3.19 UTILITIES AND SERVICE SYSTEMS

This section of the Program Environmental Impact Report (PEIR) describes the existing utilities and service systems in the SCAG region, identifies the regulatory framework with respect to laws and regulations that affect utilities and service systems, and analyzes the potential impacts of the Connect SoCal Plan ("Connect SoCal"; "Plan"). In addition, this PEIR provides regional-scale mitigation measures as well as project-level mitigation measures to be considered by lead agencies for subsequent, site-specific environmental review to reduce identified impacts as appropriate and feasible.

3.19.1 DEFINITIONS

To provide a context for analysis, definitions of terms used in the regulatory framework, characterization of baseline conditions, and impact analysis for utilities and service systems are provided below.

Nonhazardous Municipal Solid Waste: More commonly known as trash or garbage—consists of everyday items that are used and then thrown away, such as product packaging, grass clippings, furniture, clothing, bottles, food scraps, newspapers, appliances, paint, and batteries. This comes from homes, schools, hospitals, and businesses.

Regional Water Quality Control Board (RWQCB): There are nine RWQCBs in California. The RWQCBs protect ground and surface water quality and are responsible for implementing Water Quality Control Plans.[1]

Sanitary Landfill: Sanitary landfills are sites where waste is isolated from the environment until it is safe. It is considered safe when it has completely degraded biologically, chemically and physically.

Septic Tank: An underground vessel for treating wastewater from a single dwelling or building by a combination of settling and anaerobic digestion. Effluent is usually disposed of through a dispersal system which consists of one or a combination of leach fields, seepage pits, and/or subsurface drip dispersal system. Settled solids in septic tank are pumped out periodically and hauled to a treatment facility for disposal.

Storm Water and Stormwater: In layman's terms, stormwater is defined as an abnormal amount of surface water due to a heavy rain or snowstorm. The term "stormwater," instead of "storm water," is used when employed by the cited source of information. In all other instances, "stormwater" is used,

1 Water Education Foundation. *Regional Water Quality Control Boards in California.* Available online at: https://www.watereducation.org/aquapedia/regional-water-quality-control-boards-california, accessed September 4, 2019.

consistent with the provision of Appendix G of the *CEQA Guidelines* and as defined by the U.S. EPA. Stormwater runoff is generated when precipitation from rain and snowmelt events flows over land or impervious surfaces and does not percolate into the ground. As the runoff flows over the land or impervious surfaces (paved streets, parking lots, and building rooftops), it accumulates debris, chemicals, sediment, or other pollutants that could adversely affect water quality if the runoff is discharged untreated.[2]

Tier 1 Onsite Wastewater Treatment System (OWTS): Low Risk New or Replacement OWTS (Policy Section 7 & 8) applies to new or replacement OWTS that comply with conservative siting and design standards describe in the OWTS Policy. Tier 1 applies when a Local Agency Management Program (LAMP) has not been approved by the Regional Water Board. Maximum flow rate is 3,500 gallons per day (gpd).[3]

Tier 2 Onsite Wastewater Treatment System (OWTS): Local Agency Management Program (LAMP) for New or Replacement OWTS (OWTS Policy Section 9) applies to new or replacement OWTS that comply with the siting and design standards in an approved LAMP. LAMPs are developed by Local Agencies based on local conditions; siting and design standards may differ from Tier 1 standards. Maximum flow rate is 10,000 gpd.[4]

Tier 3 Onsite Wastewater Treatment System: Advanced Protection Management Program (OWTS Policy Section 10). Applies to OWTS located near impaired surface water bodies that are subject to a Total Maximum Daily Load (TMDL) implementation plan, a special provision contained in a LAMP, or is located within 600 feet of a water body listed on OWTS Attachment 2. Supplemental treatment requirements may apply to a Tier 3 system. Maximum flow rate is 10,000 gpd.[5]

Water Supply System: A water supply system is a system for the collection, transmission, treatment, storage and distribution of water from source to consumers, for example, homes, commercial establishments, industry, irrigation facilities and public agencies for water-related activities (firefighting, street flushing, and so forth).

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2 U.S. Environmental Protection Agency. *NPDES Stormwater Program*. Available online at: https://www.epa.gov/npdes/npdes-stormwater-program, accessed September 4, 2019.

3 California Water Boards. *Fact Sheet: Water Quality Control Policy for Siting, Design, Operation and Maintenance of Onsite Wastewater Treatment Systems (OWTS Policy)*. Available online at: https://www.waterboards.ca.gov/water_issues/programs/owts/docs/owts_fact_sheet_20180823.pdf, accessed September 4, 2019.

4 Ibid.

5 Ibid.

Wastewater: The spent or used water of a community or industry that contains dissolved and suspended matter.

3.19.1 SOLID WASTE

3.19.1.1 ENVIRONMENTAL SETTING

3.19.1.1.1 Existing Conditions

The majority of solid waste within the SCAG region is disposed of at landfills. Due to increased recycling and waste reduction initiatives, solid waste within the SCAG region has declined in recent years. CalRecycle's Solid Waste Information System (SWIS) tracks the total tonnage of solid waste disposed in 2018 (the most recent year for which data is available), by county. As shown below, in **Table 3.19.1-1, Solid Waste Tonnage within the SCAG Region (2018)**, the total amount of solid waste disposed of in the SCAG region was 19,550,712 tons in 2018.[1] This number includes waste trucked into the region from counties outside the SCAG boundaries.

Table 3.19.1-1
Solid Waste Tonnage within the SCAG Region (2018)

County	Total Tonnage
Imperial	305,522
Los Angeles	5,478,772
Orange	5,054,229
Riverside	4,899,025
San Bernardino	1,908,462
Ventura	1,908,462
Total	**19,550,712**

Source:
CalRecycle. 2019. Landfill Tonnage Reports. Available online at: https://www2.calrecycle.ca.gov/LandfillTipFees/, accessed September 5, 2019.

Solid Waste Management Departments

Landfills

A landfill is a waste management unit at which waste is discharged in or on land for disposal. Landfills do not include surface impoundment, waste pile, land treatment unit, injection well, or soil

1 This is approximately half the total solid waste disposed of in California in 2018.

amendments.[2] Landfills that receive solid waste in the SCAG region are listed in **Table 3.19.1-2** below.

