

5. Environmental Analysis

5.18 UTILITIES AND SERVICE SYSTEMS

5.18.1 Wastewater Treatment and Collection

This section of the Draft Program Environmental Impact Report (PEIR) evaluates the potential for implementation of the Countywide Plan (proposed Project) to impact wastewater treatment, stormwater drainage, water supplies, and solid waste disposal in the County of San Bernardino (County). The information in this section is based partly on:

- *County of San Bernardino General Plan Water, Wastewater, and Hydrology Existing Conditions Report*, Dudek and PlaceWorks, May 2017.

A complete copy of this report is in Appendix H of this PEIR.

5.18.1.1 ENVIRONMENTAL SETTING

Regulatory Background

Federal

Clean Water Act

The federal Clean Water Act (CWA), United States Code, Title 33, Section 1251 et seq. establishes regulations to control the discharge of pollutants into the waters of the United States and regulates water quality standards for surface waters. Under the CWA, the US Environment Protection Agency (EPA) is authorized to set wastewater standards for industry and runs the National Pollutant Discharge Elimination System (NPDES) permit program. Under the NPDES program, permits are required for all new developments that generate discharges that go directly into “Waters of the United States.” Additionally, Section 1251 et seq. of the CWA require wastewater treatment of all effluent before it is discharged into surface waters.

State

Porter-Cologne Water Quality Act

The Porter-Cologne Water Quality Act (Water Code § 13000 et seq.) is the basic water quality control law for California. Under this act, the State Water Resources Control Board (SWRCB) has primary responsibility for coordination and control of water quality. In California, the EPA has delegated authority to issue NPDES permits to the SWRCB. The state is divided into nine regions related to water quality and quantity characteristics. The SWRCB, through its nine Regional Water Quality Control Boards (RWQCBs), carries out the regulation, protection, and administration of water quality in each region. Each regional board is required to adopt a Water Quality Control Plan or Basin Plan that recognizes and reflects the regional differences in existing water quality, the beneficial uses of the region’s ground and surface water, and local water quality conditions and problems.

General Waste Discharge Requirement

On May 2, 2006, the SWRCB adopted a General Waste Discharge Requirement (Order No. 2006-0003) for all publicly owned sanitary sewer collection systems in California with more than one mile of sewer pipe. The

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order provides a consistent statewide approach to reducing sanitary sewer overflows by requiring public sewer system operators to take all feasible steps to control the volume of waste discharged into the system, to prevent sanitary sewer waste from entering the storm sewer system, and to develop a Sanitary Sewer Master Plan. The General Waste Discharge Requirement also requires that storm sewer overflows be reported to the SWRCB using an online reporting system.

Sanitary District Act of 1923

The Sanitary District Act of 1923 (Health and Safety Code Section 6400 et seq.) authorizes the formation of sanitation districts and empowers the districts to construct, operate, and maintain facilities for the collection, treatment, and disposal of wastewater. The act was amended in 1949 to allow the districts to also provide solid waste management and disposal services, including refuse transfer and resource recovery.

AB 885

The SWRCB implements regulations to reduce the impact of wastewater sources on groundwater quality in accordance with state law (AB 885) through its water quality control policy for siting, design, operation, and maintenance of onsite wastewater treatment systems (OWTS) (septic systems) (Resolution No. 2012-0032). This policy establishes a statewide, risk-based, tiered approach for the regulation and management of OWTS installations and replacements that have affected, or will affect, groundwater or surface water to a degree that makes it unfit for drinking water or other uses, or cause a health or public nuisance condition. RWQCBs incorporated the standards established in the OWTS policy or standards that are more protective of the environment and public health into their water quality control plans. Implementation is overseen by the state and regional water quality boards and local agencies (e.g., county and city departments and independent districts).

Pretreatment Program

The General Pretreatment Regulations at 40 CFR 403.1 et seq. establish the responsibilities of government agencies, industries, and the public to implement pretreatment standards to control industrial pollutants that may pass through or interfere with publicly owned treatment works (POTWs) or contaminate sewage sludge. In 1978, the EPA promulgated extensive regulations requiring many POTWs to develop and implement local pretreatment programs. The EPA delegated the responsibility to oversee these pretreatment programs to the state and regional water boards in 1989. As a result, the state and regional water boards are responsible for the review and approval of new and modified POTW pretreatment programs. The NPDES permits for these POTWs spell out the pretreatment program monitoring and reporting requirements.

Regional

National Pollutant Discharge Elimination System

Waste discharge requirements for effluent discharged from wastewater treatment facilities to Waters of the United States are set forth in permits issued by regional water quality control boards—the Santa Ana RWQCB for facilities in the Santa Ana Watershed (Valley Region and parts of the Mountain Region), and the Colorado River Basin RWQCB for facilities in the Lower Colorado Watershed (North and East Desert Region). In the

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North Mojave Watershed, the Lahontan RWQCB issues permits and sets waste discharge requirements for effluent discharged from such facilities to Waters of the State.

Local Area Management Program

The County adopted a Local Area Management Program (LAMP) to comply with the state's OWTS policy. The LAMP provides minimum standards and requirements for the treatment and disposal of sewage through OWTS when no connection to a sewer is available. Requirements for new development include siting standards for OWTS near drinking water wells, impaired waterways, sources of groundwater, and other specific land uses. Regulations include minimum lot size, residential density, minimum setback requirements, natural ground slope and percolation, OWTS design specifications, and other criteria. In addition, OWTS are not allowed in certain areas of the county where a moratorium exists due to the high concentration of existing OWTS or proximity to groundwater or surface water sources. These communities include:

- Grand Terrace (County Service Area 70, Improvement Zone H)
- Yucaipa-Calimesa
- Lytle Creek (above 2,600 feet elev.)
- Mill Creek (above 2,600 feet elev.)
- Bear Valley (including Baldwin Lake drainage area)
- Lahontan Regional Water Quality Control Board Prohibition Areas 1-5

Oversight of OWTS installation maintenance involves multiple County divisions. The Building and Safety Division is responsible for issuing permits for new construction, replacement, and repair of OWTS; reviewing plot plans for new and replacement OWTS; retaining permit information; and assisting with LAMP reporting requirements. The Building and Safety Division relies on the Division of Environmental Health Services' (DEHS) for approval of percolation reports and for review of OWTS proposals when the OWTS is in a prohibition area or within the Advanced Protection Management Program area.

DEHS is also responsible for issuing permits for alternative treatment systems; reviewing percolation reports and alternative treatment proposals for new and replacement systems in high risk residential areas and commercial projects; investigating and storing complaints for OWTS in multifamily dwellings (3 or more units); and complying with LAMP reporting requirements.

The Division of Code Enforcement investigates complaints for overflowing/failed septic tanks for single-family residences and two-unit dwellings, and also assist with LAMP reporting requirements.

Existing Conditions

The Valley Region contains the majority of public wastewater collection/treatment facilities in the unincorporated County, and most communities are connected to one of these systems. The Mountain Region contains regional treatment facilities for some communities, but many are still reliant on septic tanks and leach fields. Most communities in the Desert Region are serviced by private septic systems because the infrastructure, both for collection and treatment, is limited in number and capacity.

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County Special Districts provide sewer services to unincorporated communities through County service areas (CSAs) and community facilities districts (CFDs). Ten CSAs provide sewer services to approximately 10,097 residential and commercial connections, serving small and/or remote areas. Most Special Districts collect and transport sewage flow over miles of collection pipelines to local treatment facilities or to a third-party treatment provider. Special Districts outsource some of the sewage treatment to other agencies. For the CSAs that do not have treatment facilities, Special Districts have treatment agreements with Victor Valley Wastewater Reclamation Authority (WRA), Running Springs Water Agency, the City of Rialto, and Big Bear Area Regional Wastewater Agency.

In general, the Special Districts operate and maintain each CSA as a self-supporting enterprise. CSAs are formed and tailored to meet the specific needs of a defined area so that the property owners only pay for the services that they want. As self-supporting enterprises, the water and sewer rates should provide sufficient levels of revenue to meet all operation and maintenance expenses, debt service requirements, routine annual replacements of capital improvements, and other requirements.

Special Districts also administers CFDs, which are formed when the property owners in a geographic area agree to impose a special property tax on real property within that area to fund infrastructure improvements. Based on future tax revenue, CFDs seek public financing through bonds. There are two CFDs that finance public improvements related to wastewater services in unincorporated county areas—the Kaiser Commerce Center CFD and the Citrus Plaza CFD.

Community Services Districts¹ (CSDs) also provide wastewater services to unincorporated communities. The Big Bear City CSD serves portions of the unincorporated area of Big Bear City, Lake William, Baldwin Lake, and Erwin Lake. The Helendale community is serviced by the Helendale CSD, and the Lake Arrowhead CSD covers communities of Lake Arrowhead, Cedar Glen, Blue Jay, Twin Peaks, Deer Lodge Park, Rim Forest, Agua Fria, and Sky Forest. The Baker CSD serves the Baker community.

Furthermore, the cities of Rialto, Fontana, Redlands, San Bernardino, Yucaipa, Big Bear Lake, Barstow, and Needles provide sewer services within their own boundaries and to unincorporated areas within their spheres of influence (SOI). Additionally, the Crestline Sanitation District provides collection and treatment services in the Mountain Region, and the Inland Empire Utilities Agency (IEUA) provides wastewater treatment in the west valley Region.

The County also currently has 14 community plan areas (CPAs) in the unincorporated areas that have adopted community plans. Community Plans identify land use goals and policies unique to each community and include additional information to guide how the County will manage and address growth issues while recognizing the special attributes unique to each unincorporated community. Community Plans are frequently used by jurisdictions as extensions of a general plan, and frequently include goals and policies specific to a local community (San Bernardino County 2018).

¹ A CSD is a form of independent local government used to provide services in unincorporated areas of a county.

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In areas with urban wastewater management plans and treatment plants, all agencies reported adequate capacity and infrastructure to meet current wastewater demands and maintain the current level of service for existing land uses. There were no reports of any major system deficiencies or service inadequacies.

Insight from the Local Agency Formation Commission for San Bernardino County (LAFCO) indicates that the Valley Region communities are best positioned to accommodate growth and treat associated wastewater. Some communities in the Desert Regions may also have sufficient treatment systems to accommodate additional growth. Communities in the Mountain Region are better positioned to continue serving existing residents and businesses while accommodating an incremental level of growth.

Communities on Septic Systems

Generally, portions of the unincorporated County rely on private septic systems because there are no close regional sewer services. Some unincorporated communities in the Valley Region could connect to nearby regional wastewater collection systems if additional funding mechanisms are supported by property owners. Most unincorporated communities in the Mountain and Desert Regions are geographically isolated from regional wastewater collection systems and will continue to require private septic systems as the primary wastewater disposal option unless regional wastewater collection and treatment systems are established. Unincorporated areas or communities that rely on septic systems are:

- Angelus Oaks
- Adelanto SOI (portions)
- Bloomington (portions)
- Colton SOI (east)
- Daggett
- El Mirage
- Homestead Valley (Flamingo Heights, Johnson Valley, Landers, and Yucca Mesa)
- Joshua Tree
- Loma Linda SOI (east)
- Lucerne Valley
- Mentone (portions)
- Morongo Valley
- Mt Baldy
- Muscoy
- Newberry Springs
- Oak Glen
- Oak Hills
- Phelan/Pinon Hills
- Pioneertown
- Redlands (east)
- Twentynine Palms (SOI)

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- Wrightwood
- Yermo

Wastewater Treatment

Valley Region

Wastewater treatment facility providers in the Valley Region are within the Santa Ana RWQCB jurisdiction. These providers include: IEUA (various locations), Rialto, Redlands, City of San Bernardino Municipal Water Department, City of Loma Linda, City of Colton, East Valley Water District, and Yucaipa Valley Water District facilities.

Mountain Region

In the Mountain Region, regional wastewater treatment providers include Crestline Sanitation District and the Lake Arrowhead CSD. These facilities are within the Lahontan RWQCB. The Mountain Region providers also include the Lytle Creek CSA, the Running Springs County Water District, and the Big Bear Area Regional Wastewater Agency, which are within the jurisdiction of the Santa Ana RWQCB.

North Desert Region

In the North Desert Region, regional treatment facilities are provided by the Helendale CSD, Baker CSD, Oro Grande CSA, Victor Valley Wastewater Reclamation Authority, the Town of Apple Valley, Hesperia County Water District, and the cities of Barstow and Needles. These facilities fall under the jurisdiction of the Lahontan RWQCB.

East Desert Region

Most residential properties in the East Desert Region are on private sewage treatment systems that fall under the jurisdiction of the Colorado River RWQCB. However, the RWQCB banned the use of septic systems in the Town of Yucca Valley to address growing concern over groundwater quality. The Hi-Desert Water District is in the process of constructing a wastewater treatment and reclamation facility and installing infrastructure to meet all wastewater needs within town limits. The ban does not extend to the unincorporated areas (RWQCB 2011).

Wastewater treatment providers and facilities serving unincorporated areas of the County are listed in Table 5.18-1. Wastewater treatment capacities, average daily flow, and residual capacity are also shown in the table. It should be noted that average daily flow and residual capacity include both incorporated and unincorporated areas.

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Table 5.18-1 Wastewater Treatment Providers and Facilities

Communities Served	Wastewater Treatment Provider	Wastewater Treatment Facility	2015 Capacity, mgd	Average Daily Flow, 2015, mgd ¹	Residual Capacity, mgd ²
Valley Region					
Bloomington CPA (small portion)	City of Rialto	Rialto Wastewater Treatment Plant (WWTP)	11.7	9	2.7
City of Fontana SOI (north)					
City of Rialto SOI (north and south)					
Mentone CPA (small portion)	City of Redlands	Redlands WWTP	9.5	6	3.5
East Valley Area Plan					
San Antonio Heights	IEUA	Regional Water Reclamation Plant (RWRP) #1	44	28	16
City of Rancho Cucamonga SOI (north)					
City of Fontana SOI (west)					
City of Chino SOI (northwest)					
City of Montclair SOI (south)					
City of Colton SOI (northwest)	City of San Bernardino Municipal Water Department	Water Reclamation Plant (WRP)	33	28	5
City of Highland SOI (portions)					
City of San Bernardino SOI (north)					
City of San Bernardino SOI (east)					
City of Yucaipa SOI (northwest)	Yucaipa Valley Water District	Wocholz Regional WRF	6.7	3.5	3.2
Glen Helen/Rosena Ranch	San Bernardino County Special Districts Department	Lytle Creek North Wastewater Recycling Plant	3.5	1.75	1.75
Muscoy CPA	Not applicable/septic				
City of Colton SOI (east)					
City of Loma Linda SOI (east)					
City of Redlands SOI (east)					
Mountain Region					
Bear Valley Communities CPA					
Big Bear City	Big Bear Area Regional Wastewater Agency	BBARWA WWTP	4.89	2.5	2.39
Erwin Lake					
Fawnskin/ Northshore (County Service Area 53 B)					
Moonridge					
Sugarloaf					
Baldwin Lake	Not applicable – septic or holding tanks				
Lake Williams					
Crest Forest Communities CPA					
Cedarpines Park	Crestline Sanitation District	Huston Creek WWTP	0.7	0.46	0.24
Crestline		Seeley Creek WWTP	0.5	0.17	0.33

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Table 5.18-1 Wastewater Treatment Providers and Facilities

Communities Served	Wastewater Treatment Provider	Wastewater Treatment Facility	2015 Capacity, mgd	Average Daily Flow, 2015, mgd ¹	Residual Capacity, mgd ²
Lake Gregory					
Valley of Enchantment		Cleghorn WWTP	0.2	0.01	0.19
Hilltop Communities CPA					
Arrowbear Lake	Running Springs Water District	RSWD WWTP	1	0.5	0.1
Green Valley Lake					
Running Springs					
Lake Arrowhead Communities CPA					
Blue Jay	Community Services District	Willow Creek WWTP	3.75	3.1	0.65
Cedar Glen					
Deer Lodge Park					
Lake Arrowhead					
Rim Forest		Grass Valley WWTP			
Sky Forest					
Twin Peaks					
Other Unincorporated Areas					
Lytle Creek	County Service Area 70 S-3	Lytle Creek WWTP	0.16	0.066	0.094
Angelus Oaks	Not applicable/septic				
Mt. Baldy					
Oak Glen CP					
Wrightwood					
North Desert Region					
Helendale CPA	Helendale Community Services District	Silver Lakes WWTP	1.2	0.5	0.7
Baker	Baker Community Services District	Body	0.35-0.52 winter-summer	0.23-0.29	0.12-0.23
Oro Grande	County Service Area 42	VWRA WWTP	22	0.06	21.94
Town of Apple Valley SOI (portions)	Victor Valley Wastewater Reclamation Authority	VWRA WWTP	22	3.2	18.8
City of Hesperia SOI (south)		VWRA WWTP	22	3.73	18.27
City of Victorville SOI (portions)		VWRA WWTP	22	12.47	9.53
Apple Valley Hesperia County Water District					
City of Barstow SOI (outer perimeter)	City of Barstow	Barstow WWTP	4.5	2.2	2.3
City of Needles SOI (west)	City of Needles	Needles WWTP	1.2	0.4-0.65	0.55
City of Adelanto SOI (portions)	Not applicable/septic				
Oak Hills					
Oak Glen CPA					
Phelan/Pinon Hills CPA					
Lucerne Valley CPA					
Daggett					
El Mirage					
Newberry Springs					

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Table 5.18-1 Wastewater Treatment Providers and Facilities

Communities Served	Wastewater Treatment Provider	Wastewater Treatment Facility	2015 Capacity, mgd	Average Daily Flow, 2015, mgd ¹	Residual Capacity, mgd ²
Yermo					
East Desert Region					
Joshua Tree CPA	Not applicable/septic				
Flamingo Heights					
Johnson Valley					
Landers					
Yucca Mesa					
Morongo Valley					
Pioneertown					
Town of Twentynine Palms SOI (northwest and east)					

Source: Dudek and PlaceWorks 2017, Running Springs Water District 2017

Note: mgd = Million gallons per day

¹ Average daily flow is for incorporated and unincorporated areas served by the wastewater treatment facility.

² Residual capacity is capacity remaining that can accommodate growth in incorporated and unincorporated areas served by wastewater treatment facility.

³ Source: Rialto Water Services. 2018. Wastewater. <https://rialtowater.com/about-us/wastewater/>

⁴ Source: Inland Empire Utilities Agency. 2018. Carbon Canyon Water Recycling Facility. <https://www.ieua.org/facilities/carbon-canyon-water-recycling-facility/>

5.18.1.2 THRESHOLDS OF SIGNIFICANCE

According to Appendix G of the California Environmental Quality Act (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 it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments.

5.18.1.3 REGULATORY REQUIREMENTS AND GENERAL PLAN POLICIES

Regulatory Requirements

- RR USS-1 **General Waste Discharge Requirements.** Projects will comply with the State Water Resources Control Board (SWRCB) General Waste Discharge Requirements (Order No. 2006-0003).

