2014g; Los Angeles County Department of Public Works.
Each landfill is open six days per week, Monday through Saturday, except for certain holidays.

There is adequate residual daily disposal capacity at the four landfills serving the North County Subregion for cumulative solid waste generation, and cumulative impacts would be less than significant.

Regulatory Compliance

As with projects in the unincorporated areas, projects in cities would comply with AB 341 and Section 5.408 of the California Green Building Standards Code. AB 341 requires recycling by commercial and multifamily residential land uses and schools. California Green Building Standards Code Section 5.408 requires recycling or and/or reuse of at least 50 percent of nonhazardous construction and demolition waste from nonresidential construction operations. Cities, as well as the County, would comply with requirements in AB 939 for solid waste diversion. Impacts would be less than significant.

5.17.4.6 EXISTING REGULATIONS AND STANDARD CONDITIONS

State

- California Public Resources Code 40050 et seq.: Integrated Solid Waste Management Act of 1989
- Assembly Bill 341 (Chapter 476, Statutes of 2011)
- Title 24, California Code of Regulations, Part 11 (California Green Building Standards Code), Section 5.408

5.17.4.7 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Upon implementation of regulatory requirements and standard conditions of approval, Impact 5.17-4 would be less than significant. This determination applies to both direct and cumulative impacts.

5.17.4.8 MITIGATION MEASURES

No mitigation measures are required.

5.17.4.9 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Impacts would be less than significant. This determination applies to both direct and cumulative impacts.

5.17.5 Other Utilities

5.17.5.1 ENVIRONMENTAL SETTING

Regulatory Background

California Public Utilities Commission

California Public Utilities Commission (CPUC) General Order 112E, which is based upon the Federal Department of Transportation Guidelines contained in Part 192 of the Federal Code of Regulations, specifies a variety of design, construction, inspection and notification requirements. The CPUC conducts annual audits of pipeline operations to ensure compliance with these safety standards. In addition, the SCG has a safety program which has reduced the risk of gas distribution fires by improving welds on the larger diameter (24- to 30-inch) pipelines and by replacing old distribution pipes with flexible plastic pipes. According to SCG staff, high-pressure gas mains are common in developed areas throughout the country, and SCG lines are inspected regularly and must comply with CPUC mandated safety requirements.

California Energy Commission

The CEC was created as the State's principal energy planning organization in 1974, in order to meet the energy challenges facing the state in response to the 1973 oil embargo. The CEC is charged with six basic responsibilities when designing state energy policy:

- Forecasting statewide electricity needs;
- Licensing power plants to meet those needs;
- Promoting energy conservation and efficiency measures;
- Developing renewable energy resources and alternative energy technologies;
- Promoting research, development and demonstration; and
- Planning for and directing state response to energy emergencies.

Title 24, California Code of Regulations, Part 6: Energy Efficiency Standards for Buildings

Title 24, Part 6, of the California Code of Regulations contains the CEC's Energy Efficiency Standards for Residential and Nonresidential Buildings. Title 24 was first established in 1978, in response to a legislative mandate to reduce California's energy consumption. Since that time, Title 24 has been updated periodically to allow for consideration and possible incorporation of new energy efficiency technologies and methods.

Title 20, California Code of Regulations, Sections 1601 et seq: Appliance Efficiency Regulations

The 2012 Appliance Efficiency Regulations (Title 20, CCR Sections 1601 through 1608) took effect February 13, 2013. The regulations include standards for both federally regulated appliances and nonfederally regulated appliances.

Assembly Bill 1890 (1996)

The CPUC regulates investor-owned electric power and natural gas utility companies in the State of California. AB 1890, enacted in 1996, deregulated the power generation industry, allowing customers to purchase electricity on the open market. Under deregulation, the production and distribution of power that was under the control of investor-owned utilities (e.g., Southern California Edison) was decoupled. All new construction in the State of California is subject to the energy conservation standards set forth in Title 24, Part 6, Article 2 of the California Administrative Code. These are prescriptive standards that establish maximum energy consumption levels for the heating and cooling of new buildings. The utilization of alternative energy applications in development projects (including the Proposed Project), while encouraged, is not required as a development condition. Such applications may include installation of photovoltaic solar panels, active solar water heating systems, or integrated pool deck water heating systems, all of which serve to displace consumption of conventional energy sources (i.e., electricity and natural gas). Incentives, primarily in the form of state and federal tax credits, as well as reduced energy bills, provide a favorable basis.

Existing Conditions

Electricity

Southern California Edison (SCE) provides electricity to Los Angeles County. Total electricity demands in SCE's service area were 82,069 gigawatt-hours (GWH) per year in 2012, and are forecast to increase to 96,516 GWH in 2024 (CEC 2013); one GWH is equivalent to one million kilowatt-hours.