Table 3.19.1-2
Active Solid Waste Landfills by SCAG County

County	Name
Imperial	Calexico Solid Waste Site
Imperial	Niland Solid Waste Site
Imperial	Salton City Solid Waste Site
Imperial	Imperial Landfill
Imperial	Monofill Facility
Imperial	Mesquite Regional Landfill
Los Angeles	Scholl Canyon Landfill
Los Angeles	Burbank Landfill Site No. 3
Los Angeles	Lancaster Landfill and Recycling Center
Los Angeles	Chiquita Canyon Sanitary Landfill
Los Angeles	Calabasas Landfill
Los Angeles	Pebbly Beach (Avalon) Disposal Site
Los Angeles	San Clemente Island Landfill
Los Angeles	ABC Waste Management Unpermitted D.S.
Los Angeles	Sunshine Canyon City/County Landfill
Los Angeles	Antelope Valley Public Landfill
Los Angeles	Savage Canyon Landfill
Orange	Prima Deshecha Sanitary Landfill
Orange	Olinda Alpha Sanitary Landfill
Orange	Frank R. Bowerman Sanitary LF
Riverside	Badlands Sanitary Landfill
Riverside	Lamb Canyon Sanitary Landfill
Riverside	Oasis Sanitary Landfill
Riverside	Desert Center Landfill
Riverside	Blythe Sanitary Landfill
Riverside	Mecca Landfill II
Riverside	El Sobrante Landfill
Riverside	Philadelphia Recycling Mine
San Bernardino	California Street Landfill
San Bernardino	Oro Grande Kiln Waste Dust Dump
San Bernardino	Victorville Sanitary Landfill
San Bernardino	Barstow Sanitary Landfill
San Bernardino	Mid-Valley Sanitary Landfill

2 California Department of Resources Recycling and Recovery (CalRecycle). *Permitting Landfills and Disposal Sites*. Available online at: https://www.calrecycle.ca.gov/swfacilities/permitting/facilitytype/landfill#Definitions, accessed January 14, 2019.

County	Name
San Bernardino	Landers Sanitary Landfill
San Bernardino	USMC - 29 Palms Disposal Facility
San Bernardino	Fort Irwin Sanitary Landfill
San Bernardino	Mitsubishi Cement Plant Cushenbury L.F.
San Bernardino	San Timoteo Sanitary Landfill
Ventura	Toland Road Landfill
Ventura	Simi Valley Landfill & Recycling Center
Total	**40**

Source: CalRecycle. 2019. SWIS Facility/ Site Search. Available online at: https://www2.calrecycle.ca.gov/SWFacilities/Directory/, accessed September 5, 2019.

Transfer Stations

Similar to the landfills, transfer stations accept trash for disposal. There are six county operated transfer stations. These stations accept waste of various types including general refuse and wood and green waste depending on size with flat and volume rates applying. These facilities collect material that is then "transferred" to be recycled or to the nearest landfill site. While not as all-inclusive as a landfill, transfer stations provide a broad collection opportunity for local residents.

Table 3.19.1-3, Active Transfer Stations by SCAG County, identifies active transfer stations within the region.

Table 3.19.1-3
Active Transfer Stations by SCAG County

County	Number of Active Transfer Stations
Imperial	5
Los Angeles	141
Orange	56
Riverside	49
San Bernardino	36
Ventura	11
Total	**298**

Source: CalRecycle. 2018. SWIS Facility/ Site Search. Available online at: https://www2.calrecycle.ca.gov/SWFacilities/Directory/, accessed January 14, 2018.

Waste Diversion and Recycling

The California Integrated Waste Management Act of 1989 (Chapter 1095, Statutes of 1989) requires every city and county, as part of the Countywide Integrated Waste Management Plan, to prepare a Source Reduction and Recycling Element that identifies how each jurisdiction would meet the mandatory state waste diversion goals of 50 percent of all solid waste through source reduction, recycling, and composting activities. The 50 percent diversion requirement is measured in terms of per-capita disposal expressed as pounds per person per day. CalRecycle calculates per-capita disposal for all counties and jurisdictions to monitor the success of program implementation, actual recycling, and other diversion programs.[3]

3.19.1.2 REGULATORY FRAMEWORK

3.19.1.2.1 Federal

Resource Conservation and Recovery Act of 1976

Subtitle D of the Resource Conservation and Recovery Act of 1976 (RCRA) (42 USC Section 6901 *et seq.*), focuses on state and local governments as the primary planning, regulating, and implementing entities for the management of non-hazardous solid waste, such as household garbage and nonhazardous industrial solid waste.[4] To promote the use of safer units for solid waste disposal, Subtitle D provides regulations for the generation, transportation, and treatment, storage, or disposal of hazardous wastes. EPA developed federal criteria for the proper design and operation of municipal solid waste landfills and other solid waste disposal facilities, but state and local governments are the primary planning, permitting, regulating, implementing, and enforcement agencies for management and disposal subject to approval by EPA.[5] EPA approved the State of California's program, a joint effort of the CIWMB, SWRCB, RWQCBs, and LEAs, on October 7, 1993.

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3 CalRecycle. 2018. *Goal Measurement*. November. Available online at: https://www.calrecycle.ca.gov/LGCentral/GoalMeasure/, accessed January 14, 2018.

4 U.S. Environmental Protection Agency. 2019. *Summary of the Resource Conservation and Recovery Act*. Available online at: https://www.epa.gov/laws-regulations/summary-resource-conservation-and-recovery-act, accessed August 28, 2019.

5 U.S. Environmental Protection Agency. 2019. *Non-hazardous Waste*. Available online at: https://www.epa.gov/rcra/resource-conservation-and-recovery-act-rcra-regulations#nonhaz, accessed August 28, 2019.

3.19.1.2.2 State

California Integrated Waste Management Act

As many of the landfills in the state are approaching capacity and the siting of new landfills becomes increasingly difficult, the need for source reduction, recycling, and composting has become readily apparent. In response to this increasing solid waste problem, in September 1989 the state assembly passed Assembly Bill 939, known as the California Integrated Waste Management Act. This statute emphasizes conservation of natural resources through the reduction, recycling and reuse of solid waste. Assembly Bill 939 required cities and counties in the state to divert 25 percent of their solid waste stream from landfills by 1995 and 50 percent by year 2000, or face potential fines of millions of dollars per year. In 2008, the California Integrated Waste Management Act also requires that all cities conduct a Solid Waste Generation Study and prepare a Source Reduction Recycling Element.

AB 939 established CalRecycle. The purpose was to direct attention to the increasing waste stream and decreasing landfill capacity, and to mandate a reduction of waste being disposed. All jurisdictions were required to meet diversion goals of 25 percent by 1995 and 50 percent by the year 2000. A disposal reporting system was established with CalRecycle oversight, facility and program planning was required, and cities and counties began to address waste problems.[6]

AB 341 (Chapter 476, Statutes of 2011) established a statewide goal to reduce, recycle, or compost at least 75 percent of solid waste by 2020. AB 341 also requires local jurisdictions to implement commercial recycling programs to divert recyclable material away from landfills and required commercial generators and multi-family residences to arrange for recycling services starting in 2012.[7]

AB 2020 The California Bottle Bill

AB 2020 (Public Resources Code Section 14500 *et seq.*) took effect in 1987 as litter prevention legislation. At present, the minimum refund value established for each type of eligible beverage container is 5 cents for each container under 24 ounces and 10 cents for each container 24 ounces or greater.[8]

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6 CalRecycle. 2018. *History of California Solid Waste Law, 1985-1989.* Available online at: https://www.calrecycle.ca.gov/laws/legislation/calhist/1985to1989, accessed August 28, 2019.

7 CalRecycle. 2019. *Mandatory Commercial Recycling.* Available online at: https://www.calrecycle.ca.gov/recycle/commercial, accessed August 28, 2019.