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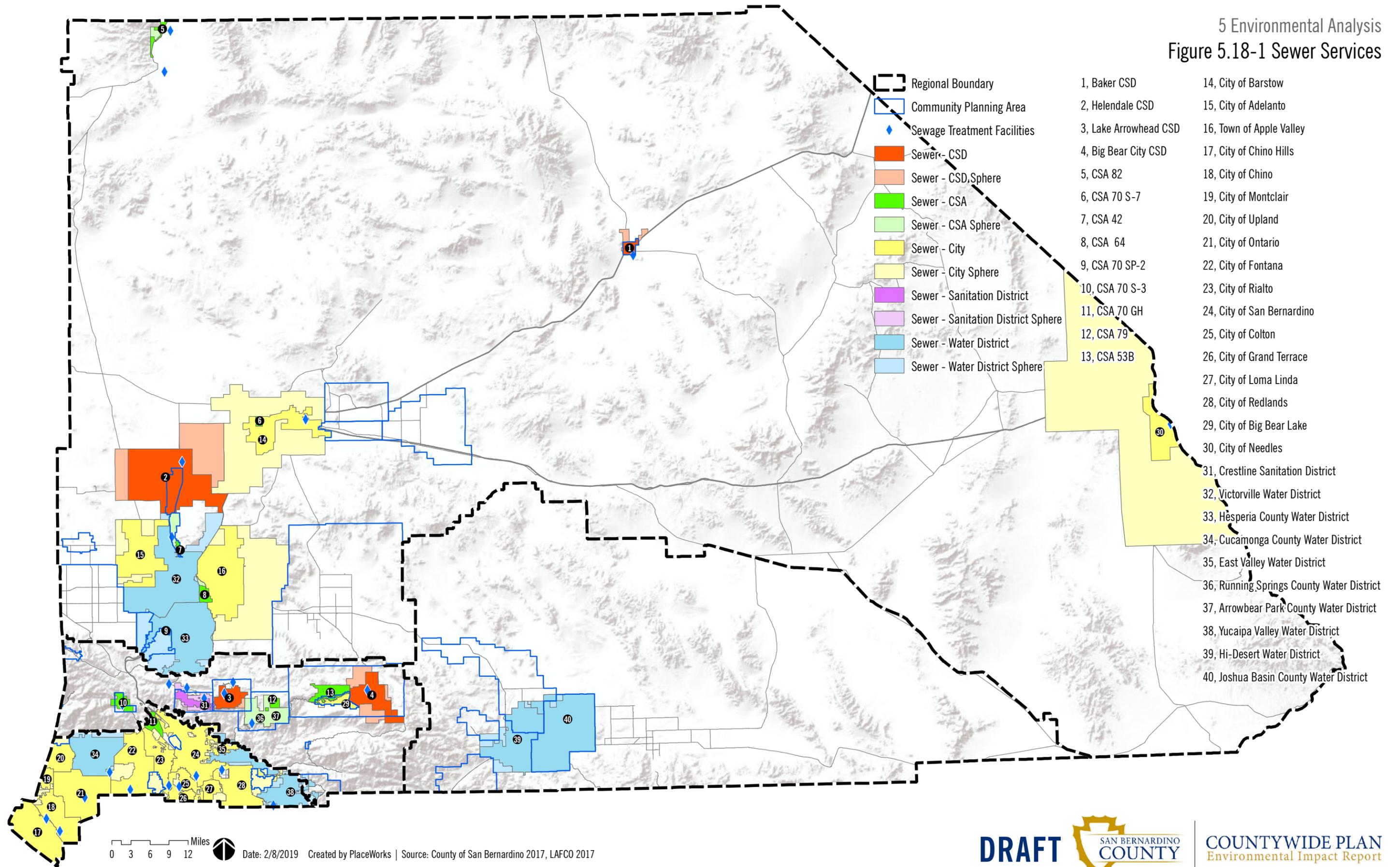
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- RR USS-2 **Sanitary District Act.** Sanitation Districts shall construct, operate, and maintain facilities for the collection, treatment, and disposal of wastewater in line with the Sanitary District Act of 1923.
- RR USS-3 **AB 885.** Onsite wastewater treatment systems shall be sited, designed, operated, and maintained in accordance with AB 885.
- RR USS-4 **General Pretreatment Regulations 40 CFR 403.1 et seq.** Government agencies, industries, and the public shall implement pretreatment standards to control industrial pollutants that may pass through or interfere with publicly owned treatment works or contaminate sewage sludge.
- RR USS-5 **RWQCB NPDES Permits.** Waste discharge requirements for effluent discharged from wastewater treatment facilities shall be in accordance with permits issued by the Santa Ana RWQCB, the Colorado River Basin RWQCB, and the Lahontan RWQCB.
- RR USS-6 **Local Area Management Program.** Onsite wastewater treatment systems shall comply with the County of San Bernardino’s Local Area Management Program.

Policy Plan

- Policy H-1.2** **Concurrent infrastructure.** We support the integrated planning and provision of appropriate infrastructure (including water, sewer, and roadways) concurrent with and as a condition of residential development to create more livable communities.
- Policy H-5.2** **Local and regional infrastructure.** We support the integrated planning and provision of appropriate infrastructure (including water, sewer, stormwater, and roadways) to create more livable residential environments. This effort will contain:
- Cooperation with the San Bernardino Local Agency Formation Commission and service providers in service planning.
 - Coordination of capital improvement planning efforts with cities and through the San Bernardino County Transportation Authority
 - Review minimum improvement standards for rural areas in the update of the County development code.
 - Coordination with the Southern California Association of Governments to include transportation improvements into the regional transportation plan
- Policy IU-2.1** **Minimum parcel size.** We require new lots smaller than one-half acre to be served by a sewer system. We may require sewer service for larger lot sizes depending on local soil and groundwater conditions, and the County’s Local Area Management Program.

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Figure 5.18-1 Sewer Services



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- Policy IU-2.2** **User fees.** For wastewater systems operated by County Special Districts, we establish user fees that cover operation and maintenance costs and set aside adequate reserves for capital upgrades and improvements.
- Policy IU-2.3** **Shared wastewater facilities for recycled water.** We encourage an expansion of recycled water agreements between wastewater entities to share and/or create connections between wastewater systems to expand the use of recycled water.
- Policy NR-2.4** **Wastewater discharge.** We apply federal and state water quality standards for wastewater discharge requirements in the review of development proposals that relate to type, location, and size of the proposed project in order to safeguard public health and shared water resources.

5.18.1.4 ENVIRONMENTAL IMPACTS

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

Impact 5.18-1: Project-generated wastewater would not result in a determination by the wastewater treatment provider which serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments. [Thresholds U-5]

Wastewater generation associated with the Countywide Plan buildout was calculated using projected population growth and projected buildout square footage (shown in Table 3-3) for the unincorporated areas. The following generation rates were used (Dudek 2017):

- Residential: 70 gal/person/day
- Retail/Office/Light Industrial/Public Space: 1,500 gal/acre/day
- Heavy Industrial: 2,500 gal/acre/day

The estimated increase in wastewater generation from 2016 to 2040 for the unincorporated areas is shown in Table 5.18-2. A total increase of 4.32 million gallons per day (mgd) is projected for the unincorporated areas.

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Table 5.18-2 Increase in Wastewater Generation in Unincorporated Areas, 2016 to 2040

Provider	Communities Served ¹	Population ²	Building Area ³ (acre)	Generation Rate ⁴	Projected Residential Increase in Wastewater Generation (mgd)	Projected Nonresidential Increase in Wastewater Generation (mgd)	Total Projected Increase in Wastewater Generation (mgd) ⁵
Valley Region							
City of Rialto	Bloomington CPA	19,270	177.50 2.4 (Heavy Industrial)	70 gal/person/day 1,500 gal/acre/day (Nonresidential other than Heavy Industrial) 2,500 gal/acre/day (Heavy Industrial)	1.35	0.27	1.62
City of Redlands	Mentone CPA (small portion)	323	4.89 5.86 (Heavy Industrial)		0.02	0.02	0.04
	East Valley Area Plan	3,243	145.64 2.55 (Heavy Industrial)		0.23	0.22	0.45
IEUA	San Antonio Heights	49	0.06		0.003	0.0001	0.004
	Chino SOI	141	11.16		0.01	0.02	0.03
	Fontana SOI	482	307 2.64 (Heavy Industrial)		0.03	0.47	0.50
	Montclair	58	0.11		0.004	0.0002	0.004
City of San Bernardino Municipal Water Department	Muscoy	449	6.47		0.03	0.03	0.06
	San Bernardino SOI	137	46.26 1.02 (Heavy Industrial)		0.01	0.08	0.09
	Loma Linda SOI	548	0.46		0.04	0.0007	0.04
City Yucaipa Valley Water District	No Growth						

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Table 5.18-2 Increase in Wastewater Generation in Unincorporated Areas, 2016 to 2040

Provider	Communities Served ¹	Population ²	Building Area ³ (acre)	Generation Rate ⁴	Projected Residential Increase in Wastewater Generation (mgd)	Projected Nonresidential Increase in Wastewater Generation (mgd)	Total Projected Increase in Wastewater Generation (mgd) ⁵
San Bernardino County Special Districts	No Growth						
Total							2.84
Mountain							
Big Bear Area Regional Wastewater Agency	Bear Valley	650	3.20	70 gal/person/day 1,500 gal/acre/day (Nonresidential other than Heavy Industrial) 2,500 gal/acre/day (Heavy Industrial)	0.05	0.005	0.06
Crestline Sanitation District	Crest Forest	342	1.85		0.02	0.003	0.02
Running Springs Water District	Hilltop	343	1.35		0.02	0.002	0.02
Lake Arrowhead Community Services	Lake Arrowhead	602	2.45		0.04	0.004	0.04
County Service Area 70 S-3	Lytle Creek	87	1.07		0.006	0.002	0.008
Total							0.15
North Desert							
Helendale CSD	Helendale CPA	1,397	2.5	1,500 gal/acre/day (Nonresidential other than Heavy Industrial) 2,500 gal/acre/day (Heavy Industrial)	0.10	0.004	0.10
Baker CSD	Baker	83	0.12		0.006	0.0002	0.006
County Service Area 42	Oro Grande	83	1.05		0.006	0.002	0.008
Victor Valley Wastewater Reclamation Authority	Apple Valley SOI	16,280	44.1		1.14	0.07	1.21
	Victorville SOI	107	0.12		0.008	0.0002	0.008

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Table 5.18-2 Increase in Wastewater Generation in Unincorporated Areas, 2016 to 2040

Provider	Communities Served ¹	Population ²	Building Area ³ (acre)	Generation Rate ⁴	Projected Residential Increase in Wastewater Generation (mgd)	Projected Nonresidential Increase in Wastewater Generation (mgd)	Total Projected Increase in Wastewater Generation (mgd) ⁵
City of Barstow	No Growth						
City of Needles	No Growth						
						Total	1.33
						Total For All Regions	4.32

¹ Communities with no unincorporated growth are not included in the table.

² Source: County of San Bernardino for unincorporated areas (2018); SCAG 2016 RTP/SCS Growth Forecast for incorporated jurisdictions, adjusted for growth in housing and population from 2012 to 2016 based on ACS population/housing estimates; and growth in employment from 2012 to 2015 based on the 2015 U.S. Census Bureau, LEHD Employment Statistics.

³ Building SF refers to projected square footage of non-residential structures.

⁴ Source: Dudek, 2017.

⁵ It is assumed that all current residential and nonresidential users in close proximity to sewer services would be required to connect to sewer services by 2040.

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Table 5.18-3 shows the projected wastewater flows for each wastewater treatment provider in 2040. Wastewater flows for 2040 were calculated by adding the increase in wastewater generation from 2016 to 2040 to the 2015 flows. The increases in both incorporated and unincorporated wastewater generation are considered.

Many of the wastewater treatment providers have capital improvement projects that will be fully implemented by 2040. The City of San Bernardino Municipal Water Department has proposed development of the Clean Water Factory, with the potential of treating up to 30.5 mgd of wastewater (WSC 2016). The Hesperia Water Reclamation Plant (WRP) will be a subregional treatment facility to treat a portion of wastewater from its local collection system. The WRP will divert wastewater flow from the Victor Valley WRA and will be designed to treat plant throughput capacities of 1.0 mgd in Phase 1, expandable to 2.0 mgd in Phase 2, and 4.0 mgd at buildout. No further expansion beyond 4.0 mgd is anticipated at the Hesperia WRP site (Carollo 2009b). The Apple Valley WRP, which will also divert wastewater flow from the Victor Valley WRA, will be a subregional treatment facility to treat a portion of wastewater from its local collection system. The WRP will be designed to treat plant throughput capacities of 1.0 mgd in Phase 1, expandable to 2.0 mgd in Phase 2. No further expansion beyond 2.0 mgd is anticipated at the Apple Valley WRP site (Carollo 2009a). Additionally, the Eastside Regional WRP, with an average treatment capacity of 4.0 mgd, and three WRPs will be developed to treat wastewater generated in the service area currently serviced by the Victor Valley WRA. WRP-1 will have an ultimate average flow capacity of 7.4 mgd, WRP-2 will have an ultimate average capacity of 8.5 mgd, and WRP-3 will have an ultimate average capacity of 4.7 mgd (VWVRA 2010).

The projected increase in wastewater treatment capacity is added to the 2015 capacity numbers of Table 5.18-1 and included in Table 5.18-3.

The IEUA, in its 2014 Wastewater Facilities Master Plan, projected a 2040 wastewater flow of 77.7 mgd (CH2MHill & Carollo 2014). This projection does not include unincorporated growth and is lower than the projected 92.87 mgd flow shown in Table 5.18-3 for incorporated areas.² The IEUA's flow projections were based on the average influent wastewater flows measured at all four IEUA facilities during a flow monitoring period in 2013. The flows were projected through the year 2060 using population, employment, and land use information (RMC 2013). The value projected in the IEUA is a more accurately projected value based on real time data. Considering a projected incorporated flow of 77.7 mgd, the 2040 projection for both incorporated and unincorporated areas will be 78.24 mgd. This value is less than the total treatment capacity for IEUA.

The City of Redlands, in its 2035 General Plan EIR, projected a wastewater flow of 6.75 mgd at full buildout (Redlands 2017). The total increase in wastewater flow from 2015 to the buildout year of 2035 is estimated at 0.75 mgd. This projection does not include unincorporated growth and is considerably lower than the 3.42 mgd projected growth shown in Table 5.18-3. Considering a 0.75 mgd increase for the incorporated flow, the 2040 projection for both incorporated and unincorporated areas will be 7.24 mgd. This value is below the total treatment capacity of the City of Redlands.

² 92.87 mgd is calculated by adding the 2015 wastewater flow of 54 mgd to the incorporated projected growth of 38.87 mgd.

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Table 5.18-3 Wastewater Generation Forecasts, and Planned Capacities for Incorporated and Unincorporated Areas

Wastewater Treatment Provider	Wastewater Flow 2015 ^{1, 2} (mgd)	Increase in Wastewater Flow from 2016 to 2040 (mgd) ³	2040 ⁴	Projected Capacity (mgd) ¹	Exceeds Capacity (Yes/No)
Valley Region					
City of Rialto					
Incorporated	7.5	2.31	11.43	11.7	No
Unincorporated		1.62			
City of Redlands					
Incorporated	6	3.42	9.91	9.5	Yes
Unincorporated		0.49			
IEUA					
Incorporated	54	38.87	93.41	85.7	Yes
Unincorporated		0.54			
City of San Bernardino Municipal Water Department					
Incorporated	28	11.34	39.53	63.5	No
Unincorporated		0.19			
Mountain Region					
Big Bear Area Regional Wastewater Agency					
Incorporated	2.5	0.51	3.07	4.89	No
Unincorporated		0.06			
Crestline Sanitation District					
Incorporated	0.64	NA	0.68	1.40	No
Unincorporated		0.02			
Running Springs Water District					
Incorporated	0.5	NA	0.52	1	No
Unincorporated		0.02			
Lake Arrowhead CSD					
Incorporated	3.1	NA	3.14	3.75	No
Unincorporated		0.04			

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Table 5.18-3 Wastewater Generation Forecasts, and Planned Capacities for Incorporated and Unincorporated Areas

Wastewater Treatment Provider	Wastewater Flow 2015 ^{1, 2} (mgd)	Increase in Wastewater Flow from 2016 to 2040 (mgd) ³	2040 ⁴	Projected Capacity (mgd) ¹	Exceeds Capacity (Yes/No)
County Service Area 70 S-3					
Incorporated	0.07	NA	0.07	0.16	No
Unincorporated		0.008			
North Desert Region					
Helendale CSD					
Incorporated	0.5	NA	0.60	1.2	No
Unincorporated		0.1			
Baker CSD					
Incorporated	0.23-0.29 winter-summer	NA	0.24-0.30	0.35-0.52	No
Unincorporated		0.006			
County Service Area 42/ Victor Valley Wastewater Reclamation Authority (VWRA)					
Incorporated	19.46	23.33	44.02	52.6	No
Unincorporated		1.23			

¹ Source: Dudek and PlaceWorks 2017. Running Springs Water District 2017.

² 2015 wastewater flows are for incorporated and unincorporated areas.

³ Increase in wastewater flow for incorporated areas is calculated using projected population growth and projected buildout square footage (shown in Table 3.3) and the same wastewater generation rates used for the unincorporated areas.

⁴ 2040 wastewater flows are for incorporated and unincorporated areas.

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Wastewater Collection Systems

With regard to sewer collection systems, the County of San Bernardino General Plan Water, Wastewater, and Hydrology Existing Conditions Report (Appendix H of this PEIR) assesses the ability of wastewater systems to accommodate unincorporated growth. Most population growth due to Countywide Plan buildout would be in four areas: the Bloomington CPA, Fontana SOI, the East Valley Area Plan (serviced by the City of Redland) in the Valley Region, and future master planned communities in the Town of Apple Valley SOI in the Desert Region. Employment growth would be focused in the unincorporated portions of the Valley region, particularly in the Fontana SOI, East Valley Area Plan, and Bloomington CPA (see Section 5.0 for further discussion). Table 3 of Appendix H shows that the Bloomington CPA, the East Valley Area Plan, and the Fontana SOI have wastewater systems that are likely to accommodate growth. The town of Apple Valley SOI has a wastewater system that is potentially capable of handling growth.

The Countywide Plan contains several policies in the Housing Element, Infrastructure and Utilities Element, and Natural Resource Element related to the development of new wastewater facilities. Within the Housing Element, Policy H-1.2 states that the availability of sewer services is a condition of new residential development. Residential development will not proceed if sewer systems cannot be provided. Policy H-5.2 supports the integrated planning and provision of residential infrastructure between local and regional entities. This policy promotes cooperation between LAFCO and service providers when conducting service planning. Under the Infrastructure and Utilities Element, Policy IU-2.2 establishes a user fee that covers operation and maintenance costs and sets aside reserves for capital improvements for facilities operated by County Special Districts. Private and city-based service providers impose sewer connection fees that must be paid prior to issuance of building permits. Sewer use charges are also imposed and are used for operation, maintenance, improvement, and expansion costs.