Natural Gas

The Southern California Gas Company (SCGC) supplies natural gas to most of Los Angeles County except for a few cities, including the City of Vernon and City of Long Beach, which supply natural gas to their own residents and other customers.

Total natural gas supplies available to SCGC are forecasted to remain constant at 3,875 million cubic feet per day from 2015 through 2035 (CGEU 2014).

Communication: Telephone, Mobile Phone, Cable and Internet Service

Cable

Cable operators serving Los Angeles County are: Time Warner Cable, Charter Communication, Cox Communications, AT&T U-verse, and Verizon.

Federal laws provide oversight of the cable industry. While the County continues to serve as the local franchise authority, and will respond to every community inquiry that it receives, it is important for residents

to understand the extent of the County's authority. Under current federal law, the County does not have any legal ability to dictate what cable companies charge for their services or how they set its channel lineup. As currently written, federal law allows all cable providers to operate in a deregulated manner when it comes to issues concerning pricing or channel lineup.

5.17.5.2 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 on other utilities.

Open Space and Conservation Element

Energy

Goal COS 11: Energy systems for use in public facilities that reduce consumption of non-renewable resources while maintaining public safety.

- **Policy COS 11.1:** Promote energy retrofits of existing public facilities throughout the County to complement and reduce dependence upon utility-scale renewable energy production facilities, such as solar facilities, in the Antelope Valley.

- **Policy COS 11.2:** Promote the use of solar-powered lighting for highways, streets, and public facilities, including parks and trails.

- **Policy COS 11.3:** Promote the use of renewable energy systems in public facilities, such as hospitals, libraries, and schools, to ensure access to power in the case of major disasters.

Goal COS 12: Individual energy systems for onsite use that reduce consumption of non-renewable resources and dependence on utility-scale energy production facilities.

- **Policy COS 12.1:** Promote the use of individual renewable energy systems throughout the County to complement and reduce dependence upon utility-scale renewable energy facilities, such as solar facilities, in the Antelope Valley.

- **Policy COS 12.2:** Require appropriate development standards for individual renewable energy systems to minimize potential impacts to surrounding properties. Simplify the permitting process for individual renewable energy systems that meet these development standards.

Goal COS 13: Utility-scale energy production facilities for offsite use that reduce consumption of non-renewable resources while minimizing potential impacts on natural resources and existing communities.

- **Policy COS 13.1:** Direct utility-scale renewable energy production facilities, such as solar facilities to locations where environmental, noise, and visual impacts will be minimized.

- **Policy COS 13.2:** Restrict development of utility-scale wind energy production facilities within the vicinity of Edwards Air Force Base to limit interference with military operations.

- **Policy COS 13.3:** Require all utility-scale renewable energy production facilities to develop and implement a decommissioning plan, with full and appropriate financial guarantee instruments that will restore the full site to its natural state upon complete discontinuance of operations and will restore non-operational portions of the site while the remainder continues operating.

- **Policy COS 13.4:** Promote the use of recycled water in utility-scale renewable energy production facilities to limit impacts on the available fresh water supply.

- **Policy COS 13.5:** Where development of utility-scale renewable energy production facilities cannot avoid sensitive biotic communities, require open space dedication within Significant Ecological Areas as a mitigation measure.

- **Policy COS 13.6:** Ensure that all utility-scale renewable energy production facilities, such as solar facilities, do not create land use conflicts with adjacent agricultural lands or existing residential areas in the vicinity. Require buffering and appropriate development standards to minimize potential conflicts.

- **Policy COS 13.7:** Limit the aesthetic impacts of utility-scale renewable energy production facilities to preserve rural character.

- **Policy COS 13.8:** Coordinate with other jurisdictions to plan for utility-scale renewable energy production facilities in order to minimize impacts to sensitive biotic communities and existing residential areas.

- **Goal COS 14:** Energy infrastructure that is sensitive to the scenic qualities of the Antelope Valley and minimizes potential environmental impacts.

- **Policy COS 14.1:** Require that new transmission lines be place underground whenever physically feasible.

- **Policy COS 14.2:** If new transmission lines cannot feasibly be placed underground due to physical constraints, require that they be collocated with existing transmission lines, or along existing transmission corridors, whenever physically feasible.

- **Policy COS 14.3:** If new transmission lines cannot be feasibly be placed underground or feasibly collocated with existing transmission lines or along existing transmission corridors due to physical constraints, direct new transmission lines to locations where environmental and visual impacts will be minimized.

- **Policy COS 14.4:** Discourage the placement of new transmission lines on undisturbed lands containing sensitive biotic communities.