8 California Legislature. 2017. *An Overview of California's Beverage Container Recycling (Bottle Bill) Program*.

SB 20 Electronic Waste "E-Waste" Recycling

SB 20 (Public Resources Code Section 42460 *et seq.*) was signed in September of 2003; it establishes a system to recycle computers, TVs, and other video display devices (known as electronic waste) when they reach their end-of-life. Fees are collected from consumers at point of purchase to fund recycling programs.[9]

AB 2901 – Cell Phone Recycling

AB 2901 Public Resources Code Section 42490 *et seq.* was signed into law on September 29, 2004. It requires all cell phone retailers to take back used cell phones for recycling at no charge to the customer.[10]

AB 2449 and SB 270 - Plastic Bag Recycling

Adopted in 2006, AB 2449 (Chapter 845, Statutes of 2006) requires all California grocery stores to take back and recycle plastic grocery bags. The bill also requires retailers to provide consumers with a bag reuse opportunity by providing reusable bags which can be purchased and used in lieu of disposable ones.[11]

Many cities and counties have adopted plastic bag ordinances. SB 270 of 2014 (Chapter 850, Statutes of 2014) established a statewide prohibition on the sale or distribution of single-use carryout plastic bags in grocery stores and pharmacies, convenience food stores, and food marts. Retailers must charge customers at least 10 cents to buy a recycled paper bag or reusable grocery bag.[12] A referendum to repeal this law failed in the November 2016 election.

Solid Waste: Diversion Rule (AB 341)

Under commercial recycling law (Chapter 476, Statutes of 2011), Assembly Bill (AB) 341, directed CalRecycle to develop and adopt regulations for mandatory commercial recycling. The final regulation was approved by the Office of Administrative Law on May 7, 2012. AB 341 declared a policy goal of the state that not less than 75 percent of solid waste generated be source reduced, recycled, or composted by the year 2020.[13]

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9 CalRecycle. 2019. *Electronic Waste Recycling Act of 2003*. Available online at: https://www.calrecycle.ca.gov/electronics/act2003, accessed August 28, 2019.

10 California Legislative Information. *Assembly Bill No. 2901*.

11 California Legislative Information. *Assembly Bill No. 2449*.

12 California Legislative Information. *Senate Bill No. 270*.

13 California Legislative Information. *Assembly Bill No. 341*.

Assembly Bill 2675

Adopted in 2014, AB 2675 (Chapter 617, Statues of 2014) requires each state agency to ensure that at least 75% of reportable purchases are recycled products on and after January 1, 2020 with exception to paint, antifreeze, and tires.[14]

Assembly Bill 1045

Adopted in 2015, AB 1045 (Chapter 596, Statutes of 2015) requires the California Environmental Protection Agency (Cal EPA) in coordination with CalRecycle, the State Water Resources Control Board, CARB, and the Department of Food and Agriculture to develop and implement policies to aid in diverting organic waste from landfills with the goal of reducing at least 5 million metric tons of GHG emissions per year.[15]

Senate Bill 1383

Adopted in 2016, SB 1383 (Chapter 395, Statutes of 2016) requires the California Air Resources Board (CARB) to approve and implement a comprehensive strategy to reduce short-living GHG pollutants in organic waste landfills to achieve a 40% reduction in methane, 40% reduction in hydrofluorocarbon gases, and a 50% reduction in anthropogenic black carbon by 50% below 2013 levels by 2030. SB 1383 also requires CARB, in consultation with the Department of Food and Agriculture, to adopt regulations to reduce methane emissions from livestock and dairy manure management operations.[16]

In response to SB 1383, CalRecycle developed the Short-Lived Climate Pollutants: Organic Waste Reductions strategy, which proposes a series of strategies and requirements to reduce methane emissions from organic waste. Strategies include maintaining a list of food recovery organizations, public outreach, and specific bin requirements.[17]

Lead-Acid Battery Recycling Act of 2016 (AB 2153)

Adopted in 2016, AB 2153 (Chapter 666, Statues of 2016) updates the current law regarding the disposing of a lead-acid battery and creates numerous requirements related to lead-acid batteries. Some of these requirements include: starting April 2017, a $1 fee on both consumers and manufacturers of lead-acid

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14 California Legislative Information. 2014. *Assembly Bill No. 2675*.

15 California Legislative Information. 2015. *Assembly Bill No. 1045*.

16 California Legislative Information. 2016. *Senate Bill No. 1383*.

17 CalRecycle. 2019. *Short-Lived Climate Pollutants (SLCP): Organic Waste Reductions*. Available online at: https://www.cacities.org/Resources-Documents/Policy-Advocacy-Section/Regulations/PropTextJune2019-(1).aspx, accessed October 31, 2019.

batteries; 2022, the fee to consumers will increase to $2 and the fee to manufacturers will be eliminated; creates the Lead-Acid Battery Clean-Up Fund; and require dealers to charge consumers a refundable deposit for new lead-acid batteries.[18]

Assembly Bill 1250

Adopted in 2016, AB 1250 (Chapter 861, Statues of 2016) requires plastic beverage containers subject to the California Redemption Value to report to CalRecycle the amount of virgin plastic and postconsumer recycled plastic used by the manufacturer for plastic CRV-eligible beverages solid within the state.[19]

Title 14, California Code of Regulations, Division 7

CalRecycle regulations pertaining to nonhazardous waste management in California include minimum standards for solid waste handling and disposal; regulatory requirements for composting operations; standards for handling and disposal of asbestos containing waste; resource conservation programs; enforcement of solid waste standards and administration of solid waste facility permits; permitting of waste tire facilities and waste tire hauler registration; special waste standards; used oil recycling program; electronic waste recovery and recycling; planning guidelines and procedures for preparing, revising, and amending countywide IWMP; and solid waste cleanup program.[20]

Title 27, California Code of Regulations, Environmental Protection, Division 2, Solid Waste

CalRecycle and the SWRCB jointly issue regulations pertaining to waste disposal on land, including criteria for all waste management units, facilities and disposal sites; documentation and reporting; enforcement, financial assurance; and special treatment, storage, and disposal units.[21]

2016 California Green Building Standard Code

The California Green Building Standards Code (California Code of Regulations, Title 24, Part 11), commonly referred to as the CALGreen Code, is a statewide mandatory construction code that was developed and adopted by the California Building Standards Commission and the California Department of Housing and Community Development in 2008. The purpose of this code is to improve public health, safety and general welfare by enhancing the design and construction of buildings through the use of

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18 California Legislative Information. 2016. *Assembly Bill No, 2153.*

19 CalReycle. *History of California Solid Waste Law, 2015-2019.*

20 California Code of Regulations. *Title 14. Natural Resources – Division 7.*

21 California Code of Regulations. 2019. *Title 27 Environmental Protection, Division 2, Solid Waste*

building concepts having a reduced negative impact or positive environmental impact and encouraging sustainable construction practices including recycling of construction (diversion of 50 percent) and other waste streams.[22]

The California Universal Waste Law

Special laws and regulations pertain to disposal of universal waste. (22 Cal. Code Regs. § 66260 *et seq.*) Examples of universal wastes are batteries, fluorescent tubes, and some electronic devices, that contain mercury, lead, cadmium, copper, and other substances hazardous to humans and the environment. Universal waste cannot be disposed in solid waste landfills. Rather, universal wastes can be recycled. Recycling requirements are less stringent than those of other hazardous wastes to encourage recycling and recovery of valuable metals.