The Countywide Plan also includes a funding and financing mechanism that is a legislatively authorized public revenue tool covering a distinct geographical area in which revenues may be generated by properties to fund various public facilities and services. Many of these mechanisms also allow for the issuance of debt. Examples of funding and financing mechanisms can include: CFDs, CSDs, multifamily housing district, community revitalization and investment authority, and enhanced infrastructure finance district. The use of funding and financing mechanisms must be complemented with the establishment, collection, and use of development impact fees. This funding and financing mechanism does not include the use of County service areas as these divert property tax revenues that would otherwise go to the County General Fund. The term also does not include the use of home/property owners associations.

Level of Significance before Mitigation: With implementation of RR USS-1 through RR USS-3, RR USS-6 and Countywide Plan policies H-1.2, H-5.2, IU-2.1 and IU-2.2 Impact 5.18-1 would be less than significant.

Impact 5.18-2: Project-generated wastewater would not exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board. [Thresholds U-1]

Waste discharge requirements for wastewater treatment plants are set forth in permits issued by RWQCBs. The Santa Ana RWQCB sets discharge limits for facilities in the Valley Region and parts of the Mountain Region;

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the Colorado River Basin RWQCB sets limits for facilities in the North and East Desert Regions; and the Lahontan RWQCB issues permits for facilities in Mountain and North Desert Regions. Figure 5.18-2 shows the jurisdiction of each RWQCB within the four regions of the County. These permits also specify local pretreatment programs. Industrial wastewater is often contaminated by a variety of harmful substances that sewage collection and treatment systems are not designed to remove; therefore, industrial facilities need to remove pollutants from industrial wastewaters before they are discharged into municipal sewage treatment systems in line with the NPDES pretreatment program.

The demand for wastewater treatment capacity would increase as projects are built upon implementation of the Countywide Plan. New residential, commercial, and industrial developments would require wastewater service. An increase in wastewater demand would require new or expanded facilities to be constructed in order to meet the demand. In order to be permitted, new facilities would be required to meet the wastewater treatment requirements in their RWQCB-issued NPDES permits.

The SWRCB has also adopted Resolution No. 2012-0032, the Water Quality Control Policy for Siting, Design, Operation and Maintenance of Onsite Wastewater Treatment Systems, that established statewide standards for septic systems. Local jurisdictions adopt LAMPs that fulfill the purpose of the OWTS Policy. LAMPs are submitted to RWQCBs for approval. Any future development associated with the Countywide Plan that relies on OWTSs needs to be compliant with the local LAMP.

Furthermore, as stated in the Countywide Plan policy RC-2.4, the County shall apply federal and state water quality standards for wastewater discharge requirements in the review of development proposals that relate to type, location, and size of the proposed project in order to safeguard public health and shared water resources.

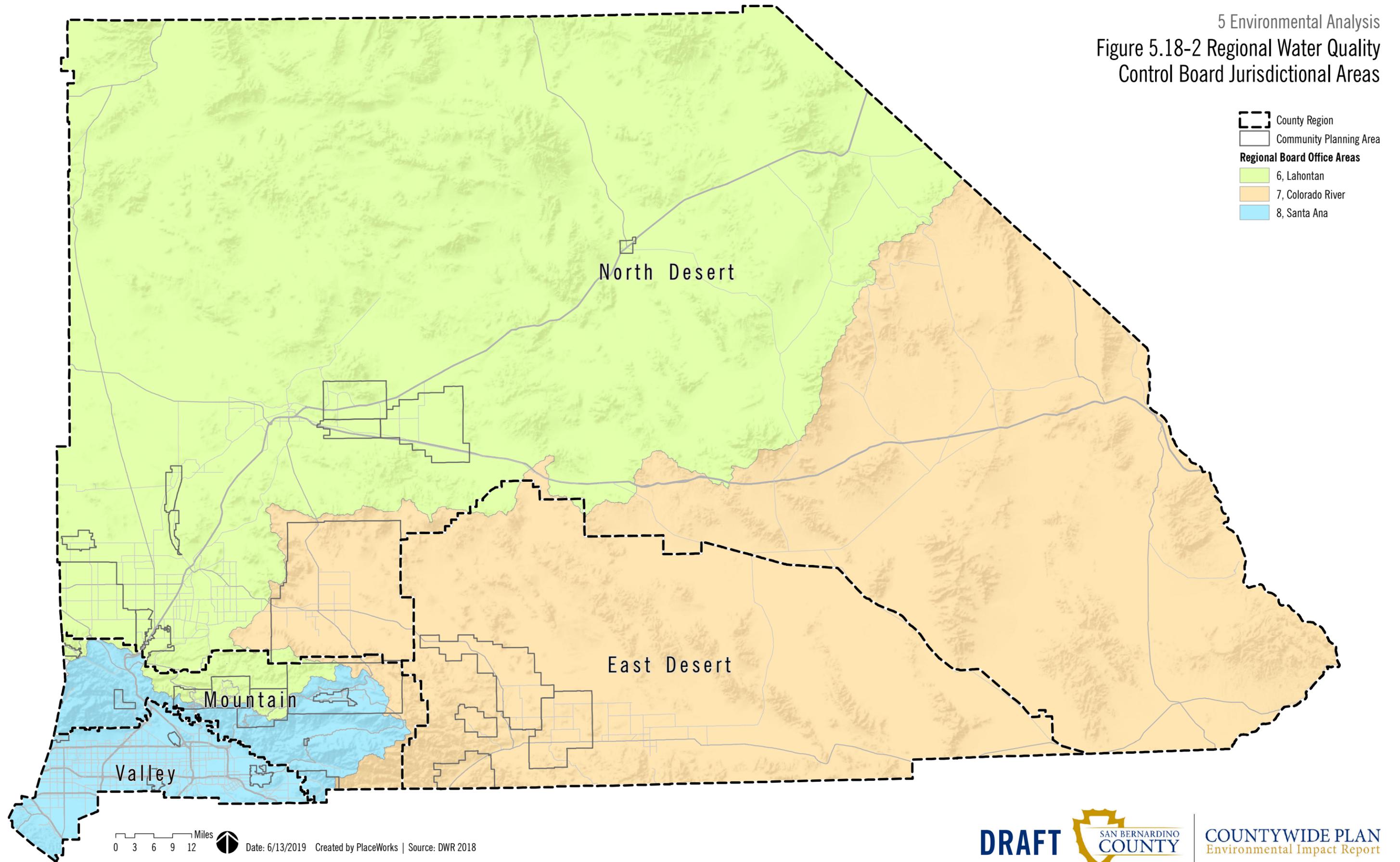
Level of Significance before Mitigation: With implementation of RR USS-3 through RR USS-6 and Countywide Plan policy RC-2.4, Impact 5.18-2 would be less than significant.

Impact 5.18-3: Project-generated wastewater would require or result in the construction of new treatment facilities or expansion of existing facilities, the construction of which would not cause significant environmental effects. [Thresholds U-2 (part)]

The construction of new or expanded wastewater facilities to serve the growth associated with Countywide Plan buildout would have the potential to cause secondary environmental effects. The extent of the environmental impact is often a function of how extensive or complex the development is.

When growth is more widespread, the impact of wastewater treatment and collection systems becomes more pronounced. A guiding principle in the Land Use and Housing Elements of the Countywide Plan is that new development should be focused in areas where there is potable water, wastewater treatment, roadways, and public services.

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 Figure 5.18-2 Regional Water Quality
 Control Board Jurisdictional Areas



Sources: Esri, USGS, NOAA

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Furthermore, any future wastewater treatment expansion projects in the County would be required to conduct environmental review pursuant to CEQA prior to approval. CEQA requires proposed projects to provide detailed information on the potentially significant environmental effects they are likely to have, list ways in which the significant environmental effects would be minimized, and identify alternatives that would reduce or avoid the significant impacts identified for the project. To the extent feasible, significant environmental impacts would be mitigated to below a level of significance, consistent with CEQA. However, some environmental impacts associated with the construction of wastewater treatment plants would be significant and require mitigation. It should be noted that the development of wastewater treatment facilities required for the Countywide Plan buildout will be undertaken by the City of Rialto, the City of Redlands, and the IUEA and are outside the jurisdiction of the County.

The numerous federal, state, and local regulations regulate environmental impacts related to wastewater facilities are discussed in “Regulatory Background” of Section 5.18.1.1. The Countywide Plan contains several policies in the Housing Element, Infrastructure and Utilities Element, and Natural Resource Element related to the development of new wastewater facilities, which are listed under “Countywide Plan Policies” in Section 5.18.1.3. Policy H-1.2 states that the availability of sewer services is a condition of residential development. Policy H-5.2 supports the integrated planning and provision of residential infrastructure between local and regional entities. Policy IU-2.2 establishes a user fee that covers operation and maintenance costs and sets aside reserves for capital improvements for facilities operated by County Special Districts. Policy RC-2.4 requires that federal and state water quality standards be part of the review and approval of development proposals.

Level of Significance before Mitigation: With implementation of RR USS-1 through RR USS-6 and Countywide Plan policies H-1.2, H-5.2, IU-2.2, and RC-2.4, Impact 5.18-3 would be less than significant.

5.18.1.5 CUMULATIVE IMPACTS

Cumulative projects are those that would be developed in the County. Cumulative projects could cause significant impacts if they either exceeded wastewater treatment requirements of RWQCBs with jurisdiction in the County or generated wastewater exceeding the combined capacities of wastewater treatment plants. Projects developed in the County are required to comply with the existing wastewater treatment regulations discussed under Impact 5.18-2. The total net increase in wastewater generation by all projects in the County between 2016 and 2040 is estimated at about 68.9 mgd.³ The total net increase in wastewater generation due to buildout of the Countywide Plan is estimated at about 4.3 mgd (see Table 5.18-4). As discussed in Impact 5.18-1, all the wastewater treatment plants, except the treatment plant in the City of Redlands, have enough capacity for the 2040 projected flow. For the City of Redlands, Housing Element Policy H-1.2 will limit residential development in the unincorporated areas if appropriate sewer systems cannot be provided.

³ The 2040 flow for the incorporated areas within the service area of IEUA is considered to be 77.7 mgd.

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Table 5.18-4 Wastewater Treatment Providers: Wastewater Generation Forecasts, and Planned Capacities

Wastewater Treatment Provider	Wastewater Flows, mgd		2015 Capacity mgd	Exceeds Capacity (Yes/No)	Planned Capacity and Year
	2015 ¹	2040 Estimated ²			
Valley Region					
City of Rialto	9	12.9	11.7	Yes	
City of Redlands	6	9.9	9.5	Yes	
IEUA [three wastewater treatment plants]	7 (CCWRF)	54	85.7	No	
	28 (RWRP #1)				
	10 (RWRP #4)				
	9 (RWRP #5)				
City of San Bernardino Municipal Water Department	28	42.8	33	Yes	SBMWD has proposed development of the Clean Water Factory, with the potential of treating up to 30.5 mgd of wastewater. ³
Yucaipa Valley Water District	No growth projected				
Mountain Region					
Big Bear Area Regional Wastewater Agency	2.5	3.1	4.89	No	
Crestline Sanitation District [three wastewater treatment plants]	0.64	0.67	1.4	No	
Running Springs Water District	0.5	0.53	1	No	
Lake Arrowhead CSD [two wastewater treatment plants]	3.1	3.15	3.75	No	
County Service Area 70 S-3	0.066	0.074	0.16	No	
North Desert Region					
Helendale CSD	0.5	0.6	0.60	No	
Baker CSD	0.23-0.29 winter-summer	0.24-0.3	0.35-0.52	No	
County Service Area 42/ Victor Valley Wastewater Reclamation Authority (VWRA)	19.46	44	22	Yes	The Hesperia WRP will be a sub-regional treatment facility to treat a portion of wastewater from its local collection system. The WRP will be designed to treat plant throughput capacities of 1.0 mgd in Phase 1, expandable to 2.0 mgd in Phase 2, and 4.0 mgd at buildout. No further expansions beyond 4.0 mgd are anticipated at the Hesperia WRP site. ⁴ The Apple Valley WRP will be a sub-regional treatment facility to treat a portion of wastewater from its local collection system. The WRP will be designed to treat plant throughput capacities of 1.0 million gallon per day (mgd) in Phase 1,

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Table 5.18-4 Wastewater Treatment Providers: Wastewater Generation Forecasts, and Planned Capacities

Wastewater Treatment Provider	Wastewater Flows, mgd		2015 Capacity mgd	Exceeds Capacity (Yes/No)	Planned Capacity and Year
	2015 ¹	2040 Estimated ²			
					expandable to 2.0 mgd in Phase 2. No further expansions beyond 2.0 mgd are anticipated at the Apple Valley WRP site. ⁵ The Eastside Regional Water Reclamation Plant (ERWP) will be constructed with average treatment capacity of 4.0 mgd. Three water reclamation facilities: WRP-1 with an ultimate average flow capacity of 7.4 mgd; WRP-2 with an ultimate average capacity of 8.5 mgd; and Water Reclamation Plant 3 with an ultimate average capacity of 4.7 mgd are scheduled for implementation by the VVWRA. ⁶
City of Barstow	No growth projected				
City of Needles	No growth projected				

¹ Source: Dudek and PlaceWorks 2017. Running Springs Water District 2017.

² Estimated wastewater generation based on projected growth between 2016 and 2040 for incorporated and unincorporated areas of the County.

³ Source: WSC 2016.

⁴ Source: Carollo 2009b.

⁵ Source: Carollo 2009a.

⁶ Source: VVWRA 2010.

Most population growth due to Countywide Plan buildout would be in two areas: the Bloomington CPA in the Valley Region, and future master planned communities in the Town of Apple Valley SOI in the Desert Region. Employment growth would be focused in the unincorporated portions of the Valley region, particularly in the Fontana SOI, East Valley Area Plan (serviced by the City of Redland), and Bloomington CPA. For sewer collection systems, the Bloomington CPA, the East Valley Area Plan, and the Fontana SOI have wastewater systems that are likely to accommodate growth. The town of Apple Valley SOI has a wastewater system that is potentially capable of handling growth.

With the implementation of local and regional regulations and the requirements of the Countywide Plan, cumulative impacts would be less than significant, and project impacts would not be cumulatively considerable.

5.18.1.6 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

With implementation of regulatory requirements and Countywide Plan policies, impacts of the Countywide Plan related to wastewater collection and treatment would be less than significant.

5.18.1.7 MITIGATION MEASURES

No mitigation measures are necessary.

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5.18.1.8 LEVEL OF SIGNIFICANCE AFTER MITIGATION

No impacts would be significant.

5.18.2 Water Supply and Distribution Systems

The information in this section is based partly on:

- *County of San Bernardino General Plan Water, Wastewater, and Hydrology Existing Conditions Report*, Dudek and PlaceWorks, May 2017.

A complete copy of this report is in Appendix H of this PEIR.

5.18.2.1 ENVIRONMENTAL SETTING

Regulatory Background

Federal

Clean Water Act

The CWA establishes regulatory requirements for potable water supplies, including raw and treated water quality criteria. The GSWC Southwest District is required to monitor water quality and conform to the regulatory requirements of the CWA.

Safe Drinking Water Act

The federal Safe Drinking Water Act (SDWA) (42 USC § 300f et seq.) is enforced by the EPA and sets standards for drinking water quality and oversees the states, localities, and water suppliers who implement those standards. SDWA requires many actions to protect drinking water and its sources, which include rivers, lakes, and groundwater.

State

Urban Water Management Planning Act

The Urban Water Management Planning Act of 1983 (Water Code § 10610 et seq.) requires water management planning for large suppliers of water. The criteria for water management plans is 3,000 acre-feet (2.6 million mgd) annually or supplying more than 3,000 customers. Under this rule, water providers are required to:

- Prepare a plan which assesses source water sustainability and reliability over expected water demand growth in 5 year increments to a minimum of 20 years future planning.
- Prepare a plan for water supply in future years under the following conditions: normal, one-year drought, and multiple-year drought. Water source must be able to supply the water demand in all conditions.
- Provide a plan to implement conservation measures for customers.

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Sustainable Groundwater Management Act

The Sustainable Groundwater Management Act—collectively, Assembly Bill 1739, Senate Bill 1168, and Senate Bill 1319—was passed in 2014 and defines sustainable groundwater measures. The legislation provides guidance for groundwater management and identifies undesirable results of groundwater withdrawal. The plan is intended to ensure sustainability measures are used in all groundwater activities.

Water Conservation Plan

The 20x2020 Water Conservation Plan of 2010 was a byproduct of the Water Conservation Act of 2009 (SB X7-7). The plan had a threefold effect: 1) established a benchmark of current usage per capita off 2005 baseline data; 2) establish intermediate goal for all water providers to meet by 2015; 3) establish a 20 percent reduction by 2020 of water usage.

Senate Bill 407

California Senate Bill 407 of 2009 was enacted to decrease wasteful water usage from owners. It requires all noncompliant plumbing fixtures installed before 1994 to be updated with plumbing fixtures that meet current usage standards.

Senate Bills 610 and 221

To assist water suppliers, cities, and counties in integrating water and land use planning, SB 610 and SB 221 improve the link between information of water supply availability and certain land use decisions made by cities and counties. They 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 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.

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AB 3030, California Groundwater Management Act

The Groundwater Management Act of the California Water Code (§ 10750 et seq.; AB 3030) provides guidance for applicable local agencies to develop a voluntary Groundwater Management Plan in state-designated groundwater basins.

State Mandated Water Use Reductions

Most of California was in extremely severe drought conditions for the five-year period of 2011 to 2016. Governor Brown declared a drought state of emergency on January 17, 2014, and issued Executive Order B-37-16 on May 9, 2016, that included the following provisions:

- Made permanent several previous temporary prohibitions on wasteful outdoor water uses such as hosing off paved areas, washing automobiles with hoses not equipped with a shut-off nozzle, and watering lawns in a manner that causes runoff.
- Water providers' Water Shortage Contingency Plans must be strengthened to include plans for droughts lasting at least five years.
- The Department of Water Resources (DWR) and the SWRCB will require urban water suppliers to report water use, conservation, and enforcement monthly; and will develop new water efficiency targets for water suppliers. (Executive Department 2016)

The SWRCB issued an emergency regulation on May 18, 2016, requiring water providers to certify that they had sufficient water supplies to meet demands in their service areas for three consecutive dry years (SWRCB 2016).

On April 7, 2017, Governor Brown issued Executive Order B-40-17 ending the drought state of emergency except for Fresno, Kings, Tulare, and Tuolumne counties. The regulations issued by the SWRCB in May 2016 regarding water supplies remain in effect statewide (SWRCB 2017).

Local

SB 1262

Effective January 1, 2017, the County was prohibited from considering hauled water as a source of water for any project, as defined in California Water Code Section 10912 (including residential).

SB 1263

Effective January 1, 2017, the County was prohibited from issuing a building permit for the construction of a new residential development as defined in California Government Code Section 65008 (including a single-family residence, a multifamily residence, and manufactured homes) where a source of water supply is water transported by a water hauler, bottled water, a water vending machine, or a retail water facility. The rebuilding of residences destroyed by a natural disaster is exempt from the prohibition.

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Urban Water Management Plans

Urban water management plans were prepared in 2015 by many of the water purveyors serving the unincorporated County; such purveyors are identified in the Water, Wastewater, and Hydrology Existing Conditions Report included as Appendix H to this PEIR.