- **Policy COS 14.5:** Discourage the placement of new transmission lines through existing communities or through properties with existing residential uses.

- **Policy COS 14.6:** Review all proposed transmission line projects for conformity with the Goals and Policies of the Area Plan, including those listed above. When the California Public Utilities Commission is the decision-making authority for these projects, provide comments regarding conformity with the Goals and Policies of the Area Plan.

- **Policy COS 14.7:** Require that electrical power lines in new residential developments be placed underground.

Green Building

Goal COS 17: Buildings are sustainable, conserving energy, water, and other resources, and limiting greenhouse gas emissions.

- **Policy COS 17.1:** Require green building techniques for the construction and operation of all public and private buildings in the unincorporated Antelope Valley.

- **Policy COS 17.2:** Require that new buildings be sited and designed in a manner that maximizes efficient use of natural resources, such as air and light, to reduce energy consumption, heat profiles, and greenhouse gas emissions.

- **Policy COS 17.3:** Promote energy retrofits of existing buildings.

- **Policy COS 17.4:** Promote the use of individual renewable energy systems and require appropriate development standards for such systems to minimize potential impacts to surrounding properties. Simplify the permitting process for individual renewable energy systems that meet these development standards.

- **Policy COS 17.5:** Protect active and passive solar design elements and systems from shading by neighboring structures and trees through appropriate development standards.

- **Policy COS 17.6:** Require new landscaping to comply with applicable water efficiency requirements in the County Code.

- **Policy COS 17.7:** Require low-flow plumbing fixtures in all new developments.

- **Policy COS 17.8:** Require onsite stormwater infiltration in all new developments through use of appropriate measures, such as permeable surface coverage, permeable paving of parking and pedestrian areas, catch basins, and other low impact development strategies.

- **Policy COS 17.9:** Require reduction, reuse, and recycling of construction and demolition debris.

Economic Development Element

Goal ED 1: A healthy and balanced economic base in the Antelope Valley that attracts a wide range of industries and businesses and provides high-paying jobs for local residents.

- **Policy ED 1.10:** Promote small-scale, household based renewable energy systems to enable Antelope Valley residents to become energy independent.
- **Policy ED 1.11:** Encourage the development of utility-scale renewable energy projects at appropriate locations and with appropriate standards to ensure that any negative impacts to local residents are sufficiently mitigated.
- **Policy ED 1.12:** Adopt regulations that ensure that local residents receive a fair share of the benefits of utility-scale renewable energy projects that are commensurate to their impacts.
- **Policy ED 1.13:** Ensure early discussions with Edwards Air Force Base and U.S. Air Force Plant 42 regarding new industries, such as utility-scale renewable energy production facilities, to limit potential impacts on mission capabilities.

5.17.5.3 THRESHOLDS OF SIGNIFICANCE

Although not specifically in Appendix G of the CEQA Guidelines, the following additional threshold is also addressed in the impact analysis: a project would normally have a significant effect on the environment if the project:

U-8 Would increase demand for other public services or utilities.

5.17.5.4 ENVIRONMENTAL IMPACTS

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

Impact 5.17-5: Existing and/or proposed facilities would be able to accommodate project-generated utility demands. [Threshold U-8]

Impact Analysis

Electricity

Growth in the Project Area would result in additional demand for electricity service. Presently and for the foreseeable future, the national and regional supply of electrical energy is not in jeopardy. The acceleration of the approval and licensing process of additional state power plants will ensure an adequate supply of electricity for state consumers. Past shortages of electricity were solved by the additional power plants being brought "online" in California. The matter of electrical generation capacity is not one of physical shortages due to power plant limitations; rather, it is a function of market forces and the wholesale cost of electricity.

Implementation of the Proposed Project would result in increased demand in electricity service to the Project Area. New development occurring from buildout of the Proposed Project would be subject to Title 24, Part 6of the California Administrative code, the Energy Efficiency Standards for Residential and Nonresidential Buildings, which requires local jurisdiction to use energy efficient appliances, weatherization techniques and efficient cooling and heating systems to reduce energy demand stemming from new development.

Forecast electricity demands by Proposed Project buildout are shown below in Table 5.17-11. The forecasted net increase in electricity demand due to Proposed Project buildout is about 4.1 billion kWh per year, or about 4,100 GWH per year, and is within SCE's demand forecast for its service area. Therefore, impacts of Proposed Project buildout on electricity supplies would be less than significant.

Table 5.17-11 Forecasted Net Increase in Electricity Demand by Proposed Project Buildout

Land Use	Net Increase	Annual Electricity Demand, kWh	
		Per Unit/Employee[1]	Total
Residences	81,441 units	7,055	574,566,255
Nonresidential	102,513 employees	34,249	3,510,967,737
Total	Not applicable	Not applicable	4,085,533,992

[1] Source: LACDPW 2014a.