California Solid Waste Reuse and Recycling Act

The California Solid Waste Reuse and Recycling Act of 1991 (Pub. Res. Code §§ 42900-42901) was enacted to assist local jurisdictions with accomplishing the goals of AB 939. In accordance with AB 2176, any development project that has submitted an application for a building permit must include adequate, accessible areas for the collection and loading of recyclable materials. Furthermore, the areas to be utilized must be adequate in capacity, number, and distribution to serve the proposed project. Moreover, the collection areas are to be located as close to existing exterior refuse collection areas as possible. [23]

3.19.1.2.3 Local

Countywide Integrated Waste Management Plan

Counties are required to prepare and submit to CalRecycle an integrated waste management plan which includes all Source Reduction and Recycling Element (SRREs), all Household Hazardous Waste Element (HHWEs), a Countywide Siting Element (CSE), all Non-Disposal Facility Elements (NDFEs), all applicable Regional SRREs, HHWEs. Public Resources Code Section 41751 requires that a countywide integrated waste management plan include a summary of significant waste management problems facing the county or city. The plan is required to provide an overview of the specific steps that will be taken by local agencies, acting independently and in concert, to achieve the purposes of this division. The plan is required to contain a statement of the goals and objectives set forth by the countywide task force.[24]

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22 California Building Standards Commission. 2017. *2016 California Green Building Standards Code.*,

23 California Legislative Information. *Article 1. Short Title and Findings and Declarations [42900-42901].*

24 California Legislative Information. *Article 1. Plan Preparation [41750-41751], Section 41751.*

Source Reduction and Recycling Element

The SRRE consists of the following components: waste characterization, source reduction, recycling, composting, solid waste facility capacity, education and public information, funding, special waste and integration. Each city and county is required to prepare, adopt, and submit to the California Department of Resources Recycling and Recovery (CalRecycle) an SRRE, which includes a program for management of solid waste generated within the respective local jurisdiction. The SRREs must include an implementation schedule for the proposed implementation of source reduction, recycling, and composting programs. In addition, the plan identifies the amount of landfill and transformation capacity that will be needed for solid waste which cannot be reduced, recycled, or composted.[25]

Household Hazardous Waste Element

Cities and counties are required to prepare, adopt, and submit to CalRecycle, a HHWE that identifies a program for the safe collection, recycling, treatment, and disposal of hazardous wastes that are generated by households. The HHWE specifies how household hazardous wastes generated by households within the jurisdiction must be collected, treated, and disposed of.[26]

Non-Disposal Facility Element (NDFE)

Cities and counties are required to prepare, adopt and submit to CalRecycle, an NDFE that includes a description of new facilities and expansion of existing facilities, and all solid waste facility expansions (except disposal and transformation facilities) that recover for reuse at least 5 percent of the total volume. The NDFE are to be consistent with the implementation of a local jurisdiction's SRRE. Each jurisdiction must also describe transfer stations located within and outside of the jurisdiction, which recover less than 5 percent of the material received.[27]

Countywide Siting Element (CSE)

Counties are required to prepare a CSE that describes areas that may be used for developing new disposal facilities. The element also provides an estimate of the total permitted disposal capacity needed

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25 CalRecycle. 2018. *Source Reduction and Recycling Element Adequacy*. Available online at: https://www.calrecycle.ca.gov/LGCentral/Library/Policy/CIWMPEnforce/Part1/SRREAdq/, accessed August 28, 2019.

26 CalRecycle. 2018. *Household Hazardous Waste Element (HHWE) Adequacy*. Available online at: https://www.calrecycle.ca.gov/LGCentral/Library/Policy/CIWMPEnforce/Part1/HWWEAdq/, accessed August 28, 2019.

27 CalRecycle. 2018. *Nondisposal Facility Element Adequacy.* Available online at: https://www.calrecycle.ca.gov/LGCentral/Library/Policy/CIWMPEnforce/Part1/NDFEAdq/, accessed August 28, 2019.

for a 15-year period if counties determine that their existing disposal capacity will be exhausted within 15 years or if additional capacity is desired (PRC Sections 41700-41721.5).[28]

General Plans

Local policies related to utilities and service systems are established in each jurisdiction's general plan. In general, jurisdictions have policies in place that state that utility and service systems must be provided at the same time (or in advance of) need. In addition to these general policies, jurisdictions may have more specific policies tailored to performance objectives including solid waste services. For further guidance regarding solid waste, some jurisdictions also produce an Integrated Waste Management Plan.

3.19.1.3 ENVIRONMENTAL IMPACTS

3.19.1.3.1 Thresholds of Significance

For the purposes of this PEIR, SCAG has determined that adoption and/or implementation of the Plan could result in significant adverse impacts to utilities if the Plan would:

- Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals;
- Comply with federal, state, and local management and reduction statutes and regulations related to solid waste.

3.19.1.3.2 Methodology

The methodology for determining the significance of impacts utilities and service systems compares existing conditions to the expected future use of landfills with the Plan. Factors such as existing capacity and expected demand (based on population and land use patterns) are reviewed at the regional level. The criteria above were applied to compare current conditions to future 2045 Plan conditions.

Implementation of Connect SoCal would affect the use of utility and service systems in the SCAG region. The analysis of these impacts is programmatic at the regional level. With regard to solid waste, the Plan's potential to exceed capacity of local infrastructure as well as compliance with applicable statutes and regulations were analyzed to determine whether or not there will be a significant impact.

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28 CalRecycle. 2018. *Countywide Siting Element Adequacy*. Available online at: https://www.calrecycle.ca.gov/LGCentral/Library/Policy/CIWMPEnforce/Part1/CSEAdq/, accessed August 28, 2019.

The mitigation measures in the PEIR are divided into two categories: SCAG mitigation and project-level mitigation measures. SCAG mitigation measures shall be implemented by SCAG over the lifetime of the Plan. For projects proposing to streamline environmental review pursuant to SB 375, SB 743 or SB 226 (as described in **Section 1.0 Introduction**), or for projects otherwise tiering off this PEIR, the project-level mitigation measures described below (or comparable measures) can and should be considered and implemented by Lead Agencies and Project Sponsors during the subsequent, project- or site-specific environmental reviews for transportation and development projects as applicable and feasible. However, SCAG cannot require implementing agencies to adopt mitigation, and it is ultimately the responsibility of the implementing agency to determine and adopt project-specific mitigation.

3.19.1.3.3 Impacts and Mitigation Measures

Impact USSW-1 **Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals**

Impact USSW-2 **Comply with federal, state, and local management and reduction statutes and regulations related to solid waste.**

Significant and Unavoidable – Mitigation Required.

Many of the transportation projects within the Plan have the potential to generate a substantial amount of solid waste during construction through grading and excavation activities, as well as debris resulting from removal of structures. Construction of development projects anticipated to occur during implementation of the Plan, would generate similar debris. Construction debris could be recycled or used as fill at other projects (clean dirt) or transported to the nearest landfill site and disposed of appropriately.