County ordinances require that County Service Areas and County Service Zones comply with statewide drought regulations set forth in 2015.

San Bernardino County Code of Ordinances

The County Code of Ordinances Chapter 83.10, Landscaping Standards, sets landscape water efficiency standards. The ordinance provides for the conservation and protection of water resources through the efficient use of water; appropriate use of plant materials suitable for climate and location; regular maintenance of landscaped areas; and the provision of standards that are as effective in conserving water as the State Model Water Efficient Landscape Ordinance.

Existing Conditions

The unincorporated areas within the County have access to domestic water sources that are generally supplied through local and imported water—with approximately 85 percent of the domestic water supplied by local groundwater sources and the remaining 15 percent supplied by imported purchased water. Imported water is primarily purchased from the Metropolitan Water District (MWD) through the State Water Project (SWP) as a supplemental source to local groundwater supplies. While several regional water wholesalers distribute this imported water throughout the County, numerous retail and private water purveyors manage the majority of the groundwater pumping and distribution.

Water Agencies: Overview

Up to four levels of water agencies participate in delivering water from its source to households and other retail customers.

- The DWR operates and maintains the SWP.
- Water Wholesalers: Two levels of water wholesalers serve many County residents:
 - MWD buys imported SWP water; imports water from the Colorado River; and wholesales water to its member agencies. One agency in the County, the IEUA, is an MWD member agency.
 - Other water wholesalers in the County include the IEUA, the San Bernardino Valley Municipal Water District, the Mojave Water Agency, and the Crestline-Lake Arrowhead Water Agency. Some water wholesalers also operate groundwater wells. The latter three agencies are SWP contractors, that is, they purchase imported water directly from the SWP.
- Water purveyors provide water to retail customers; some are agencies of cities or counties, some private companies, and some are special districts.

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County Special Districts and Community Service Districts

County Special Districts serves as a water supplier to unincorporated communities through CSAs and CFDs as well as to three regional parks, the High Desert Detention Center, and the Gilbert Street Complex.

The CSAs provide water to approximately 7,939 residential connections and commercial connections. The water supply is from the Mojave and Morongo groundwater basins, with water pumped from and treated at active wells in each CSA. Groundwater meets the total annual demand of 3,850 acre-feet for all CSAs. The CSAs distribute the pumped groundwater to their customers through a series of storage tanks and miles of distribution pipelines.

There are three CFDs that finance public improvements related to water services in unincorporated county areas—the Kaiser Commerce Center CFD, the Citrus Plaza CFD, and Lytle Creek North CFD.

In addition, four CSDs provide water services to unincorporated areas. These are the Baker CSD, Daggett CSD, Phelan/Pinon Hills CSD, and Newberry CSD.

Communities on Wells

Some portions of unincorporated areas rely on groundwater extracted from wells as the primary source of drinking water. DEHS is responsible for permitting new wells. If a community area is not within the service area of a water purveyor, well water is allowed if all setback requirements and appropriate testing are met, and the well permit is approved. DEHS also recommends testing annually for bacteria, nitrates, and any other contaminants of concern, including arsenic, fluoride, iron, manganese, and sulfur.

Unincorporated areas that rely on wells (and are not covered by a CSA) are:

- Adelanto SOI (portions)
- Colton SOI (east)
- Devore
- El Mirage
- Loma Linda SOI (east)
- Lytle Creek
- Mt Baldy
- Muscoy
- Newberry Springs

Water Sources Overview

Water agencies in the County rely on four general types of water sources:

- **Local groundwater** from the groundwater basin(s) under or near the purveyor's service area.
- **Local surface water** from local streams and lakes.

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- **Imported water** from northern California via the SWP, and/or from the Colorado River by MWD. IEUA purchases imported water from MWD, and the San Bernardino Valley Municipal Water District, the Mojave Water Agency, and the Crestline-Lake Arrowhead Water Agency purchase water from the SWP.
- **Recycled Water** is used by some water agencies, including Yucaipa Valley Water District, for irrigation of landscaped areas, including golf courses, parks, and residential front and back yards.

Water Purveyors, Water Sources, and Demands

Water purveyors and water sources for unincorporated communities in the County are shown in Table 5.18-5. Water sources, supplies, and demands are described in more detail in the Water, Wastewater, and Hydrology Existing Conditions Report (Appendix H to this PEIR).

Table 5.18-5 Water Providers Serving Unincorporated San Bernardino County

Community	Water Purveyor	Water Sources ¹	2010/2015 Service Demand (afy or connections)
Valley Region			
Bloomington CPA	West Valley Water District	LG, LS, I	17,131 afy
	Fontana Water Company	LG, LS, I	34,964 afy
	Marygold Mutual Water Company	LG	919 connections
Mentone CPA	City of Redlands	LG, LS, I	21,290 afy
Devore	Devore Water Company	LG	460 connections
Muscoy CPA	Muscoy Mutual Water Company	LG	1,387 connections
City of Chino SOI (northwest)	Monte Vista Water District	LG, LS, I (MVWD 2018)	16,834 afy
	City of Chino	LG, I (Chino 2017)	23,468 afy
City of Colton SOI (northwest)	Terrace Water Company	ND	ND
City of Fontana SOI (north)	West Valley Water District	LG, LS, I (WVWD 2018)	17,131 afy
City of Fontana SOI (west)	Fontana Water Company	LG, LS, I (FWC 2018)	34,964 afy
City of Highland SOI (portions)	East Valley Water District	LG, LS, I (EVWD 2018)	16,943 afy
City of Montclair SOI (south)	Monte Vista Water District	LG, LS, I (MVWD 2018)	16,834 afy
City of Rancho Cucamonga SOI (north)	Cucamonga Valley Water District	LG, I (CVWD 201)	19,525 afy
City of Redlands SOI (east)	City of Redlands	LG, LS, I, R (Redlands 2018)	21,290 afy
City of Rialto SOI (north and south)	West Valley Water District	LG, LS, I (WVWD 2018)	16,943 afy
City of San Bernardino SOI (east)	East Valley Water District	LG, LS, I (EVWD 2018)	16,943 afy
City of San Bernardino SOI (west)	City of San Bernardino Municipal Water Department	LG (SBMWD 2017)	36,036 afy

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Table 5.18-5 Water Providers Serving Unincorporated San Bernardino County

Community	Water Purveyor	Water Sources ¹	2010/2015 Service Demand (afy or connections)
City of Yucaipa SOI (northwest)	Yucaipa Valley Water District	LG, LS, I, R (YVWD 2017)	9,594 afy
San Antonio Heights	San Antonio Water Company	ND	7,937 afy
Mountain Region			
Bear Valley Communities CPA			
Baldwin Lake	Big Bear City CSD	LG	890 afy
Big Bear City			
Erwin Lake	Big Bear Lake Department of Water	LG	2,095 afy
Fawnskin/ Northshore			
Lake Williams			
Moonridge			
Sugarloaf			
Crest Forest Communities CPA			
Cedarpines Park	Cedarpines Park Mutual Water Company	ND	767 afy
Crestline	Crestline Village Water District	LG, I	611 afy
Lake Gregory			
Valley of Enchantment	Valley of Enchantment Mutual Water Company	ND	2,789 connections
Hilltop Communities CPA			
Arrowbear Lake	Arrowbear Park County Water District	ND	946 connections 9 afy
Green Valley Lake	Green Valley Mutual Water Company	ND	1048 connections 1 afy
Running Springs	Running Springs Water District	LG, I	ND
Lake Arrowhead Communities CPA			
Blue Jay	Crestline-Lake Arrowhead Water Agency	I	1,281 connections
Cedar Glen	County Service Area 70 CG	LG	300 connections
Deer Lodge Park	Lake Arrowhead CSD	LG, LS, I	1,238 afy
Lake Arrowhead			
Rim Forest			
Sky Forest	Sky Forest Mutual Water Company	ND	ND
Twin Peaks	Alpine Water Users Association	ND	934 connections
Other Communities			
Angelus Oaks	Glen Martin Mutual Water Company	ND	339 connections
Lytle Creek	Private/wells	ND	ND
Mt. Baldy	Private/wells	ND	ND
Wrightwood	Golden State Water Company	ND	2,739 connections
North Desert Region			
Helendale CPA	Helendale CSD	LG	2,789 connections

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 UTILITIES AND SERVICE SYSTEMS

Table 5.18-5 Water Providers Serving Unincorporated San Bernardino County

Community	Water Purveyor	Water Sources ¹	2010/2015 Service Demand (afy or connections)
Lucerne Valley CPA	Multiple private companies	ND	749 connections
Oak Glen CPA	Oak Glen Domestic Water Company	ND	49 connections
Phelan/Pinon Hills CPA	Sheep Creek Water Company	LG	1,377 connections
	Phelan/Pinon Hills CSD	LG	2,776 afy
City of Adelanto SOI (portions)	Private/wells	ND	ND
Town of Apple Valley SOI (portions)	Liberty Utilities	LG (Liberty 2016)	10,646 afy
	Multiple private companies	ND	3,426 connections
City of Barstow SOI (outer perimeter)	Golden State Water Company	LG (GSWC 2018)	5,254 afy
City of Hesperia SOI (south)	City of Hesperia	LG (HWD 2018)	12,688 afy
City of Needles SOI (west)	Private/wells (no municipal service)	ND	ND
City of Victorville SOI (portions)	Victorville Water District	LG (VWD 2017)	20,844 afy
Baker	Baker CSD	ND	109 connections
Daggett	Daggett CSD	LG	195 connections
El Mirage	Private/wells	ND	ND
Newberry Springs	Private/wells	ND	ND
Oak Hills	County Service Area 70 J	LG	3,319 connections
Oro Grande	County Service Area 42	LG	142 connections
Yermo	Liberty Utilities	ND	276 connections
East Desert Region			
Joshua Tree CPA	Joshua Basin Water District	LG	1,369 afy
Town of Twentynine Palms SOI (northwest and east)	Twentynine Palms Water District	LG (TPWD 2017)	2,111 afy
Flamingo Heights	Bighorn-Desert View Water Agency	LG, I	1,625 connections
Johnson Valley			
Landers			
Yucca Mesa	Hi-Desert Water District	LG	2,399 afy
Morongo Valley	Golden State Water Company	LG	2,739 afy
	CSA 70 F	LG	35 afy
	CSA 70 W-3	LG	65 afy
Pioneertown	County Service Area 70 W4	LG	120 connections (105 active and 15 inactive)

Source: Dudek and PlaceWorks 2017 (PEIR Appendix H); Devore Water Company 2019.

afy = acre-feet per year
 LG = Local Groundwater
 I = Imported Water
 ND = No Data
 LS = Local Surface Water
 R = Recycled Water

¹ Water sources information for Community Plan Areas and other unincorporated communities are from Appendix H. Water sources information for water purveyors serving SOIs of incorporated cities and towns is cited in parentheses.

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5.18.2.2 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.

5.18.2.3 REGULATORY REQUIREMENTS AND GENERAL PLAN POLICIES

Regulatory Requirements

- RR USS-7 **Urban Water Management Plan.** Publicly or privately owned water suppliers that provide more than 3,000 acre-feet of water annually or supply more than 3,000 customers must prepare an urban water management plan in line with the Urban Water Management Planning Act.

- RR USS-8 **Sustainable Groundwater Management Act.** Sustainability measures will be ensured in all groundwater activities in line with the Sustainable Groundwater Management Act.

- RR USS-9 **Water Conservation Plan.** Future development will abide by the County's will established water conservation target in line with the 20x2020 Water Conservation Plan.

- RR USS-10 **SB 610 and SB 221.** Local water suppliers, cities, and counties will make decisions about land use in accordance with SB 610 and SB 221.

- RR USS-11 **San Bernardino County Code of Ordinances.** Landscape water efficiency standards shall be implemented in accordance with the San Bernardino County Code of Ordinances, Chapter 83.10, Landscaping Standards.

Policy Plan

- Policy H-1.2 Concurrent infrastructure.** We support the integrated planning and provision of appropriate infrastructure (including water, sewer, and roadways) concurrent with and as a condition of residential development to create more livable communities.

- Policy H-5.2 Local and regional infrastructure.** We support the integrated planning and provision of appropriate infrastructure (including water, sewer, stormwater, and roadways) to create more livable residential environments. This effort will contain:
 - Cooperation with the San Bernardino Local Agency Formation Commission and service providers in service planning

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- Coordination of capital improvement planning efforts with cities and through the San Bernardino County Transportation Authority
- Review minimum improvement standards for rural areas in the update of the County **development code**

- Policy D/H-1.3** **Waterwise landscaping.** Where multiple-family apartment projects are required to have landscaping, we encourage water-conserving, drought-tolerant, or native landscaping that is capable of surviving a desert climate.
- Policy IU-1.1** **Water supply.** We require that new development be connected to a public water system or a County-approved well to ensure a clean and resilient supply of potable water, even during cases of prolonged drought.
- Policy IU-1.2** **Water for military installations.** We collaborate with military installations to avoid impacts on military training and operations from groundwater contamination and inadequate groundwater supply.
- Policy IU-1.3** **Recycled water.** We promote the use of recycled water for landscaping, groundwater recharge, direct potable reuse, and other applicable uses in order to supplement groundwater supplies.
- Policy IU-1.4** **Greywater.** We support the use of greywater systems for non-potable purposes.
- Policy IU-1.5** **Agricultural water use.** We encourage water-efficient irrigation and the use of non-potable and recycled water for agricultural uses.
- Policy IU-1.6** **User fees.** For water systems operated by County Special Districts, we establish user fees that cover operation and maintenance costs and set aside adequate reserves for capital upgrades and improvements.
- Policy IU-1.9** **Water conservation.** We encourage water conserving site design and the use of water conserving fixtures, and advocate for the adoption and implementation of water conservation strategies by water service agencies. For existing County-owned facilities, we incorporate design elements, building materials, fixtures, and landscaping that reduce water consumption, as funding is available.
- Policy IU-1.10** **Connected systems.** We encourage local water distribution systems to interconnect with regional and other local systems, where feasible, to assist in the transfer of water resources during droughts and emergencies.
- Policy IU-1.11** **Water storage and conveyance.** We assist in development of additional water storage and conveyance facilities to create a resilient regional water supply system, when it is cost effective for County-owned water and stormwater systems.

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5.18.2.4 ENVIRONMENTAL IMPACTS

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

Most population growth due to Countywide Plan buildout would be in four areas: the Bloomington CPA, Fontana SOI, the East Valley Area Plan in the Valley Region, and future master planned communities in the Town of Apple Valley SOI in the Desert Region. Employment growth would be focused in the unincorporated portions of the Valley region, particularly in the Fontana SOI, East Valley Area Plan, and Bloomington CPA (see Section 5.0 for further discussion).

Impact 5.18-4: Water supply is adequate to meet project requirements. [Thresholds U-4]

Valley Region

Bloomington CPA

Countywide Plan buildout would generate population growth of about 19,270, and employment growth of approximately 2,727 in the Bloomington CPA—thus increasing water demands.

Estimated water demands in the Bloomington CPA are based on the West Valley Water District's 2020 water demand target of 232 gallons per capita per day (gpcd). The estimated net increase in water demands in Bloomington due to Countywide Plan buildout is about 4.47 mgd or 5,000 acre-feet per year (afy) (see Table 5.18-6).

Three water purveyors supply the Bloomington CPA: West Valley Water District, Fontana Water Company, and Marygold Mutual Water Company. The West Valley Water District estimates that it will have water surpluses in 2040 of 21,088 afy. The Fontana Water Company forecasts that its water supplies will increase by 16,422 afy between 2020 and 2040, and that it will have sufficient water supplies to meet demands in its service area over that period.

Fontana SOI

Buildout of the Countywide Plan in Fontana's SOI would involve development of about 8,724,613 square feet of industrial and commercial land uses. Manufacturing uses are estimated to generate water demand of about 0.1 gallons per day (gpd) per square foot; thus, the increase in water demands in the Fontana SOI is estimated at about 827,461 gpd. The Fontana Water Company supplies water to the western part of the SOI. The Fontana Water Company forecasts that its water supplies will increase by 16,422 afy between 2020 and 2040, and that it will have sufficient water supplies to meet demands in its service area over that period.

East Valley Area Plan

Countywide Plan buildout would include construction of up to about 4.13 million square feet of industrial uses in the East Valley Area Plan area, generating water demand of approximately 412,959 gpd. The City of Redlands

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Municipal Utilities & Engineering Department supplies water to the East Valley Area Plan area. The Department forecasts that it will have a water surplus in 2040 of 28,383 afy, or 25.3 mgd

Remainder of Valley Region

Population and employment growth in the balance of the Valley Region would be slight and would be spread out over several portions of the region. Unincorporated areas of the Valley Region are served by numerous water providers, listed in Table 5.18-5. The estimated net increase in population due to Countywide Plan buildout would be about 1,898 persons. The net increase in water demands, estimated using the water demand factor of 232 gpcd for the West Valley Water District in Bloomington, would be about 440,000 gpd (see Table 5.18-6). Growth in the balance of the Valley Region would be dispersed among several areas of the region. Thus, net increases in water demands in each area would be minor.

Table 5.18-6 Net Increase in Water Demand by Countywide Plan Buildout

Region/Area	Residential			Nonresidential			Total gpd
	Net Increase, Population	Demand per Person ¹ (gpcd)	Total Demand (gpd)	Net Increase, Nonresidential Square Feet	Demand per square foot (gpd/square foot)	Total Generation (gpd)	
Valley Region							
Bloomington CPA	19,270	232	4,470,640	3,756,069	Not applicable ¹		4,470,640
Fontana SOI (west)	482	Not applicable ²		8,724,613	0.10 ³	872,461	872,461
East Valley Area Plan	3,243	232	753,376	4,129,593	0.10	412,959	1,165,335
Balance, Valley Region	1,898	232	440,336	1,768,796	Not applicable ¹		440,336
Total	24,893⁴	232	5,663,352	18,379,071	0.10	1,285,420	6,948,772
Mountain Region							
Mountain Region	2,355	94 ⁵	221,370	Not applicable ¹			221,370
North Desert Region							
Apple Valley SOI	16,280	238 ⁶	3,874,640	Not applicable ¹			3,874,640
Balance, North Desert Region	4,793	238	1,140,734				1,140,734
Total	21,073	238	5,015,374				5,015,374
East Desert Region							
East Desert Region	1,359	157 ⁷	213,363	Not applicable ¹			213,363
Total							
Total	49,680	Not applicable	11,113,459	Not applicable	Not applicable	1,285,420	12,398,879

¹ The water demand targets used in estimating water demand in the Bloomington CPA and the Mountain, North Desert, and East Desert regions account for all potable water uses—indoor and outdoor, residential and nonresidential. Thus, the estimates of residential water demand for these two areas also accounts for generation by nonresidential land uses.

² Water demand for the City of Fontana SOI is estimated using the net increase in nonresidential square feet rather than population increase to avoid double-counting; see footnote 1 regarding the generation factor for residential uses. The net increase in employment (4,397) is much larger than net increase in residents (482).

³ The water demand factor is 125 percent of the City of Los Angeles wastewater generation factor of 0.08 gallon per day per square foot for manufacturing uses (Los Angeles 2006).