Natural Gas

Estimated natural gas demands by Proposed Project buildout are shown below in Table 5.17-12. The estimated net increase in natural gas demand is about 53.4 million therms per year, that is, 14.2 million cubic feet of natural gas per day. Forecasted natural gas demands due to the Proposed Project buildout are within SCGC's estimated supplies; thus, impacts of the Proposed Project buildout on natural gas supplies would be less than significant.

Table 5.17-12 Forecasted Net Increase in Natural Gas Demand by Proposed Project Buildout

Land Use	Net Increase	Annual Natural Gas Demand, Therms	
		Per Unit/Employee[1]	Total
Residences	81,441 units	424.6	34,579,849
Nonresidential	102,513 employees	183.8	18,841,889
Total	Not applicable	Not applicable	53,421,738

[1] Source: LACDPW 2014a.

5.17.5.5 CUMULATIVE IMPACTS

The cumulative impact area for the Proposed Project is SCAG's North Los Angeles County Subregion, which includes all unincorporated areas of Los Angeles County located within the Antelope Valley and Santa Clarita Valley areas, as well as the incorporated cities of Palmdale, Lancaster, and Santa Clarita.

Electricity

Cumulative electricity demands are estimated below in Table 5.17-13. Estimated cumulative electricity demands in 2035 Proposed Project buildout conditions would be about 13.2 billion kWh per year, that is, 13,200 GWH per year, within SCE's demand forecast for its service area. Thus, cumulative impacts on electricity supplies would be less than significant.

Table 5.17-13 Cumulative Electricity Demand Existing, 2035, and Post–2035

	Existing			2035[2]			Post–2035[1]		
	Housing Units	Employment	Electricity Demand, kWh[3]	Housing Units	Employment	Electricity Demand, kWh[3]	Housing Units	Employment	Electricity Demand, kWh[3]
Project Area[1]	24,739	31,838	1.26 billion	N/A	N/A	N/A	106,180	134,351	5.35 billion
North Los Angeles County Subregion[2]	200,636	213,899	8.74 billion	304,241	321,743	13.2 billion	N/A	N/A	N/A

Notes:
The Proposed Project will not be built out within the SCAG RTP/SCS horizon of 2035.
N/A = Data not available.
[1] County of Los Angeles 2014.
[2] SCAG 2012–2035 RTP/SCS.
[3] The electricity demand factors used here are 7,055 kWh per year per residential unit and 34,249 kWh per year per employee, the same as used above in Table 5.17-11.

Natural Gas

Cumulative natural gas demands are estimated below in Table 5.17-14. Cumulative natural gas demands in 2035 Proposed Project buildout conditions would be about 188 million therms per year, or 50 million cubic feet of natural gas per day, within SCGC's natural gas supply forecast. Thus, cumulative impacts on natural gas supplies would be less than significant.

Table 5.17-14 Cumulative Natural Gas Demand Existing, 2035, and Post–2035

	Existing			2035[2]			Post–2035[1]		
	Housing Units	Employment	Natural Gas Demand, Therms[3]	Housing Units	Employment	Natural Gas Demand, Therms[3]	Housing Units	Employment	Natural Gas Demand, Therms[3]
Project Area[1]	24,739	31,838	16,356,004	N/A	N/A	N/A	106,180	134,351	69,777,742
North Los Angeles County Subregion[2]	200,636	213,899	124,504,682	304,241	321,743	188,317,092	N/A	N/A	N/A

Notes:
The Proposed Project will not be built out within the SCAG RTP/SCS horizon of 2035.
N/A = Data not available.
[1] County of Los Angeles 2014.
[2] SCAG 2012–2035 RTP/SCS.
[3] The natural gas demand factors used here are 424.6 therms per year per residential unit and 183.8 therms per year per employee, the same as used above in Table 5.17-12.

5.17.5.6 EXISTING REGULATIONS AND STANDARD CONDITIONS

State

- California Code of Regulations Title 24, Part 6: Energy Efficiency Standards for Residential and Nonresidential Buildings.
- California Code of Regulations Title 20, Sections 1601 et seq: Appliance Efficiency Regulations
- Assembly Bill 1890: Electric power deregulation

5.17.5.7 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Upon implementation of regulatory requirements and standard conditions of approval, Impact 5.17-6 would be less than significant. This determination applies to both direct and cumulative impacts.

5.17.5.8 MITIGATION MEASURES

No mitigation measures are required.

5.17.5.9 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Impacts would be less than significant. This determination applies to both direct and cumulative impacts.

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