Although there are 40 landfills that serve the SCAG region **(Table 3.19.1-2, Active Solid Waste Landfills by SCAG County)**, the lifetime of many of these landfills does not extend out 25 years. The total population is expected to grow by approximately 3.2 million across the SCAG region by 2045 resulting in substantial generation of solid waste (**Table 3.14-8, 2019-2045 Population, Households, and Employment Projections in the SCAG Region**). CalRecycle estimates that the average resident in California disposes of 5.2 pounds of trash per day and the average employee disposes of 11.9 pounds of trash per day, as of 2017. From 1989 to 2012, solid waste generation per employee and resident in California was reduced by approximately half in large part due to compliance with AB 939.[29] AB 341 requires 75 percent diversion

29 CalRecycle. 2019. California Statewide per Resident, per Employee, and Total Disposed Since 1989. http://www.calrecycle.ca.gov/lgcentral/goalmeasure/disposalrate/graphs/disposal.htm, accessed September 5, 2019.

by 2020 as compared to 2000.[30] Because 2017 solid waste generation already reflects some reductions from AB 341 (which was implemented in 2012), an 18 percent reduction from the 2017 number was assumed for future years. This equates to approximately 4.2 pounds of trash per day for residences and 9.7 pounds of trash per day for employees in 2045. Because people both live and work in the region, calculating waste for total residents and total employees likely overestimates waste generation.

These solid waste generation rates were used to calculate the solid waste generated in 2045. As discussed above, solid waste generation per capita had been decreasing steadily each year, until 2013 when they began to rise again. Despite recent increases, it is expected that solid waste generation will return to a decreasing trend in the future due to sustainable policies and practices. As shown in **Table 3.19.1-4, Solid Waste Generated in the SCAG Region,** assuming solid waste generation for both residents and employees according to the factors discussed above, the waste generated per day in the SCAG region under the Plan in 2045 could be up to 96,001 tons per day as compared to 89,014 tons per day in 2019.[31] However, as noted above, because the calculation is for residents and employees likely there is some double counting in the calculated numbers shown in the table.

30 AB 341 requires a 75% reduction by 2020.

31 In order to estimate the amount of waste generated by residents and employees in 2019 and 2045, it was assumed that an even percentage of waste has been reduced from 2012 to 2020 to meet the AB 341 requirement. Therefore, each year represents a reduction of 6.25% (50% / 8 years = 6.25%/year). Based on this assumption, 2017's estimated waste stream will have already met 31.25% of the required reduction (6.25%/year x 5 years = 31.25%). From 2017 to 2019, an additional 12.5% of waste would be reduced (6.25%/year x 2 years = 12.5%). As a result, 2017 residential and employment per capita waste generation is reduced by approximately 12.5%, resulting in a 2019 residential waste generation of 4.55 lbs/day and an employment waste generation of 10.4 lbs/day. From 2019 to 2020, an additional 6.25% of waste would be reduced (18.75% reduction from 2017), resulting in a 2020 residential waste generation of 4.2 lbs/day and an employment waste generation of 9.7 lbs/day.

Table 3.19.1-4
Solid Waste Generated in the SCAG Region

Year	Number of People	Solid Waste Generation Rate (lbs/day) [a]	Solid Waste Generated (tons/day)
Population			
2019	19,339,700	4.55	43,998
2045	22,507,200	4.2	47,265
Employment			
2019	8,657,000	10.4	45,016
2045	10,048,700	9.7	48,736
Population and Employment			
2019 Total			**89,014**
2045 Total			**96,001**

a California Statewide per Resident, per Employee, and Total Disposed 1989-2017. http://www.calrecycle.ca.gov/lgcentral/goalmeasure/disposalrate/graphs/disposal.htm, accessed September 5, 2019 Assumes an even reduction in solid waste from 2012 to 2020. This table overestimates waste generated as people both live and work within the region.

Source: SCAG modeling, 2019; Impact Sciences, 2019.

The maximum daily disposal for the 40 landfills in the SCAG region is calculated to be 152,155 tons/day as of 2019. However, only 18 of the landfills are currently anticipated to be operational in 2045 with a combined daily disposal of 61,459 tons/day.[32] Therefore, the anticipated solid waste generated could exceed the projected landfill capacity resulting in a significant impact. Mitigation is required.

Plan projects would be required to comply with federal, state, and local statues and regulations related to solid waste, including county and city general plans. Local jurisdictions also have goals and policies for recycling and diversion of solid waste to ensure compliance with the California Integrated Waste Management Act (AB 939), the California Solid Waste Reuse and Recycling Act, and the Solid Waste Diversion Rule (AB 341). Local governments submit an annual report to CalRecycle on the implementation of waste diversion plans to comply with their respective per capita disposal targets. CalRecycle reviews each local government's progress in implementing its unique diversion program and progress in sustaining or achieving compliance. CalRecycle may refer some local governments for a compliance evaluation review, although the number of local governments referred is generally less than 1 percent. If a more thorough analysis reveals a jurisdiction is not meeting the "good faith" standard for implementing its diversion programs or for reaching per capita disposal targets, CalRecycle will issue a

32 CalRecycle. 2019. SWIS Facility/Site Search. Available online at: https://www2.calrecycle.ca.gov/swfacilities/Directory/13-AA-0004/Index, accessed September 5, 2019.

compliance order. If the jurisdiction fails to fulfill its implementation plan to correct the program deficiencies, then the jurisdiction will be subject to penalties.

There are also multiple additional laws aimed at reducing solid waste in California including, AB 1826 which sought to greatly reduce the amount of organic material deposited into landfills by further mandating waste recycling services for organic material. At the beginning of 2016, local jurisdictions were required under AB 1826 to implement an organic waste recycling program and measure and monitor their efforts. Also, Section 5.408 "Construction Waste Reduction, Disposal and Recycling" of the 2016 California Green Building Standards code (CalGreen) requires all new construction and demolition projects to develop a Construction Waste Management Plan which recycles or salvages a minimum of 65% of non-hazardous construction and demolition waste.

Transportation projects contained in the Plan and development projects anticipated to occur under the Plan would be required to comply with AB 341, as well as the additional laws sited above which would further reduce anticipated solid waste generation. However, due to the volume of solid waste debris expected to be generated with implementation of the Plan and lack of identified landfill capacity, impacts would be significant requiring mitigation measures.

Mitigation Measures

SCAG Mitigation Measures

SMM USSW-1: During the planning, design, and project-level CEQA review process for individual development projects, SCAG shall coordinate with waste management agencies and the appropriate local and regional jurisdictions to facilitate the development of measures and to encourage diversion of solid waste such as recycling and composting programs, as needed. This includes discouraging siting of new landfills unless all other waste reduction and prevention actions have been fully explored to minimize impacts to neighborhoods.

SMM USSW-2: SCAG shall coordinate with waste management agencies, and the appropriate local and regional jurisdictions, measures to facilitate and encourage diversion of solid waste such as recycling and composting programs.