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Table 5.18-6 Net Increase in Water Demand by Countywide Plan Buildout

Region/Area	Residential			Nonresidential			Total gpd
	Net Increase, Population	Demand per Person ¹ (gpcd)	Total Demand (gpd)	Net Increase, Nonresidential Square Feet	Demand per square foot (gpd/square foot)	Total Generation (gpd)	
⁴ This figure omits net increases of 482 residents in the City of Fontana SOI and 2,158 residents in the East Valley Area Plan. The net increases in land use in those two areas would be mostly nonresidential; thus, water demand is estimated using square footage and generation factor for nonresidential uses. ⁵ 2020 water demand target of 94 gpcd from the Big Bear City CSD (BCCSD 2016). ⁶ 2020 water demand target of 238 gpcd for Liberty Utilities/Apple Valley (Liberty 2016). ⁷ 2020 water demand target of 157 gpcd for the Joshua Basin Water District (JBWD 2016).							

North Desert Region

Town of Apple Valley SOI

Buildout of the Countywide Plan would add approximately 16,280 residents in the Town of Apple Valley SOI, thus increasing water demands. The potential annexation area (PAA) relies on private wells for water service and is not served by a public water system. Liberty Utilities supplies water to the Hacienda Fairview Valley Specific Plan area. Liberty Utilities also supplies water to areas south, east, and northeast of the PAA, and it is assumed that Liberty Utilities would extend service to the PAA upon Countywide Plan buildout.

Liberty Utilities’ water supply is entirely groundwater from the Mojave Groundwater Basin. Liberty Utilities forecasts that water demands in its service area will be 16,895 acre-feet in 2020 and 22,128 acre-feet in 2040, and that it will have adequate water supplies to meet demands. Water demands for 2040 are based on a population projection. Liberty Utilities estimates that its service area population will increase from about 59,600 in 2015 to 83,000 in 2040. The population estimate is based on projected growth rates from a Mojave Water Agency Population Forecast report dated December 2015 (Liberty 2016).

The net increase in water demands in the Town of Apple Valley SOI is estimated at about 3.87 mgd (or 4,335 acre-feet per year) using the 2020 water demand target of 238 gpcd for Liberty Utilities. This water demand increase can be accommodated by Liberty Utilities’ water supply.

Remainder of North Desert Region

Growth in the remainder of the North Desert Region would be slight and would be spread across wide areas of the region. The net increase in water demands, estimated using the 2020 water demand target of 238 gpcd, would be about 1.14 mgd (see Table 5.18-6). The region is served by numerous water purveyors, described in Table 5.18-5. Impacts to individual purveyors’ water supplies would therefore be minor.

Mountain and East Desert Regions

Countywide Plan buildout would involve slight growth in these two regions—2,335 residents in the Mountain Region and 1,359 residents in the East Desert Region. Each of these regions is served by many water purveyors (see Table 5.18-5). The net increases in water demands in the two regions would be about 221,000 gpd for the Mountain Region and 213,000 gpd for the East Desert Region (see Table 5.18-6). Growth in these two regions

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would be dispersed among many purveyors' service areas, and impacts to each purveyor's water supplies would be minor.

Furthermore, sustainability measures will be ensured in all groundwater activities in line with the Sustainable Groundwater Management Act and local water suppliers, cities, and counties will make decisions about land use in accordance with SB 610 and SB 221. In addition, the landscape water efficiency standards shall be implemented in accordance with the County Code, Chapter 83.10. All future development will also abide by the County's will established a water conservation target in line with the 20x2020 Water Conservation Plan. Future development would not require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities and impacts would be less than significant.

Level of Significance before Mitigation: With implementation of RR USS-8 through RR USS-11 and Countywide Plan policies H-1.2, H-5.2, D/H-1.3, IU-2.1, IU-1.5, IU-1.6, IU-1.9, IU-1.10 and UI-1.1,, Impact 5.18-4 would be less than significant.

Impact 5.18-5: Additional water demand under Countywide Plan buildout would not require or result in the construction of new treatment facilities or expansion of existing facilities, the construction of which would cause significant environmental effects. [Thresholds U-2 (part)]

The construction of new or expanded water treatment facilities to serve the growth associated with Countywide Plan buildout would have the potential to cause secondary environmental effects. The extent of the environmental impact is often a function of how extensive or complex the development is.

When growth is more widespread, the impact of water treatment systems becomes more pronounced. A guiding principle in the Land Use and Housing Elements of the Countywide Plan is that new development should be focused in areas where there is potable water, wastewater treatment, roadways, and public services.

Furthermore, any future water treatment expansion projects in the County would be required to conduct environmental review pursuant to CEQA prior to approval. CEQA requires proposed projects to provide detailed information on the potentially significant environmental effects they are likely to have, list ways in which the significant environmental effects would be minimized, and identify alternatives that would reduce or avoid the significant impacts identified for the project. To the extent feasible, significant environmental impacts would be mitigated to below a level of significance, consistent with CEQA. However, some environmental impacts associated with the construction of water treatment facilities would be significant and require mitigation.

Numerous federal, state, and local regulations regulate environmental impacts related to water treatment facilities; these are discussed in "Regulatory Background" of Section 5.18.2.1. The Countywide Plan contains several policies in the Housing Element, Infrastructure and Utilities Element, and Natural Resource Element related to the development of new water treatment facilities, which are listed under "Countywide Plan Policies" in Section 5.18.2.3. Policy H-1.2 states that the availability of water services is a condition of residential development. Policy H-5.2 supports the integrated planning and provision of residential infrastructure between local and regional entities. Policy IU-1.6 establishes a user fee that covers operation and maintenance costs and sets aside reserves for capital improvements for facilities operated by County Special Districts. Policy RC-2.4

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requires that federal and state water quality standards be part of the review and approval of development proposals.

Level of Significance before Mitigation: With implementation of RR USS-1 through RR USS-6 and Countywide Plan policies H-1.2, H-5.2, and IU-1.6, Impact 5.18-3 would be less than significant.

5.18.2.5 CUMULATIVE IMPACTS

The area considered for cumulative impacts is the County. Typically, areas considered for cumulative impacts to utilities and public services are the service areas of the affected providers. However, analyzing water supplies and demands for all of the water purveyors identified in Table 5.18-5—in incorporated and unincorporated areas—is beyond the scope of this PEIR; thus the County is used as a substitute area.

The estimated net increase in water demands in the County between 2016 and 2040 is about 127.8 mgd, as shown in Table 5.18-7. Demands in unincorporated areas are as calculated in Table 5.18-6. Demands for incorporated areas are calculated using the 2020 water demand target for the water purveyor for the most populous city in each region.

Table 5.18-7 Forecast Water Demands, San Bernardino County, 2040

Area	Generation per Person ¹ (gpcd)	Existing Conditions (2015)		Net Increase		Horizon Year 2040	
		Population	Total Generation (gpd)	Population	Total Generation (gpd)	Population	Total Generation (gpd)
Valley Region							
Incorporated Areas	203 ²	1,407,932	285,810,196	382,468	77,641,004	1,790,400	363,451,200
Unincorporated Areas	232	128,415	29,792,280	24,893	5,775,176	153,308	35,567,456
Total	Not applicable	1,536,347	315,602,476	407,361	83,416,180	1,943,708	399,018,656
Mountain Region							
Incorporated Areas	142 ³	54,266	7,705,772	1,751	248,642	6,900	979,800
Unincorporated Areas	94	5,149	484,006	2,355	221,370	56,621	5,322,374
Total	Not applicable	59,415	8,189,778	4,106	470,012	63,521	6,302,174
North Desert Region							
Incorporated Areas	202 ⁴	346,133	69,918,866	180,167	36,393,734	526,300	106,312,600
Unincorporated Areas	238	99,214	23,612,932	21,073	5,015,374	120,287	28,628,306
Total	Not applicable	445,347	93,531,798	201,240	41,409,108	646,587	132,940,906
East Desert Region							
Incorporated Areas	142 ⁵	47,210	6,703,820	16,390	2,327,380	63,600	9,031,200

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Table 5.18-7 Forecast Water Demands, San Bernardino County, 2040

Area	Generation per Person ¹ (gpcd)	Existing Conditions (2015)		Net Increase		Horizon Year 2040	
		Population	Total Generation (gpd)	Population	Total Generation (gpd)	Population	Total Generation (gpd)
Unincorporated Areas	157	25,803	4,051,071	1,359	213,363	27,162	4,264,434
Total	Not applicable	73,013	10,754,891	17,749	2,540,743	90,762	13,295,634
County Totals							
Incorporated Areas	Not applicable	1,806,424	370,138,654	580,776	116,610,760	598,590	479,774,800
Unincorporated Areas	Not applicable	307,698	57,940,289	49,680	11,225,283	357,918	73,782,570
Total	Not applicable	2,114,122	428,078,943	630,456	127,836,043	956,508	553,557,370

¹ Demands for incorporated areas are calculated using the 2020 water demand target for the water purveyor for the most populous city in each region.
² 2020 water demand target for the City of San Bernardino Municipal Water Department, the water purveyor for the most populous city in the Valley Region (WSC 2016).
³ 2020 water demand target for Big Bear Lake Department of Water and Power, the water purveyor for the incorporated city in the Mountain Region (BBLDWP 2016).
⁴ 2020 water demand target for Victorville Water District, the water purveyor for the most populous city in the North Desert Region (VWD 2016).
⁵ 2020 water demand target for Twentynine Palms Water District, the water purveyor for the incorporated city in the East Desert Region (TPWD 2016).

The County of San Bernardino General Plan Water, Wastewater, and Hydrology Existing Conditions Report (PEIR Appendix H) assesses the ability of water systems to accommodate unincorporated growth. Most population growth due to Countywide Plan buildout would be in four areas: the Bloomington CPA, Fontana SOI, and the East Valley Area Plan (City of Redlands) in the Valley Region, and future master planned communities in the Town of Apple Valley SOI in the Desert Region. Table 2 of the report in Appendix H shows that the Bloomington CPA and the Fontana SOI have adequate water systems to accommodate growth. The town of Apple Valley SOI and the City of Redlands have water systems that are likely to accommodate growth. Cumulative impacts would be less than significant, and project impacts would not be cumulatively considerable.

5.18.2.6 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

With the implementation of RR USS-7 through RR USS-11 and General Plan policies, Impact 5.18-4 would be less than significant.

With the implementation of RR USS-1 through RR USS-3, RR USS-6 and General Plan policies, Impact 5.18-5 would be less than significant.

5.18.2.7 MITIGATION MEASURES

No mitigation is required.

5.18.2.8 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Impacts would be less than significant.

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5.18.3 Storm Drainage Systems

5.18.3.1 ENVIRONMENTAL SETTING

Regulatory Background

Laws and regulations governing storm drainage systems are listed here and described in Section 5.9, *Hydrology and Water Quality*, of this PEIR.

Federal

- Clean Water Act
- National Pollutant Discharge Elimination System

State

- Porter-Cologne Water Quality Act
- General Construction Permit Order No. 2009-0009-DWQ (as amended by 2010-0014-DWQ and 2012-0006-DWQ)
- Projects creating and/or replacing 2,500 square feet or more of impervious surfaces will be constructed and operated in accordance with the Statewide Small MS4 Permit, Order No. 2013-0001-DWQ, issued by the SWRCB in 2013.

Regional

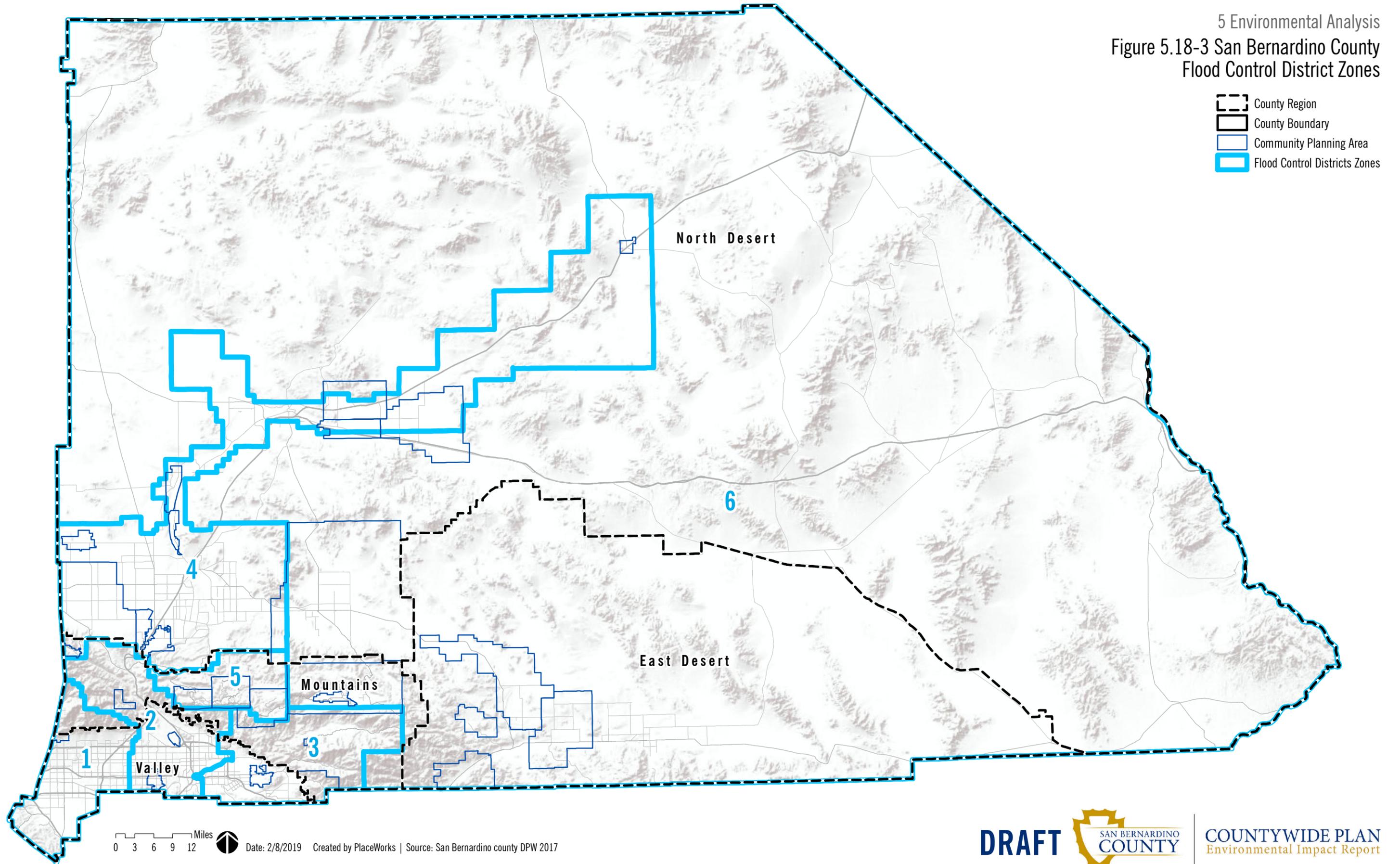
- Santa Ana RWQCB MS4 Permit Order No. R8-2010-0036

Existing Conditions

The flood control functions of the County are handled through the San Bernardino County Flood Control District (Flood District). The Flood District was established in 1939 in response to the severe floods of 1938, which caused millions of dollars of property damage in the county and took several lives. The Flood District has developed an extensive system of facilities including dams, conservation basins, channels and storm drains. The primary purpose of these facilities is to intercept and convey flood flows through and away from the major developed areas of the County to protect property and ensure public safety. Primary functions of the district are flood protection, water conservation, and storm drain construction. For future development proposals, the County does not require the payment of impact fees to pay for the construction and maintenance of regional infrastructure, although each project is required to include drainage improvements.

The Flood District is divided into six zones with interests, responsibilities and geographical divisions distinctive to the particular zone (see Figure 5.18-3, *San Bernardino County Flood Control District Zones*). Following is a breakdown of the existing drainage conditions for the flood control zones.

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Figure 5.18-3 San Bernardino County
Flood Control District Zones



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Zone 1

This zone encompasses the County's west end, from the Los Angeles and Riverside county lines to West Fontana and several other unincorporated areas. This includes the cities of Chino, Chino Hills, Fontana, Montclair, Ontario, Rancho Cucamonga, and Upland and the community of Etiwanda. According to the information readily available for Zone 1, the facilities in this area primarily consist of underground storm drains that empty into the Santa Ana River. The average ground slope across Zone 1 has generally been calculated at 1.5 percent from the northeast to the southwest.

Zone 2

This zone encompasses the central area of the San Bernardino Valley. It includes the cities of Colton, Fontana, Grand Terrace, Highland, Loma Linda, Redlands, Rialto, and San Bernardino and the communities of Bloomington, Del Rosa, Devore, and Muscoy. According to the information readily available for Zone 2, the facilities in this area primarily consist of levees. The average ground slope across Zone 2 has generally been calculated at 2 percent from the northwest to the southeast.

Zone 3

This zone consists of the east end of the San Bernardino Valley, including the cities of Highland, Loma Linda, Redlands, San Bernardino, and Yucaipa and the community of Mentone. According to the information readily available for Zone 3, the facilities in this area primarily consist of channels, streams, and natural watercourses. The average ground slope across Zone 3 has generally been calculated at 2.6 percent from the northwest to the southeast.

Zone 4

This zone consists of portions of the Mojave River Valley and includes the cities/towns of Adelanto, Apple Valley, Barstow, Hesperia, and Victorville and all or portions of the communities of Baker, Baldy Mesa, Daggett, Desert Knolls, El Mirage, Helendale, Hinkley, Hodge, Lenwood, Oro Grande, Phelan, Piñon Hills, Silver Lakes, Spring Valley Lake, Wrightwood, and Yermo. According to the information readily available for Zone 4, the facilities in this area primarily consist of channels, streams, and natural watercourses. The average ground slope across Zone 4 has generally been calculated at 0.3 percent from the southeast to the northwest.

Zone 5

This zone consists of communities in the San Bernardino Mountains—Arrowbear Lake, Blue Jay, Cedar Glen, Crestline, Green Valley Lake, Lake Arrowhead, Lake Gregory, Rimforest, Running Springs, Silverwood Lake, Skyforest, Snow Valley, and Twin Peaks. According to the information readily available for Zone 5, the facilities in this area primarily consists of channels, streams, and natural watercourses. The average ground slope has generally been calculated at 2.4 percent from southeast to northwest.

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Zone 6

This zone consists of the remaining portions of the San Gabriel and San Bernardino Mountains and the semidesert portion of the county. This zone includes Bear Valley, Joshua Tree, and Lucerne Valley. According to the information readily available for Zone 6, facilities primarily consist of storm drains, channels, and natural streams and watercourses. The average ground slope across Zone 6 has generally been calculated at 0.2 percent from the west to the east.