Project Level Mitigation Measures

PMM USSW-2: In accordance with provisions of sections 15091(a)(2) and 15126.4(a)(1)(B) of the *State CEQA Guidelines*, a Lead Agency for a project can and should consider mitigation measures to reduce the generation of solid waste, as applicable and feasible. Such measures may include the following or other comparable measures identified by the Lead Agency:

Integrate green building measures consistent with CALGreen (California Building Code Title 24) into project design including, but not limited to the following:

a) Reuse and minimization of construction and demolition (C&D) debris and diversion of C&D waste from landfills to recycling facilities.

b) Inclusion of a waste management plan that promotes maximum C&D diversion.

c) Source reduction through (1) use of materials that are more durable and easier to repair and maintain, (2) design to generate less scrap material through dimensional planning, (3) increased recycled content, (4) use of reclaimed materials, and (5) use of structural materials in a dual role as finish material (e.g., stained concrete flooring, unfinished ceilings, etc.).

d) Reuse of existing structure and shell in renovation projects.

e) Development of indoor recycling program and space.

f) Discourage the siting of new landfills unless all other waste reduction and prevention actions have been fully explored. If landfill siting or expansion is necessary, site landfills with an adequate landfill-owned, undeveloped land buffer to minimize the potential adverse impacts of the landfill in neighboring communities.

g) Discourage exporting of locally generated waste outside of the SCAG region during the construction and implementation of a project. Encourage disposal within the county where the waste originates as much as possible. Promote green technologies for long-distance transport of waste (e.g., clean engines and clean locomotives or electric rail for waste-by-rail disposal systems) and consistency with SCAQMD and Connect SoCal policies can and should be required.

h) Encourage waste reduction goals and practices and look for opportunities for voluntary actions to exceed the 80 percent waste diversion target.

i) Encourage the development of local markets for waste prevention, reduction, and recycling practices by supporting recycled content and green procurement policies, as well as other waste prevention, reduction and recycling practices.

j) Develop ordinances that promote waste prevention and recycling activities such as: requiring waste prevention and recycling efforts at all large events and venues; implementing recycled content procurement programs; and developing opportunities to divert food waste away from landfills and toward food banks and composting facilities.

k) Develop and site composting, recycling, and conversion technology facilities that have minimum environmental and health impacts.

l) Integrate reuse and recycling into residential industrial, institutional and commercial projects.

m) Provide education and publicity about reducing waste and available recycling services.

n) Implement or expand city or county-wide recycling and composting programs for residents and businesses. This could include extending the types of recycling services offered (e.g., to include food and green waste recycling) and providing public education and publicity about recycling services.

Level of Significance after Mitigation

As discussed above, regulations and polices would reduce impacts but given the regional scale of the analysis in this PEIR, it is not possible to determine if all impacts would be fully mitigated by existing regulations and policies. Therefore, this PEIR identifies project-level mitigation measures consistent with applicable regulations and polices designed to reduce impacts. Lead Agencies may choose to include project-level mitigation measures in environmental documents as they determine to be appropriate and feasible. However, because of the regional nature of the analysis and the lack of project specific-detail, including project components and locations, and SCAG's lack of authority to impose project-level mitigation measures, this PEIR finds impacts related to solid waste exceeding the capacity of local

infrastructure and consistency with plans could be significant and unavoidable even with implementation of mitigation.

3.19.1.4 SOURCES

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3.19.2 WASTEWATER

3.19.2.1 EXISTING CONDITIONS

Wastewater is defined as water that contains wastes from residential, commercial, and industrial processes. Sewage, gray water, and industrially polluted discharges can all be categorized as wastewater. Within the SCAG region, wastewater is generally conveyed through the storm drain and sanitary sewer systems.

3.19.2.1.1 Wastewater Treatment Facilities

Wastewater treatment is generally performed in three stages: primary treatment, secondary treatment, and tertiary treatment. During primary treatment, materials sink to the bottom of tanks and then microbes eat the organic material and settle out in the secondary treatment tanks. Tertiary treatment occurs last, in which remaining pollutants are filtered out via sand and coal. Along with the additions of disinfectant chemicals like chlorine and careful testing and monitoring, this process treats water to an acceptable level to be returned into natural water bodies or recycled for irrigation, industrial, and agricultural uses. More recently, advanced treatment techniques have achieved level of cleanliness that allows highly purified recycled water to recharge underground aquifers.[1]

A majority of wastewater within the SCAG region is treated by one of the 67 major wastewater treatment facilities in the area. Such facilities are often located in densely populated areas and in close proximity to bodies of water for simple discharge of treated water. Within each SCAG county, various smaller municipal wastewater systems and agencies manage wastewater from cities on a smaller scale, and private on-site sewage disposal systems are also available to serve wastewater generators without access to a municipal system. **Table 3.19.2-1, Major Wastewater Treatment Facilities in the SCAG Region,** lists the 67 large-scale facilities managing wastewater within the region, which have a combined design flow of approximately 3,088 millions of gallons per day (mgd).

1 Los Angeles County Sanitation Districts (LACSD). 2018. Wastewater Treatment and Water Reclamation. Available online at: https://www.lacsd.org/wastewater/wwfacilities/moresanj.asp, accessed January 14, 2019.

Table 3.19.2-1
Major Wastewater Treatment Facilities in the SCAG Region

County	Design Flow (mgd)
Imperial	**22.21**
Brawley City WWTP	6
Calexico City WWTP	4.3
Calipatria City WWTP	1.7
El Centro City WWTP	8
Herber PUD WWTP	0.81
Imperial City WWTP	1.4
Los Angeles	**1,250.1**
Avalon WWTF	1.2
Civic Center Water Treatment Facility	70
Burbank WWRP	12.5
Donald C. Tillman WWRP	80
Edward C. Little Water Recycling Plant	5.2
Groundwater Reliability Improvement Project (WDR GRIP/ AWTF)	--
Hyperion WWTP	450
Joint Water Pollution Control Plant, Carson	400
Juanita Millender-McDonald Carson Regional Water Recycling Plant	1.2
Long Beach WRP	25
Los Angeles-Glendale WWRP	20
Los Coyotes WRP	37.5
Newhall Ranch WRP	2
Pomona Water Reclamation Plant	15
San Jose Creek Water Reclamation Plant	62.5
Saugus Water Reclamation Plant	6.5
Tapia WRF	12
Terminal Island Water Reclamation Plant	30
Valencia WRP	4.5
Whittier Narrows Water Reclamation Plant, El Monte	15
Orange	**1,131.12**
City of San Clemente WRP	38.78
El Toro WD WRP	34.37
Irvine Desalter Project Shallow GW Unit	34.37
IRWD Los Alisos WRP	34.37
Latham WWP	38.78
Los Alisos WD WWTP	33.5
Michelson WWRF	33.5
OCSD Plant 1	332

County	Design Flow (mgd)
OCSD Plant 2	332
SMWD Oso Creek WRP	38.78
SMWD-Chiquita WRP	38.78
SOCWA Aliso Creek Ocean Outfall	34.37
SOCWA Coastal TP	34.37
SOCWA Regional TP	34.37
SOCWA San Juan Creek Ocean Outfall	38.78
Riverside	**128.4**
Beaumont WWTP No. 1	4
Coachella SD WWTP	2.4
Coachella Valley WD WWTP	7
Corona WWRF No. 1	11.5
Corona WWRF No. 3	1
EVMWD Regional WWRF	8
Riverside City WWRF	46
Temescal Creek Outfall	26
Valley SD WWTP	8.5
WRCRWA Regional WWRF	14
San Bernardino	**421.65**
Big Bear WWRF	3.2
Colton WRF	0
Colton/San Bernardino STP, RIX	40
Henry N. Wochholz WWRF	8.0
IEUA Carbon Canyon WWRF	85
IEUA Regional Plant No. 1	85
IEUA Regional Plant No. 4	85
IEUA Regional Plant No. 5	85
Lytle Creek North WWTP	1.75
Margaret H Chandler WWRF	4.5
Rialto WWRF	11.7
Victor Valley Wastewater Reclamation Authority WTP	12.5
Ventura	**90.09**
Camarillo WRP	7.25
Camrosa Water Reclamation Facility	2.25
Fillmore WWTP and Wastewater Recycling Plan	1.33
Hill Canyon WWTP	14
Moorpark WWTP	1.5
Ojai Valley WWTP	3
Oxnard Wastewater Treatment Plant	31.7
Santa Paula WWRP	2.55
Simi Valley WQCP	12.5

County	Design Flow (mgd)
Ventura WRF	14
Total	**3,043.57**

Source:
Cal EPA. 2015. Regulated Facility Report. Available online at: https://ciwqs.waterboards.ca.gov/ciwqs/readOnly/CiwqsReportServlet?reportID=2281746&inCommand=drilldown&reportName=RegulatedFacilityDetail&program=NPDES&majorminor=Major, accessed September 6, 2019.
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Wastewater Treatment Requirements

Created by the State Legislature in 1967, the SWRCB has jurisdiction throughout California, where it protects water quality by setting statewide policies.[2] The SCAG region incorporates five of the nine Regional Water Boards in the State:

- Region 4—Los Angeles Regional Water Quality Control Board: Los Angeles and Ventura Counties (and small portions of Kern and Santa Barbara Counties).
- Region 6—Lahontan Regional Water Quality Control Board: San Bernardino and Los Angeles (N/E corner) counties.
- Region 7—Colorado River Regional Water Quality Control Board: Imperial, San Bernardino, Riverside, and San Diego Counties.
- Region 8—Santa Ana Regional Water Quality Control Board: Orange, Riverside, and San Bernardino Counties.
- Region 9—San Diego Regional Water Quality Control Board: San Diego, Imperial, and Riverside Counties.

3.19.2.1.2 Storm Water Drainage Facilities

Each city and county within the SCAG region maintains a storm drain system. The systems vary by age, size, and type depending on the municipality, and may consist of day pipe, iron/steel pipe, very old brick collector sewers, and reinforced concrete pipe facilities.

2 California Water Boards. *Water Board Structure.* Available online at: https://www.waterboards.ca.gov/lahontan/about_us/water_boards_structure.html, accessed August 23, 2019.

California Water Board Districts 4, 6, 7, 8, and 9 are all within the SCAG region and manage their own storm water drainage facilities, utilizing NPDES program permits. Under a NPDES permit, operators must develop a storm water management program to prevent polluted storm water run-off from entering Municipal Separate Storm Sewer Systems (MS4s), which often discharge to local water bodies.

In April 2018, the State Water Resources Control Board released a storm water strategy called the Strategy to Optimize Resource Management of Storm Water, or STORMS. The report focuses on enhancing urban run-off capture and use by identifying barriers, providing incentives, and increasing pubic engagement. The STORMS report found that urban run-off can be a viable source of water and that hybrid strategies combining green and gray infrastructure will be imperative for future urban water management.[3]

3.19.2.2 REGULATORY FRAMEWORK

3.19.2.2.1 Federal

Clean Water Act/National Pollutant Discharge Elimination System Permits

The Clean Water Act (CWA) (33 USC Sections 1251 *et seq.*) was enacted by Congress in 1972 and has been amended several times since its adoption. It is the primary federal law regulating water quality in the U.S. Its objective is to reduce or eliminate water pollution in the nation's rivers, streams, lakes, and coastal waters. The CWA prescribes the basic federal laws for regulating discharges of pollutants and sets minimum water quality standards for all surface waters in the U.S. The CWA is administered by the U.S. Environmental Protection Agency (USEPA).[4]

In California, the State Water Resources Control Board (State Water Board) and the nine Regional Water Quality Control Boards (Regional Water Boards) implement many of the Clean Water Act's provisions. The Clean Water Act requires the State to adopt water quality standards and to submit those standards for approval by the U.S. Environmental Protection Agency (US EPA). For point source discharges to surface water, the Clean Water Act authorizes the U.S.EPA and/or approved states (such as California) to administer the National Pollutant Discharge Elimination System (NPDES) program. The NPDES program regulates the discharge of pollutants from point sources. Municipal point sources consist primarily of municipal wastewater treatment plant outfalls and stormwater conveyance system outfalls. The Clean

3 California State Water Resources Control Board. 2018. *Strategy to Optimize Resource Management of Storm Water (Storm Water Strategy, STORMS*). April. Available online at: https://www.waterboards.ca.gov/water_issues/programs/stormwater/storms/, accessed January 15, 2019.

4 U.S. Environmental Protection Agency. 2002. *Federal Water Pollution Control Act*. Available online at: https://www.epa.gov/sites/production/files/2017-08/documents/federal-water-pollution-control-act-508full.pdf, accessed August 23, 2019.

Water Act also establishes a loan program—the State Revolving Fund—for the implementation of water quality improvement projects.

MS4 Permit Guidance Provision C.3

On May 17, 1996, EPA published an Interpretive Policy Memorandum on Reapplication Requirements for Municipal Separate Storm Sewer Systems, which provided guidance on permit application requirements for regulated MS4s. MS4 permits include requirements for post-construction control of stormwater runoff in what is known as Provision C.3. The goal of Provision C.3 is for the Permittees to use their planning authorities to include appropriate source control, site design, and stormwater treatment measures in new development and redevelopment projects to address both soluble and insoluble stormwater runoff pollutant discharges and prevent increases in runoff flows from new development and redevelopment projects. This goal is to be accomplished primarily through the implementation of low impact development (LID) techniques.[5]

3.19.2.2.2 State

Porter-Cologne Water Quality Control Act

The Porter-Cologne Act is the principal law governing water quality regulation in California. It establishes a comprehensive program to protect water quality and the beneficial uses of water. The Porter-Cologne Act applies to surface waters, wetlands, and ground water and to both point and nonpoint sources of pollution. Pursuant to the Porter-Cologne Act (California Water Code section 13000 *et seq.*), the policy of the State is as follows:

- That the quality of all the waters of the State shall be protected;
- That all activities and factors affecting the quality of water shall be regulated to attain the highest water quality within reason; and
- That the State must be prepared to exercise its full power and jurisdiction to protect the quality of water in the State from degradation.

The Porter-Cologne Act established nine Regional Water Boards (based on hydrogeologic barriers) and the State Water Board, which are charged with implementing its provisions and which have primary responsibility for protecting water quality in California. The State Water Board provides program

5 Government Publishing Office. 1996. *Environmental Protection Agency 40 CFR Part 122.* Available online at: https://www.govinfo.gov/content/pkg/FR-1996-08-09/pdf/96-20228.pdf, accessed August 23, 2019.

guidance and oversight, allocates funds, and reviews Regional Water Boards decisions. In addition, the State Water Board allocates rights to the use of surface water. The Regional Water Boards have primary responsibility for individual permitting, inspection, and enforcement actions within each of nine hydrologic regions. The State Water Board and Regional Water Boards have numerous NPS-related responsibilities, including monitoring and assessment, planning, financial assistance, and management.