5.18.3.2 REGULATORY REQUIREMENTS AND GENERAL PLAN POLICIES

Regulatory Requirements

- RR HYD-2 **Statewide Small MS4 Permit:** Projects creating and/or replacing 2,500 square feet or more of impervious surfaces will be constructed and operated in accordance with the Statewide Small MS4 Permit, Order No. 2013-0001-DWQ, issued by the State Water Resources Control Board in 2013.
- RR HYD-3 **Santa Ana RWQCB MS4 Permit:** Projects will be constructed and operated in accordance with the Santa Ana RWQCB Municipal Stormwater (MS4) Permit for the part of the Santa Ana Basin in San Bernardino County in 2010 (Order No. R8-2010-0036).

Policy Plan

- Policy H-1.2 Concurrent infrastructure.** We support the integrated planning and provision of appropriate infrastructure (including water, sewer, and roadways) concurrent with and as a condition of residential development to create more livable communities.
- Policy H-5.2 Local and regional infrastructure.** We support the integrated planning and provision of appropriate infrastructure (including water, sewer, stormwater, and roadways) to create more livable residential environments. This effort will contain:
- Cooperation with the San Bernardino Local Agency Formation Commission and service providers in service planning
 - Coordination of capital improvement planning efforts with cities and through the San Bernardino County Transportation Authority
 - Review minimum improvement standards for rural areas in the update of the County development code
 - Coordination with the Southern California Association of Governments to include transportation improvements into the regional transportation plan

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5.18.3.3 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-3 Would require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

5.18.3.4 ENVIRONMENTAL IMPACTS

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

Impact 5.18-6: Existing and/or proposed storm drainage systems are adequate to serve the drainage requirements of the proposed project. [Threshold U-3]

Refer to Impact 5.9-1.

Level of Significance before Mitigation: With implementation of RR HYD-2 and RR HYD-3, Impact 5.18-6 would be less than significant.

5.18.3.5 CUMULATIVE IMPACTS

The area considered for cumulative storm drainage impacts is the Santa Ana RWQCB region, the Lahotan RWQCB region, and the Colorado River RWQCB region. Other projects in the region would increase impervious areas and thus increase runoff. Other projects meeting certain criteria would be required to implement low-impact development (LID) BMPs requiring that specified amounts of runoff be infiltrated, evapotranspired, harvested and reused, or treated (see Section 5.8, *Hydrology and Water Quality*, for further discussion of BMPs). Implementation of such BMPs would reduce the amount of runoff entering public storm drain systems. Cumulative impacts would be less than significant, and project impacts would not be cumulatively considerable.

5.18.3.6 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

With the implementation of RR HYD-2 and RR HYD-3, Impact 5.18-6 would be less than significant.

5.18.3.7 MITIGATION MEASURES

No mitigation is required.

5.18.3.8 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Impacts would be less than significant.

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5.18.4 Solid Waste

The information in this section is based partly on an email dated June 29, 2018, from Gary Koontz, Facility Project Manager at Burrtec, responding to a service questionnaire. The email is included in Appendix K, *Service Responses*, to this PEIR.

5.18.4.1 ENVIRONMENTAL SETTING

Regulatory Background

State

Assembly Bill 939

Assembly Bill 939 (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 disposal capacity for all jurisdictions within the county; or show a plan to transform or divert its waste.

Assembly Bill 341

AB 341 (Chapter 476, Statutes of 2011) increases the statewide waste diversion goal to 75 percent by 2020, and mandates recycling for commercial and multifamily residential land uses.

Assembly Bill 1826

AB 1826 (California Public Resources Code § 42649.8 et seq.) requires recycling of organic matter by businesses and multifamily residences of five or more units generating such wastes in amounts over certain thresholds. Organic waste means food waste, green waste, landscape and pruning waste, nonhazardous wood waste, and food-soiled paper waste that is mixed in with food waste. Multifamily residences are not required to have a food waste diversion program.

California Green Building Standards Code

Section 5.408 (Construction Waste Reduction, Disposal, and Recycling) of the 2016 California Green Building Standards Code (CALGreen; Title 24, California Code of Regulations, Part 11) requires that at least 65 percent of the nonhazardous construction and demolition waste from nonresidential construction operations be recycled and/or salvaged for reuse.

Existing Conditions

Solid Waste Collection

Private trash hauling companies collect solid waste from unincorporated areas of San Bernardino County under franchise agreements with the County; haulers by community are listed in Table 5.18-8.

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Table 5.18-8 Solid Waste Haulers Serving Unincorporated San Bernardino County

Hauler	Communities Served	Services Trash (T) and Recycling (R)
Valley Region		
Burrtec Waste & Recycling/ Burrtec Waste Industries	Grand Terrace-Loma Linda	T R
	Mt. Baldy-San Antonio Hgts-Upland	T R
	Montclair	T R
	West Fontana	T R
Cal Disposal Services	Muscoy-San Bernardino	T R
EDCO Disposal Services	North Rialto	T R
	Bloomington	T R
Empire Disposal	Redlands-Mentone-Oak Glen	T R
Jack's Disposal Services	Devore-North San Bernardino-Del Rosa-East Highland	T R
Mountain Region		
Big Bear City	Big Bear City	T R
Big Bear Disposal	Fawnskin-Baldwin Lake-Lake Williams	T R
C R & R	Wrightwood	T R
Empire Disposal	Barton Flats-Angeles Oaks-Forest Falls	T
Mountain Disposal Services	Crestline-Running Springs-Lake Arrowhead	T R
North Desert Region		
Advance Disposal	Hesperia	T R
AVCO/Burrtec Waste Ind.	Apple Valley-Victorville-Adelanto-Silver Lakes-Lucerne Valley-Landers	T R
Benz Sanitation	Boron-Kramer Jct.-Trona	T
Burrtec Waste Industries	Barstow-Lenwood/Hinkley	T R
	Yermo-Newberry Springs	T R
C R & R	Phelan-Pinon Hills	T
East Desert Region		
Burrtec Waste & Recycling/ Burrtec Waste Industries	Yucca Valley-Joshua Tree	T R
	Twentynine Palms	T R

Source: San Bernardino County 2017.

Solid Waste Recycling and Disposal

Landfills

In 2016 about 97 percent of the solid waste landfilled from the unincorporated County was disposed of at the eight landfills, described in Table 5.18-9 (CalRecycle 2017a).

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Table 5.18-9 Landfill Capacity: Landfills Serving Unincorporated San Bernardino County

Landfill and Nearest City	Current Remaining Capacity (Cubic Yards)	Maximum Daily Disposal Capacity (tons)	Average Daily Disposal, 2017 (tons) ¹	Residual Daily Disposal Capacity, tons	Estimated Close Date
Valley Region					
Mid-Valley Sanitary Landfill Rialto	67,520,000	7,500	3,474	4,026	2033
San Timoteo Sanitary Landfill Redlands	11,402,000	2,000	928	1,072	2043
Subtotal	78,922,000 [59,191,500 tons]	9,500	4,402	5,098	Not applicable
Mountain Region					
Barstow Sanitary Landfill Barstow	71,481,660	1,500	256	1,244	2071
Victorville Sanitary Landfill Victorville	81,510,000	3,000	1,009	1,991	2047
Subtotal	171,926,862 [128,945,147 tons]	4,500	1,265	3,235	Not applicable
North Desert Region					
Barstow Sanitary Landfill Barstow	71,481,660	1,500	256	1,244	2071
Victorville Sanitary Landfill Victorville	81,510,000	3,000	1,009	1,991	2047
Ft. Irwin Landfill ² Fort Irwin	18,935,202	100	27	73	2045
Subtotal	171,926,862 [128,945,147 tons]	4,600	1,292	3,308	Not applicable
East Desert Region					
Landers Sanitary Landfill Landers	13,983,500 [10,487,625 tons]	1,200	177	1,023	2072
Outside San Bernardino County					
El Sobrante Landfill Corona, Riverside County	145,530,000	16,054	10,855	5,199	2045
Azusa Land Reclamation Company Landfill Azusa, Los Angeles County	51,512,201	8,000	1,410	6,590	2045
Subtotal	197,042,201 [147,781,651 tons]	24,054	12,265	11,789	Not applicable
TOTAL					
Total	461,874,563 [346,405,922 tons]	39,354	18,136	21,218	Not applicable

Sources: CalRecycle 2017b to CalRecycle 2017j.

¹ Average daily disposal is calculated based on 300 operating days per year. Each of the facilities is open six days per week, Monday through Saturday, except certain holidays. Note that this daily disposal rate is for incorporated and unincorporated areas.

² Ft. Irwin Landfill is on Fort Irwin National Training Center (U.S. Army) and is not open to the public.

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Transfer/Processing Facilities

Large-volume transfer/processing facilities open to the public are listed in Table 5.18-10.

Table 5.18-10 Large-Capacity Transfer Stations/Processing Facilities in San Bernardino County

Facility Nearest Community	Permitted Throughput, tons per day
Valley Region	
West Valley Materials Recovery Facility Fontana	7,500
East Valley Recycling Transfer station San Bernardino	900
Inland Regional MRF Transfer Station Colton	1,950
Subtotal	10,350
Mountain Region	
Heap's Peak Transfer Station Running Springs	600
Big Bear Transfer Station Big Bear City	400
Subtotal	1,000
North Desert Region	
Advance Disposal Center for the Environment Hesperia	1,500
Sheep Creek Transfer Station Phelan	198
Victor Valley MRF Transfer Station Victorville	500
Subtotal	2,198
East Desert Region	
Twentynine Palms Transfer Station Twentynine Palms	200
TOTAL	
Total	13,748

Source: CalRecycle 2017k.

Construction and Demolition Debris

The Solid Waste Information System lists 43 facilities in the County accepting construction and demolition debris:

- 25 in the Valley Region
- 2 in the Mountain Region
- 14 in the North Desert Region
- 2 in the East Desert Region (CalRecycle 2017l)

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Recycling Facilities

CalRecycle's facility database lists 90 recycling facilities in the County accepting glass, metal, plastic, and paper:

- 73 in the Valley Region
- 2 in the Mountain Region
- 13 in North Desert Region
- 2 in the East Desert Region (CalRecycle 2017k)

Composting Facilities

There are 31 composting facilities in the County listed on the Solid Waste Information System maintained by CalRecycle:

- 22 in the Valley Region
- 2 in the Mountain Region
- 6 in the North Desert Region
- 1 in the East Desert Region (CalRecycle 2017l)

Many of the recycling and composting facilities and facilities accepting construction and demolition waste carry out more than one of those functions and are included multiple times in the above lists of facilities.

Solid Waste Diversion Programs

There are 50 solid waste diversion programs in the unincorporated County, including composting, material recovery facilities, household hazardous waste, public education programs, recycling, source reduction programs, and special waste materials programs including concrete/asphalt/rubble, scrap metal, wood waste, and tires (CalRecycle 2017m).

5.18.4.2 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.

5.18.4.3 REGULATORY REQUIREMENTS AND GENERAL PLAN POLICIES

Regulatory Requirements

- RR USS-12 The County and cities within the County shall abide by AB 939 and AB 341 and divert 75 percent of their waste from landfills by the year 2020. The County shall show 15 years disposal capacity for all jurisdictions within the county or show a plan to transform or divert its waste.

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- RR USS-13 Projects will be constructed in accordance with the California Green Building Standards Code, which requires a minimum of 50 percent of the “non-hazardous construction and demolition debris” (by weight or volume) to be recycled or reused.
- RR USS-14 Projects will store and collect recyclable materials in compliance with AB 341. Green waste will be handled in accordance with AB 1826.

Policy Plan

- Policy IU-4.1 Landfill capacity.** We maintain a minimum ongoing landfill capacity of 15 years to serve unincorporated waste disposal needs.
- Policy IU-4.2 Transfer stations.** We locate and operate transfer stations based on overall system efficiency.
- Policy IU-4.3 Waste diversion.** We shall meet or exceed state waste diversion requirements, augment future landfill capacity, and reduce greenhouse gas emissions and use of natural resources through the reduction, reuse, or recycling of solid waste.
- Policy IU-4.4 Landfill funding.** We require sufficient fees for use of County landfills to cover capital costs; ongoing operation, maintenance, and closure costs of existing landfills; the costs and liabilities associated with closed landfills.

5.18.4.4 ENVIRONMENTAL IMPACTS

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

Most population growth due to Countywide Plan buildout would be in four areas: the Bloomington CPA, Fontana SOI, the East Valley Area Plan in the Valley Region, and future master planned communities in the Town of Apple Valley SOI in the Desert Region. Employment growth would be focused in the unincorporated portions of the Valley region, particularly in the Fontana SOI, East Valley Area Plan, and Bloomington CPA (see Section 5.0 for further discussion).

Impact 5.18-7: Existing and/or proposed facilities could accommodate project-generated solid waste and comply with related solid waste regulations. [Thresholds U-6 and U-7]

Residual Landfill Capacity

The landfills in the County serving unincorporated areas of the County have total residual capacity of nearly 21,218 tons per day (see Table 5.18-9). Residual capacity at the two landfills in the Valley Region totals 5,098 tons per day, enough to accommodate the anticipated 2,990 tons/day increase in the Valley Region (see Table 5.18-11). The three landfills in the North Desert Region have a total residual capacity of 3,308 tons per day. Two of these landfills also serve the Mountain Region. The anticipated increase in the North Desert and

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Mountain Regions is 1,239 tons/day, and thus enough capacity is available. The landfills in the East Desert Region have a residual capacity of 1,023 tons/day. The anticipated increase is 140 tons/day.

The two landfills outside of the County serving unincorporated areas of the County have additional residual capacity totaling nearly 12,000 tons per day.

There is sufficient landfill capacity for solid waste generation by Countywide Plan buildout, and buildout would not require construction of new or expanded landfills.

Table 5.18-11 Estimated Net Increase in Solid Waste Generation by Countywide Plan Buildout, pounds per day

Region/Area	Residential			Nonresidential			Total
	Net Increase, Residential Units	Generation per Unit ¹	Total Generation	Net Increase, Nonresidential Square Feet	Generation per square foot ¹	Total Generation	
Valley Region							
Incorporated Areas	150,427	10	1,504,270	421,143,055	0.010	4,211,431	5,715,701
Bloomington CPA	6,169	10	61,690	3,756,069	0.010	37,561	99,251
Fontana SOI (west)	225	10	2,250	8,724,613	0.010	87,246	89,496
East Valley Area Plan	977	10	9,770	4,129,593	0.010	41,296	51,066
Balance Unincorporated Areas	607	10	6,070	1,777,173	0.010	17,772	23,842
Total	158,405	10	1,584,050	439,530,503	0.010	4,395,305	5,979,355
Mountain Region							
Incorporated Areas	881	10	8,810	4,111,926	0.010	41,119	49,929
Unincorporated Areas	702	10	7,020	162,356	0.010	1,624	8,644
Total	1,583	10	15,830	4,274,282	0.010	42,743	58,573
North Desert Region							
Incorporated Areas	61,578	10	615,780	173,237,103	0.010	1,732,371	2,348,151
Apple Valley SOI	4,841	10	48,410	613,380	0.010	6,134	54,544
Balance Unincorporated Areas	1,440	10	14,400	169,667	0.010	1,697	16,180
Total	67,859	10	678,590	174,020,150	0.010	1,740,201	2,418,875
East Desert Region							
Incorporated Areas	4,736	10	47,360	22,866,506	0.010	228,665	276,035
Unincorporated Areas	394	10	3,940	65,050	0.010	651	4,591
Total	5,130	10	51,300	22,931,556	0.010	229,316	280,626
TOTAL							
Total	232,977	10	2,392,770	640,756,491	0.010	6,407,565	8,737,429

¹ Source: CalRecycle 2016. The generation factor for nonresidential land uses, 0.010 pound per day, is averaged from two factors: 0.006 pound per square foot per day, for office and retail uses; and 0.0142 pound per square foot per day, for warehouse and manufacturing/warehouse uses.

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With regard to material recovery facilities (MRF), Burrtec Waste Industries operates the West Valley Transfer Station, the East Valley Transfer Station, and the Victor Valley MRF. Burrtec anticipates the possible need for two new organics processing facilities for green waste and food waste to accommodate Countywide Plan buildout. Due to the difficulty of siting new solid waste facilities, the increased need would be met by expanding existing facilities, upgrading sorting equipment, or adding shifts (Burrtec 2018). Most population and employment growth will occur in Burrtec's service area, and the impact would be less than significant.

Solid Waste Collection

Burrtec estimates that full Countywide Plan buildout would require approximately 90 to 100 residential side load trucks to collect the three residential materials (trash, mixed recyclables, and green waste). Multifamily residential, commercial, industrial, and institutional buildout would probably require in the range of 30 to 40 front-load and roll-off collection trucks (Burrtec 2018). There is no threshold pertaining to solid waste collection, and this is for information only.

Furthermore, the County shall abide by AB 939 and AB 341 and divert 75 percent of their waste from landfills by the year 2020. The County shall show 15 years disposal capacity for all jurisdictions within the County or show a plan to transform or divert its waste. New projects will be constructed in accordance with the California Green Building Standards Code, which requires a minimum of 65 percent of the "non-hazardous construction and demolition debris" (by weight or volume) to be recycled or reused. New projects will also store and collect recyclable materials in compliance with AB 341. Green waste will be handled in accordance with AB 1826.

Policy IU-4.2 will ensure that the County locates and operates transfer stations based on overall system efficiency. Policy IU-4.3 states that the County shall meet or exceed state waste diversion requirements through the reduction, reuse, or recycling of solid waste. And Policy IU-4.4 will require sufficient fees for use of County landfills to cover capital costs; ongoing operation, maintenance, and closure costs of existing landfills.

Level of Significance before Mitigation: With implementation of RR USS-12 through RR USS-14 and Policy IU-4.1 through IU-4.4, Impact 5.18-7 would be less than significant.

5.18.4.5 CUMULATIVE IMPACTS

The area considered for cumulative impacts to solid waste disposal is the County. As shown in Impact 5.18-7, waste disposal services serving the County are sufficient for both incorporated and unincorporated growth at Countywide Buildout and thus no cumulative impacts will arise.

5.18.4.6 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

With the implementation of RR USS-12 through RR USS-14 and General Plan policies, Impact 5.18-7 would be less than significant.

5.18.4.7 MITIGATION MEASURES

No mitigation is required.

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5.18.4.8 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Impacts would be less than significant.

5.18.5 Other Utilities

5.18.5.1 ENVIRONMENTAL SETTING

Regulatory Background

California Energy Commission

The California Energy Commission (CEC) was created in 1974 as the state's principal energy planning organization 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:

- Forecast statewide electricity needs.
- License power plants to meet those needs.
- Promote energy conservation and efficiency measures.
- Develop renewable energy resources and alternative energy technologies.
- Promote research, development and demonstration.
- Plan for and direct the state's response to energy emergencies.

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

All new construction in California is subject to the energy conservation standards 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 use of alternative energy applications in development projects, 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. Incentives are primarily state and federal tax credits, as well as reduced energy bills.

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

The 2012 Appliance Efficiency Regulations took effect on February 13, 2013. The regulations include standards for both federally and nonfederally regulated appliances.

Electric Utility Industry Restructuring Act: Assembly Bill 1890

The California Public Utilities Commission 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,

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allowing customers to purchase electricity on the open market. Under deregulation, the production and distribution of power that were under the control of investor-owned utilities (e.g., Southern California Edison) were decoupled.

CALGreen

On July 17, 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (Part 11, Title 24) was adopted as part of the California Building Standards Code (Title 24, California Code of Regulations). CALGreen established planning and design standards for sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and internal air contaminants. The mandatory provisions of CALGreen became effective January 1, 2011. The building efficiency standards are enforced through the local building permit process. The code was updated again in 2013, effective January 1, 2014, except energy based measures whose implementation was delayed until July 1, 2014.

The purpose of CALGreen is to improve public health, safety, and general welfare by enhancing the design and construction of buildings through the use of building concepts having a reduced negative impact or positive environmental impact and encouraging sustainable construction practices in the following categories:

- Planning and design
- Energy efficiency
- Water efficiency and conservation
- Material conservation and resource efficiency
- Environmental quality

The provisions of CALGreen apply to the planning, design, operation, construction, use, and occupancy of every newly constructed building or structure, unless otherwise indicated in this code, throughout California. Compliance with CALGreen is not a substitute for meeting the certification requirements of any green building program. CALGreen requires new buildings to reduce water consumption by 20 percent, divert 50 percent of construction waste from landfills, and install low pollutant-emitting materials.

Desert Renewable Energy Conservation Plan

The Desert Renewable Energy Conservation Plan (DRECP), which covers 22.5 million acres in seven California counties including the County, is a landscape-level plan that streamlines renewable energy development while conserving unique and valuable desert ecosystems and providing outdoor recreation opportunities. The US Bureau of Land Management (BLM) approved a land use plan amendment to the California Desert Conservation Area Plan, pursuant to the DRECP, covering 10.8 million acres of public lands within the 22.5-million-acre plan area, in September 2016. The amendment identified about 847,000 acres out of the 10.8 million acres where renewable energy facilities could be permitted:

- **Development Focused Areas:** 388,000 acres where solar, wind, and geothermal facilities would be allowed and incentivized, including 88,000 acres in the County.

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- **Variance Process Lands:** 40,000 acres where such facilities would be permitted subject to a variance process (BLM 2016). Most of the variance process lands are in the County near the town of Amboy in the North Desert Region (BLM 2016).
- **General Public Lands:** 419,000 acres with no specific land designation, potentially available to renewable energy applications subject to site-specific plan amendments (BLM 2016).

In March 2017 President Trump issued Executive Order 13783, Promoting Energy Independence and Economic Growth, which directs all federal agencies to review all actions that could potentially burden the development or use of domestically produced energy resources. In January 2018, the president signed an executive order on Streamlining and Expediting Requests to Locate Broadband Facilities in Rural America, which directs federal agencies to reduce barriers to capital investment, remove obstacles to broadband services, and more efficiently employ Government resources. The BLM reopened the DRECP to consider changes in the plan; a 45-day public scoping process was conducted in February and March 2018 (NARA 2018).

County of San Bernardino Renewable Energy and Conservation Element (RECE)

The Renewable Energy and Conservation Element (RECE) was adopted in 2017 and is not being updated through the Countywide Plan. The RECE is intended to ensure efficient consumption of energy and water, reduce greenhouse gas emissions, pursue the benefits of renewable energy and responsibly manage its impacts on the County's environment, communities and economy. The RECE will be incorporated in its entirety into the Countywide Plan after the Countywide Plan is adopted.

San Bernardino County Transportation Authority Greenhouse Gas Emissions Reduction Plan

In 2006, the California legislature passed AB 32, the Global Warming Solutions Act of 2006. The law establishes a limit on greenhouse gas (GHG) emissions for the state of California to reduce statewide emissions to 1990 levels by 2020.

As a response, a project partnership, led by the San Bernardino Associated Governments (SANBAG), the predecessor agency to San Bernardino County Transportation Authority, compiled an inventory of GHG emissions and developed reduction measures that could be adopted by the 21 Partnership cities of the County. Once adopted, the regional greenhouse gas reduction plan will serve as the basis for cities in the County to develop more-detailed, community-level climate action plans (SBCAT 2018).

Existing Conditions

Electricity

Southern California Edison

Southern California Edison (SCE) provides electricity to most of the County (CEC 2015a). Other electricity providers to portions of the County include the City of Needles Electric Department; City of Colton Electric Utility; Bear Valley Electric Service; and City of Victorville Municipal Utilities Services (see Figure 5.18-4, *Electricity Service Areas*). The Rancho Cucamonga Municipal Utility provides electricity to some portions of the southeast part of Rancho Cucamonga.

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SCE’s service area spans much of southern California from Orange and Riverside counties on the south to Santa Barbara County on the west to Mono County on the north (CEC 2015a). Total electricity consumption in SCE’s service area in 2015 was 106,140 gigawatt-hours (GWh) and is forecast to increase to 120,780 GWh in 2028 for the mid-demand scenario (CEC 2017a); one GWh is equivalent to one million kilowatt-hours.

Other Providers

Other electricity providers serve portions of the County, including:

- **Valley Region**
 - City of Colton Electric Department
 - City of Rancho Cucamonga Electric Utility
- **Mountain Region**
 - Bear Valley Electric Service (Bear Valley communities including City of Big Bear Lake, Big Bear City, Moonridge, Sugarloaf, Fawnskin)
- **North Desert Region**
 - City of Needles Electric Department
 - Victorville Municipal Utilities Services

Table 5.18-12 shows the 2014 demand for SCE, Bear Valley Electric, and the City of Needles Electric. City of Colton Electric Department, the City of Rancho Cucamonga Electric Utility, and the Victorville Municipal Utilities Services are small providers with small service areas (see Figure 5.18-4). The total energy demand for the unincorporated areas was estimated at 2,451 GWh/yr.

Table 5.18-12 2014 Energy Demand in Unincorporated San Bernardino County

Type	Unit	Energy Demand
Southern California Edison		
Residential Electricity	kWh	705,669,564
Commercial Electricity	kWh	327,700,763
Agriculture Electrical	kWh	120,030,573
Industrial Electricity	kWh	1,116,789,238
Transmission & distribution losses	kWh	120,072,502
Total	kWh	2,390,262,640
Bear Valley Electric		
Residential Electricity	kWh	44,093,676
Commercial Electricity	kWh	12,087,852
Industrial Electricity	kWh	74,375
Transmission & distribution losses	kWh	2,694,658
Total	kWh	58,950,561

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Table 5.18-12 2014 Energy Demand in Unincorporated San Bernardino County

Type	Unit	Energy Demand
City of Needles Electric		
Residential Electricity	kWh	337,500
Commercial Electricity	kWh	1,611,720
Transmission & distribution losses	kWh	93,368
Total	kWh	2,042,588
Total for All Providers		2,451,255,789

Sources: ICF 2017.

Natural Gas

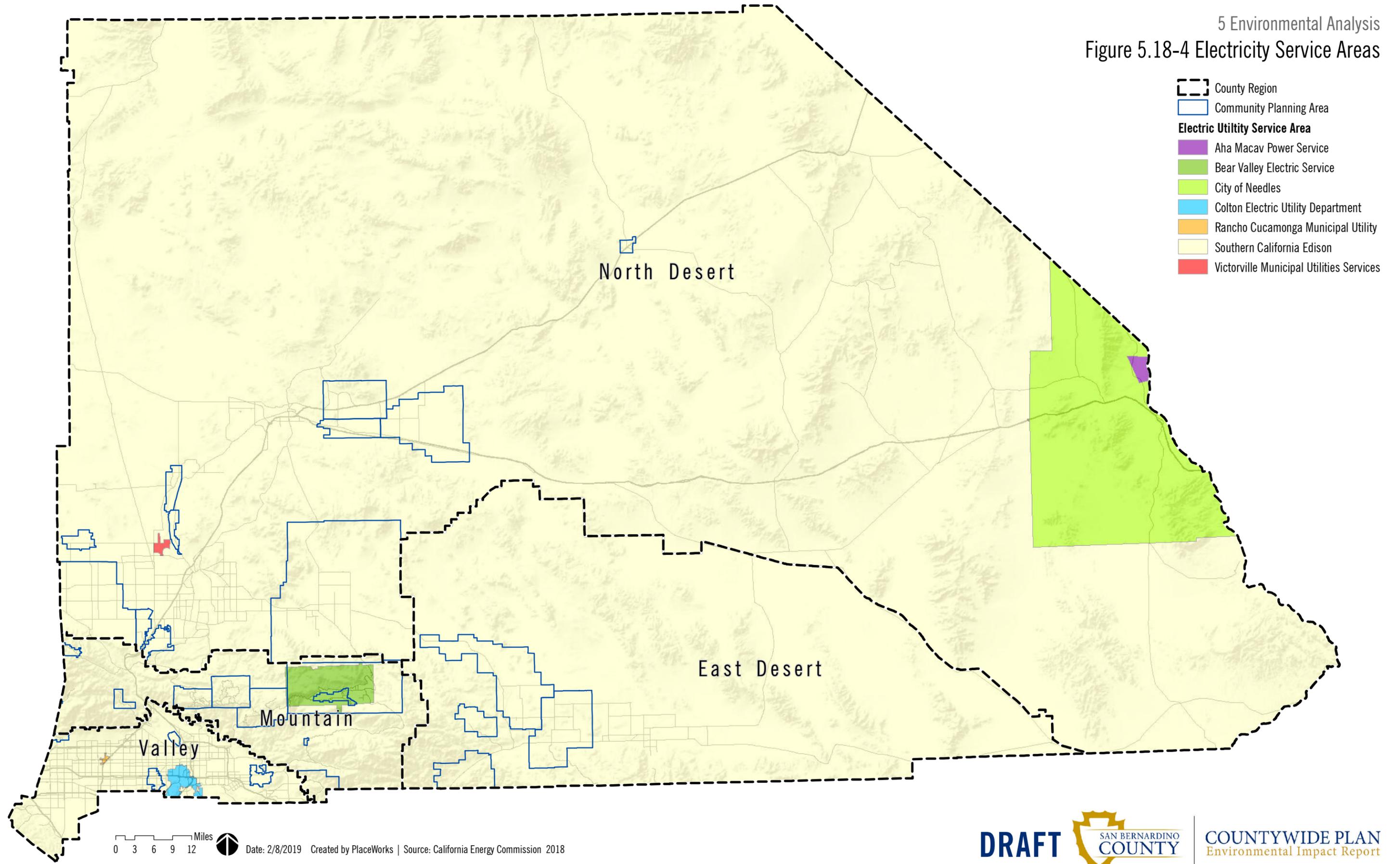
Southern California Gas Company

The Southern California Gas Company (SCGC) provides natural gas to most of the County (see Figure 5.18-5, *Natural Gas Service Areas Map*). SCGC's service area spans much of the southern half of California, from Imperial County on the southeast to San Luis Obispo County on the northwest to part of Fresno County on the north to Riverside County and most of the County on the east (CEC 2015b). Total natural gas supplies available to SCGC are forecast to be 3,775 million cubic feet per day (MMcf/d) from 2020 through 2035. Total natural gas consumption in SCGC's service area for average temperature years was 2,518 MMcf/d in 2017 and is forecast to be 2,313 MMcf/d in 2035 (CGEU 2018).

Southwest Gas

Southwest Gas Corporation serves the Big Bear Lake area in the Mountain Region, and the Victorville and Lucerne Valley areas in the North Desert Region (see Figure 5.18-5). Southwest Gas is wholesale utility customer of SCGC.

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 Figure 5.18-4 Electricity Service Areas

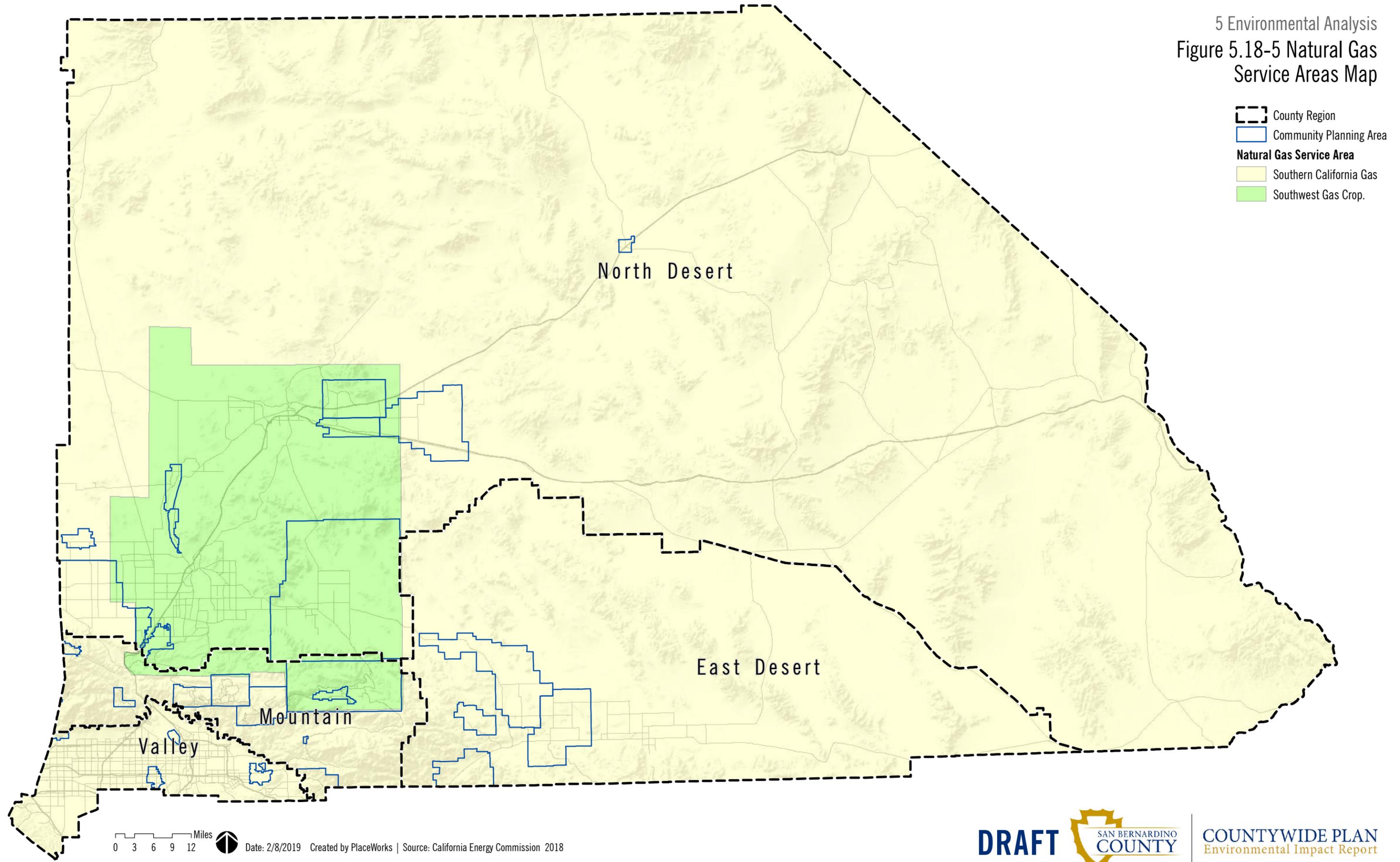


SOURCE: ERI, CEC, NCA

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Figure 5.18-5 Natural Gas Service Areas Map



SOURCE: ERI, CGG, TCAA

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Table 5.18-13 shows the 2014 demand for SCGC and Southwest Gas. The total natural gas demand for the unincorporated areas was estimated at 45,007,722 therms.⁴

Table 5.18-13 2014 Natural Demand in Unincorporated San Bernardino County

Type	Unit	Natural Gas Demand
Southern California Gas Company		
Residential Natural Gas	therms	25,376,717
Commercial Natural Gas	therms	8,844,792
Industrial Natural Gas	therms	2,381,420
Total	therms	36,602,929
Southwest Gas		
Residential Natural Gas	therms	6,068,460
Commercial Natural Gas	therms	948,645
Industrial Natural Gas	therms	292,648
Water Pumping	therms	169
Electricity Generation	therms	455,420
Other	therms	639,451
Total	therms	8,404,793
Total for All Providers		45,007,722

Sources: ICF 2017.

Renewable Energy

There are several forms of renewable energy—solar, wind, biomass, small hydroelectric (≤ 30 megawatts [MW]), geothermal, and municipal solid waste conversion; ocean and tidal renewable energy generation are omitted here due to the County’s inland location. Municipal solid waste conversion is a two-step process where solid waste is first converted to a gaseous or liquid fuel, then the fuel burned to generate electricity (CEC 2017b). The number and types of renewable energy generating facilities in the County are shown in Table 5.18-14.

Table 5.18-14 Renewable Energy Generating Facilities in San Bernardino County (Operating and Permitted)

Type	Operating Facilities		Have Environmental Permits but Not Built	
	Number of Facilities	Capacity, Total (MW)	Number of Facilities	Capacity, Total (MW)
Southern California Edison				
Wind	4	7	0	0
Biomass	1	0.25	1	3
Southern California Edison				
Landfill Gas	1	2.6	0	0
Hydroelectric	14	71.6	0	0
Total	117	1,733	13	394

Sources: CEC 2018; CEC 2017b.

⁴ One therm is equivalent 99.9761 cubic feet of natural gas.

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Renewable energy facilities are also classified in three categories by size:

- Utility-scale: 20 MW or larger
- Distributed: Smaller than 20 MW .
- Self-generation: Distributed facilities at a utility customer’s home or business (CEC 2017b)

Solar

There are two forms of solar generating technology: photovoltaic, which converts solar energy directly to electric current, and solar thermal, where solar energy is focused to heat a fluid which in turn is used to generate electricity. Solar thermal electricity-generating facilities either use parabolic mirrors that focus solar energy on a tube in front of the mirror or numerous mirrors focusing solar energy on a fluid in a central tower.

Solar Facilities in San Bernardino County

There are 98 operating solar facilities in the County: 87 photovoltaic (PV) and 11 solar thermal, with total capacity of 1,652 MW. There are an additional 12 planned solar facilities that have received environmental permits but have not yet been built, with total capacity of 391 MW (CEC 2018b). Applications for 9 additional solar facilities, with total capacity of 1,664 MW, were under review by the County Land Use Services Department as of March 26, 2018 (San Bernardino County 2018). The five largest PV solar facilities in the County are:

- Adelanto 1, Adelanto: 20 MW
- Alamo Solar, San Bernardino: 20 MW
- Lone Valley Solar Park 2, Lucerne Valley, 20 MW
- Cascade Solar PV, Joshua Tree, 18.5 MW
- RE Victor Phelan Solar One, Adelanto, 17.5 MW (CEC 2018b)

All but one of the 12 operating solar thermal facilities in California are in the County. The Ivanpah I, II, and III facilities are near Nipton; the Mojave Solar Project is in Hinkley; and the SEGS I-IX facilities are in Hinkley, Boron, and Daggett. The SEGS facilities are being evaluated for conversion to PV. One conversion has already been completed. The one permitted (unconstructed) solar thermal facility in the County is the only such facility in California (CEC 2018b).⁵

Distributed Facilities

There are over 40,000 distributed renewable energy facilities—such as rooftop solar—in the County with total capacity of over 273 MW (CEC 2017b).

⁵ The Victorville 2 Hybrid Power Project, approved in 2008, would consist of a 50 MW solar thermal facility and a 513 MW natural-gas-fired facility; the project is on hold (CEC 2018b).

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Wind Energy

The four wind energy facilities in the County are in Victorville, Apple Valley, and Rancho Cucamonga with a total capacity of 7 MW.

Biomass and Landfill Gas

There is one biomass facility in the County, Western Rock Products in Newberry Springs, with a capacity of 0.25 MW.

There is one landfill gas facility in the County, MN Mid Valley Genco LLC in Fontana, with a capacity of 2.6 MW.

Hydroelectric

There are 14 hydroelectric facilities in the County considered to be renewable energy (that is, 30 MW or smaller), with total capacity of about 71.6 MW. Thirteen of the facilities are in the Valley Region or in the part of the Mountain region near the Valley Region; and one is in the North Desert Region.

Statewide

There were approximately 1,240 renewable energy facilities in California serving the wholesale market in 2017, with total capacity of about 21,833 MW. About half of those facilities were solar, and approximately another 25 percent were wind facilities. The 1,733 MW capacity in the County thus is about 8 percent of statewide wholesale renewable energy capacity.

Forecast

Forecasts for renewable energy generation capacity by county is not available. California's large investor-owned utilities' aggregated forecast project that they will meet the 2030 Renewable Portfolio Standard of 50 percent by 2020 (CPUC 2017).

5.18.5.2 THRESHOLDS OF SIGNIFICANCE

A project would normally have a significant effect on the environment if the project:

- U-8 Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.
- U-9 Conflict with or obstruct a state of local plan for renewable energy or energy efficiency.

5.18.5.3 REGULATORY REQUIREMENTS AND GENERAL PLAN POLICIES

Regulatory Requirements

- RR USS-15 Projects will abide by Title 24 Chapter 6 of the California Code of Regulations with respect to energy efficiency standards for new building construction.

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- RR USS-16 Both federally and nonfederally regulated appliances shall abide by the efficiency standards of Title 20, Section 1601 et seq. of the California Code of Regulations.
- RR USS-17 New development shall abide by the requirements of CalGreen Building Code.
- RR-USS-18 Renewable energy projects shall comply with the Desert Renewable Energy Conservation Plan that streamlines renewable energy development while conserving unique and valuable desert ecosystems and providing outdoor recreation opportunities.

Policy Plan

- Policy H-1.5** **Life-cycle costs.** We encourage energy-conservation techniques and upgrades in both the construction and rehabilitation of residential units that will reduce the life-cycle costs of housing.
- Policy D/H-1.4** **Funding priorities.** As funding becomes available, we prioritize the use and application of grants and loans for housing rehabilitation, energy conservation retrofits, and water conservation retrofits for housing in the Desert Region.
- Policy IU-5.1** **Electricity and natural gas service.** We partner with other public agencies and providers to improve the availability and stability of electricity and natural gas service in unincorporated communities.
- Policy -RE1.9** **Building design and upgrades.** We use the CALGreen Code to meet energy efficiency standards for new buildings and encourage the upgrading of existing buildings to incorporate design elements, building materials, and fixtures that improve environmental sustainability and reduce emissions.
- Policy RE-1.1** **GHG Reduction Plan.** We implement the energy conservation and efficiency measures identified in the County of San Bernardino Greenhouse Gas Emissions Reduction Plan.
- Policy RE-1.2** **Optimized efficiency.** We optimize energy efficiency in the built environment.
- Policy RE-1.3** **Local benefits.** We promote the local economic benefits of energy efficiency retrofits.
- Policy RE-1.4** **Energy conservation.** We encourage residents and businesses to conserve energy.
- Policy RE-2.1** **Types of renewable energy systems.** We support solar energy generation, solar water heating, wind energy and bioenergy systems that are consistent with the orientation, siting and environmental compatibility policies of the General Plan.
- Policy RE-2.2** **Energy storage.** We promote use of energy storage technologies that are appropriate for the character of the proposed location.

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- Policy RE-2.3** **Emerging technologies.** We encourage the use of feasible emerging and experimental renewable energy technologies that are compatible with County regulatory standards.
- Policy RE-2.4** **Access to renewable energy.** We identify and prioritize programs that support cost-effective and universal access to renewable energy.
- Policy RE-2.5** **Zero net energy.** We support renewable energy systems that accelerate zero net energy through innovative design, construction, and operations of residences, businesses, and institutions that are grid-neutral and independent of centralized energy infrastructure.
- Policy RE-2.6** **Energy efficiency.** We encourage energy efficiency through appropriate renewable energy systems.
- Policy RE-3.1** **Onsite accessory systems.** We prioritize, facilitate, and encourage onsite accessory renewable energy generation to serve the unincorporated county, with a primary focus on rooftop and parking lot solar energy generation.
- Policy RE-3.2** **Locally-focused service.** We encourage neighborhood- and community-serving renewable energy generation that primarily serves local uses in the county.
- Policy RE-3.3** **Adaptive and resilient energy infrastructure.** We promote adaptive distributed energy infrastructure that sustains local communities and improves resiliency to grid failures and increasing energy prices.
- Policy RE-3.4** **Sphere standards.** We require renewable energy facilities developed in spheres of influence of incorporated cities to be compatible and consistent with standards of the sphere cities.
- Policy RE-3.5** **Local input.** We incorporate resident, business owner, and stakeholder input into the development and implementation of County policies for renewable energy.
- Policy RE-3.6** **Community goals.** We encourage renewable energy facilities to meet community goals, including supporting community health, wellness, and recreational needs.
- Policy RE-3.7** **Community involvement.** We foster local economic benefits of renewable energy facilities through community involvement.
- Policy RE-4.1** **Standards.** We apply standards to the design, siting, and operation of all renewable energy facilities to protect the environment, including sensitive biological resources, air quality, water supply and quality, cultural, archaeological, paleontological and scenic resources.

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- Policy RE-4.2** **Local hydrology.** We ensure that renewable energy facilities do not disrupt, degrade, or alter the local hydrology and hydrogeology.
- Policy RE-4.3** **Local community impacts.** We require construction and operation of all renewable energy facilities to minimize negative effects and optimize benefits to unincorporated communities.
- Policy RE-4.4** **Visual impacts.** We encourage siting, construction and screening of renewable energy generation facilities to avoid, minimize, or mitigate significant changes to the visual environment including minimizing light and glare.
- Policy RE-4.5** **Decommissioning plan.** We require renewable energy generation facility developers to provide and facility owners to implement a decommissioning plan that provides for reclamation of the site to a condition at least as good as that which existed before the lands were disturbed or another appropriate end use that is stable (i.e. with interim vegetative cover), prevents nuisance, and is readily adaptable for alternative land uses. Decommissioning plans shall:
- Include a cost estimate of the decommissioning and site restoration work for the purpose of providing a bond to guarantee completion of decommissioning.
 - Provide for an inspection after all decommissioning and site restoration work to ensure that the work has been completed to the standards required by the County, prior to release of the decommissioning bond.
 - Require any structures created during construction to be decommissioned and all material recycled to the greatest extent possible.
 - Require all material recovered during decommissioning and site restoration work of a renewable energy facility, including the renewable energy technology itself, to be reused or recycled to the greatest extent possible.
- Policy RE-4.6** **Hazardous material recycling.** We require all recyclable electronic and/or toxic materials to be recycled in accordance with the requirements of the Basel Convention or comparable standard.
- Policy RE-4.7** **Site design and habitat.** We apply the following considerations relative to habitat conservation and mitigation to the County’s review of project site selection and site design:
- Avoid sensitive habitat, including wildlife corridors
 - Where necessary and feasible, conduct mitigation on-site

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- When on-site habitat mitigation is not possible or adequate, establish mitigation off-site in an area designated for habitat conservation

Policy RE-4.8 **Mitigation on public lands.** We encourage mitigation for renewable energy generation facility projects to implement habitat conservation offsets on public lands where suitable habitat is available.

Policy RE-4.9 **Sanctuary areas.** We encourage renewable energy facility developers to design projects in ways that provide sanctuary (i.e., a safe place to nest, breed and/or feed) for native bees, butterflies, and birds where feasible and appropriate, according to expert recommendations.

Policy RE-4.10 **Utility-Oriented Renewable Energy Projects.** Prohibit utility-oriented renewable energy project development on sites that would create adverse impacts on the quality of life or economic development opportunities in existing unincorporated communities. Any exceptions or revisions to the following policy direction would require approval by the Board of Supervisors.

Policy RE-5.1 **Preference for disturbed or degraded sites.** We encourage the siting of renewable energy generation facilities on disturbed or degraded sites in proximity to necessary transmission infrastructure.

Policy RE-5.2 **Private land criteria.** We limit utility-oriented renewable energy generation projects on private land in the unincorporated county to the site-types below (sites must also meet criteria established herein and in the Development Code):

- Private lands adjacent to the federal Development Focus Areas supported by the Board of Supervisors that meet siting criteria and development standards
- Waste Disposal Sites
- Mining Sites (operating and reclaimed)
- Fallow, degraded, and unviable agricultural lands
- Airports (existing and abandoned or adaptively re-used)
- Brownfields
- California Department of Toxic Substance Control Cleanup Program sites
- Resource Conservation and Recovery Act sites
- Sites within or adjacent to electric transmission and utility distribution corridors

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- Industrial zones proven to not conflict with economic development needs
- Other sites proven by a detailed suitability analysis to reflect the significantly disturbed nature or conditions of those listed above

Policy RE-5.3	Collocation of transmission facilities. We collaborate with utilities and renewable energy generation facility developers to encourage collocation of transmission and intertie facilities.
Policy RE-5.4	Utility-oriented standards. We require utility-oriented renewable energy generation facilities to meet a higher standard of evaluation for appropriate site selection due to their size and distance from population centers.
Policy RE-5.5	Military coordination. We coordinate with the Department of Defense on the siting of renewable energy generation facilities to avoid significant impacts on military operations in the county.
Policy RE-5.6	Tribal consultation. We consult Native American tribes early in the site selection process, with joint evaluation of a Phase 1 Cultural Resources Analysis prior to approval of a site for utility-oriented renewable energy generation.
Policy RE-5.7	Scenic and recreation assets. We support renewable energy projects that are compatible with protection of the scenic and recreational assets that define San Bernardino County for its residents and make it a destination for tourists.
Policy RE-5.8	Agricultural lands. We discourage the conversion of productive or viable prime agricultural lands to renewable energy generation facilities.
Policy RE-6.1	Permitting process. We provide a consistent, clear, and timely development permitting process for renewable energy generation facilities.
Policy RE-6.2	Cost and benefit nexus. We establish mechanisms by which the County can restore and maintain the nexus between costs and benefits in renewable energy development.
Policy RE-6.3	Cost and benefit information. We communicate the costs and benefits of investing in energy efficiency retrofits, energy conservation behaviors, and renewable energy systems.
Policy RE-6.4	State renewable energy goal. We support the governor's initiative to obtain 50% of the energy consumed in the state through renewable energy generation sources by 2040.
Policy RE-6.5	Pilot projects. We encourage pilot projects to demonstrate energy efficiency retrofit investments and renewable energy opportunities.

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Policy RE-6.6 **Incentive programs.** We investigate new renewable energy generation incentive programs, such as Community Choice Aggregation, for their appropriateness to our communities.

Policy RE-6.7 **Streamlining.** We induce high volume energy users to develop onsite renewable energy generation systems through streamlining of permit requirements.

5.18.5.4 ENVIRONMENTAL IMPACTS

The applicable thresholds are identified in brackets after the impact statement.

Impact 5.18-8: Implementation of the Countywide Plan would not result in wasteful, inefficient or unnecessary consumption of energy, and would be consistent with the DRECP. Existing and/or proposed facilities would be able to accommodate project-generated utility demands. [Threshold U-8, U-9]

Electricity

The Countywide Plan areas would be served by existing SCE, Bear Valley Electric Service, and City of Needles Electric Department distribution systems. The proposed unincorporated growth would require electrical services totaling an estimated 3,367 GWh/yr (see Table 5.18-15). The total increase in energy demand from 2014 until full buildout in 2040 is 916 GWh/yr.

The average annual growth rates for SCE for the years 2015 to 2028 is 1 percent (CEC 2017a). Using this growth rate, the estimated demand for SCE for 2040 is 167,750 GWh/yr. The total increase in energy demand from 2015 until 2040 is 61,610 GWh/yr. The increase in energy demand related to unincorporated growth is modest compared to overall growth for the SCE service area and will not cause a significant impact.

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Table 5.18-15 2040 Projected Energy Demand in Unincorporated San Bernardino County

Type	Unit	Projected Energy Demand ¹
Southern California Edison		
Residential Electricity	kWh	785,578,737
Commercial Electricity	kWh	525,764,395
Agriculture Electrical	kWh	120,030,573
Industrial Electricity	kWh	1,791,781,052
Transmission & distribution losses	kWh	140,790,592
Total	kWh	3,363,945,349
Bear Valley Electric		
Residential Electricity	kWh	49,086,791
Commercial Electricity	kWh	19,393,797
Industrial Electricity	kWh	87,208
Transmission & distribution losses	kWh	3,159,612
Total	kWh	71,727,408
City of Needles Electric		
Residential Electricity	kWh	375,718
Commercial Electricity	kWh	2,585,850
Transmission & distribution losses	kWh	109,478
Total	kWh	3,071,046
Total for All Providers		3,367,016,395

Source: ICF 2017.

¹ Appendix B includes the methodology and calculations associated with calculating 2040 demands.

In addition, any project would be required to comply with energy efficiency standards set forth by Title 24 of the California Administrative Code, appliance efficiency regulations set forth by Title 20 of the California Administrative Code, CALGreen and policies of the Countywide Plan. Countywide buildout will also be provided with additional sources of electricity from Bear Valley Electric, City of Needles Electric, and renewable energy sources.

Renewable Energy

Forecast Renewable Energy Development

The DRECP includes a forecast of renewable energy capacity in the DRECP Plan Area in 2040. BLM forecasts that 3,887 MW of renewable energy capacity could be developed in the ecoregion subunits in and overlapping San Bernardino County, requiring approximately 59,445 acres. Approximately 67 percent of the generation

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capacity would be large solar facilities, 25 percent large wind facilities, and the remainder distributed generation (solar facilities 20 MW or smaller and supplying power directly to a consumer).

BLM uses the following factors for acreage required per MW of renewable energy facilities: 7.1 acres per MW for solar thermal and solar PV; 40 acres per MW for wind; 5 acres per MW for geothermal; and 7.1 acres per MW for distributed generation. Approximately 65 percent of the acreage required would be for wind facilities.

The development of renewable energy projects on private lands would proceed in line with the Countywide Plan policies in the RECE. This element of the Countywide Plan calls for the implementation of the San Bernardino County Transportation Authority's Greenhouse Gas Emissions Reduction Plan and supports solar energy generation, solar water heating, wind energy, and bioenergy systems that are consistent with the orientation, siting, and environmental compatibility policies of the Countywide Plan. The policies prioritize programs that support cost-effective and universal access to renewable energy and facilitate and encourage onsite accessory renewable energy generation to serve the unincorporated county, with a primary focus on rooftop and parking lot solar energy generation. Additionally, the plan applies standards to the design, siting, and operation of all renewable energy facilities to protect the environment, including sensitive biological resources; air quality; water supply and quality; and cultural, archaeological, paleontological, and scenic resources.

Natural Gas

Any proposed project would be served by existing SCGC and Southwest Gas distribution systems. Countywide buildout would require natural gas service up to 56,292,862 therms/yr (see Table 5.18-16). The total increase in natural gas demand from 2014 until full buildout is 11,285,140 therms/yr, or 1,128 MMcf/d.⁶

As previously stated, total natural gas supplies available to SCGC are forecast to remain constant at 3,775 million cubic feet per day (MMcf/d) from 2020 through 2035. Total natural gas consumption in SCGC's service area for average temperature years is forecast to be 2,313 MMcf/d in 2035 (CGEU 2018). SCGS will have a residual supply of 1,462 MMcf/d in 2035. Assuming gas supply remains constant to 2040, and seeing that gas consumption is projected to continually decrease from 2018 to 2035, SCGC would have enough residual supply in 2040 to accommodate Countywide buildout. Furthermore, James Chuang, Senior Environmental Specialist at SCGC, confirmed that in order to meet gas demands in the Valley and East Desert regions at Countywide Plan buildout, SCGC will not require additional gas supplies or additional transmission lines (SCGC 2018).

⁶ One therm is equivalent 99.9761 cubic feet of natural gas.

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Table 5.18-16 2040 Projected Natural Gas Demand in Unincorporated San Bernardino County

Type	Unit	Projected Natural Gas Demand ¹
Southern California Gas Company		
Residential Natural Gas	therms	28,250,346
Commercial Natural Gas	therms	14,190,619
Industrial Natural Gas	therms	3,820,760
Total	therms	46,261,725
Southwest Gas		
Residential Natural Gas	therms	6,755,645
Commercial Natural Gas	therms	1,522,010
Industrial Natural Gas	therms	469,526
Water Pumping	therms	169
Electricity Generation	therms	534,001
Other	therms	749,786
Total	therms	10,031,137
Total for All Providers		56,292,862 45,007,722

Source: ICF 2017.

¹ PEIR Appendix B includes the methodology and calculations associated with calculating 2040 demands.

Level of Significance before Mitigation: With implementation of RR USS-15 through RR USS-18, and Countywide Plan policies H-1.5, D/H-1.4, IU-5.1, RC-1.9, RE-1.1 through RE-1.4, RE-2.1 through RE-2.6, RE-3.1 through RE-3.7, RE-4.1 through RE-4.9, RE-5.1 through RE-5.8, and RE-6.1 through RE-6.7, Impact 5.18-8 would be less than significant.

5.18.5.5 CUMULATIVE IMPACTS

The area considered for cumulative impacts to electricity and natural gas supplies and facilities is SCE and SGCG's service areas. Forecast total electricity and natural gas supplies for the service areas are discussed under Impact 5.18-8 above. Incorporated growth would increase electricity and natural gas demands.

The forecasts provided by CEC are used in several applications, including the California Public Utility Commission's resource planning. The Commission has identified the Integrated Energy Policy Report process as the appropriate venue for considering issues of load forecasting, resource assessment, and scenario analyses, to determine the appropriate level and ranges of resource needs for load serving entities in California. The final forecasts will also be an input to the California Independent System Operator Transmission Planning Process as well as controlled grid studies and to electricity supply-demand assessments (resource adequacy) (CEC 2017a).

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It is anticipated that electricity and natural gas demands by most incorporated growth would be accounted for in the CEC 2017 forecast and the CGEU 2018 forecast. Other projects would be subject to independent CEQA review, including analysis of impacts to electricity and natural gas supplies. Implementation of all feasible mitigation measures would be required for any significant impacts identified. Cumulative impacts would be less than significant, and Countywide Plan impacts would not be cumulatively considerable.

5.18.5.6 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

With the implementation of RR USS-15 through RR USS-18, and General Plan policies, Impact 5.18-8 would be less than significant.

5.18.5.7 MITIGATION MEASURES

No mitigation is required.

5.18.5.8 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Impacts would be less than significant.

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