The Regional Water Boards regulate discharges under the Porter-Cologne Act primarily through issuance of NPDES permits and waste discharge requirements (WDRs for point and nonpoint source discharges. Anyone discharging or proposing to discharge materials that could affect water quality (other than to a community sanitary sewer system regulated by an NPDES permit) must file a report of waste discharge.

The Porter-Cologne Act also implements many provisions of the Clean Water Act, such as NPDES permitting program. Section 401 of the Clean Water Act gives the State Water Board the authority to review any proposed federally permitted or federally licensed activity that may impact water quality and to certify, condition, or deny the activity if it does not comply with State water quality standards.

The Porter-Cologne Act also requires adoption of water quality control plans (basin plans) that contain the guiding policies of water pollution management in California. A number of statewide water quality control plans have been adopted by the State Water Board. In addition, regional basin plans have been adopted by each of the Regional Water Boards and get updated as needed. These plans identify the existing and potential beneficial uses of waters of the State and establish water quality objectives to protect these uses. The basin plans also contain implementation, surveillance, and monitoring plans. Statewide and regional water quality control plans include enforceable prohibitions against certain types of discharges, including those that may pertain to nonpoint sources. Portions of water quality control plans, the water quality objectives and beneficial use designations, are subject to review by U.S.EPA, when approved they become water quality standards under the Clean Water Act.[6]

California Ocean Plan

The California Ocean Plan establishes water quality objectives for California's ocean waters and provides the basis for regulation of wastes discharged into the state's coastal waters. The plan applies to point and nonpoint source discharges. Both the SWRCB and the six coastal RWQCBs implement and interpret the California Ocean Plan. The California Ocean Plan identifies the applicable beneficial uses of marine waters. These beneficial uses include preservation and enhancement of designated Areas of Special Biological Significance (ASBS), rare and endangered species, marine habitat, fish migration, fish

6 California State Water Resources Control Board. 2019. *Porter-Cologne Water Quality Control Act*. Available online at: https://www.waterboards.ca.gov/laws_regulations/docs/portercologne.pdf, accessed August 23, 2019.

spawning, shellfish harvesting, recreation, commercial and sport fishing, mariculture, industrial water supply, aesthetic enjoyment, and navigation.

The California Ocean Plan establishes a set of narrative and numerical water quality objectives to protect beneficial uses. These objectives are based on bacterial, physical, chemical, and biological characteristics as well as radioactivity. The water quality objectives in Table 1 (formerly Table B) of the California Ocean Plan apply to all receiving waters under the jurisdiction of the plan and are established for the protection of aquatic life and for the protection of human health from both carcinogens and noncarcinogens. Within Table 1 there are 21 objectives for protecting aquatic life, 20 for protecting human health from noncarcinogens, and 42 for protecting human health from exposure to carcinogens. The Ocean Plan also includes an implementation program for achieving water quality objectives. Effluent limitations are established for the protection of marine waters.[7]

Strategy to Optimize Resource Management of Storm Water (STORMS)

In April 2018, the California State Water Resources Control Board published the STORMS report to advance the ideology that storm water is a valuable resource. The report explores policies for collaborative watershed level storm water management and pollution prevention, obstacles to funding and barriers to development. It also describes the importance of integrating regulatory and non-regulatory interests and how raised awareness of the benefits of storm water management invokes participation and enthusiasm with regards to this little-explored resource.[8]

NPDES General Permits

Construction General Permit

The California Construction Stormwater Permit (Construction General Permit) 1 (also, known as Industrial General Permit), adopted by the State Water Resources Control Board (SWRCB), regulates construction activities that include clearing, grading, and excavation resulting in soil disturbance of at least one acre of total land area. The Construction General Permit authorizes the discharge of stormwater to surface waters from construction activities. It prohibits the discharge of materials other than stormwater and authorized non-stormwater discharges and all discharges that contain a hazardous

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7 California Water Boards. 2015. *California Ocean Plan*. Available online at: https://www.waterboards.ca.gov/water_issues/programs/ocean/docs/cop2015.pdf, accessed August 27, 2019.

8 California State Water Resources Control Board. 2019. *Strategy to Optimize Resource Management of Stormwater*. Available online at: https://www.waterboards.ca.gov/water_issues/programs/stormwater/storms/docs/storms_capture_use.pdf, accessed August 23, 2019.

substance in excess of reportable quantities established in Title 40, Sections 117.3 or 302.4 of the CFR, unless a separate National Pollution Discharge Elimination System (NPDES) permit has been issued to regulate those discharges. The Construction General Permit requires that all developers of land where construction activities will occur over more than 1 acre do the following:

- Complete a risk assessment to determine pollution prevention requirements pursuant to the three risk levels established in the General Permit;
- Eliminate or reduce non-stormwater discharges to storm sewer systems and other waters of the US;
- Develop and implement a Stormwater Pollution Prevention Plan (SWPPP), which specifies BMPs that will reduce pollution in stormwater discharges to the Best Available Technology Economically Achievable/ Best Conventional Pollutant Control Technology standards; and
- Perform inspections and maintenance of all BMPs.

To obtain coverage under the NPDES Construction General Permit, the Legally Responsible Person must electronically file all permit registration documents with the SWRCB before the start of construction. Permit registration documents must include:

- Notice of Intent,
- Risk Assessment,
- Site Map,
- SWPPP,
- Annual Fee, and
- Signed Certification Statement.

Typical BMPs contained in SWPPPs are designed to minimize erosion during construction, stabilize construction areas, control sediment, control pollutants from construction materials, and address post construction runoff quantity (volume) and quality (treatment). The SWPPP must also include a discussion of the program to inspect and maintain all BMPs.[9]

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9 State Water Resources Control Board. *Construction General Permit Fact Sheet*. Available online at: https://www.waterboards.ca.gov/water_issues/programs/stormwater/docs/constpermits/wqo_2009_0009_complete.pdf, accessed August 27, 2019.

Industrial General Permit

The Statewide General Permit for Storm Water Discharges Associated with Industrial Activities, Order 2014-0057-DWQ (Industrial General Permit or IGP) implements the federally required storm water regulations in California for storm water associated with industrial activities discharging to waters of the United States.[10]

Municipal Stormwater Program

The Municipal Storm Water Program regulates storm water discharges from municipal separate storm sewer systems (MS4s) throughout California. Pursuant to the Federal Water Pollution Control Act (Clean Water Act) section 402(p), storm water permits are required for discharges from an MS4 serving a population of 100,000 or more. The Municipal Storm Water Program manages the Phase I Permit Program (serving municipalities over 100,000 people), the Phase II Permit Program (for municipalities less than 100,000), and the Statewide Storm Water Permit for the State of California Department of Transportation (Caltrans).[11]

Caltrans is responsible for the design, construction, management, and maintenance of the State highway system, including freeways, bridges, tunnels, Caltrans' facilities, and related properties, and is subject to the permitting requirements of CWA Section 402(p). Caltrans' discharges consist of storm water and non-storm water discharges from state-owned rights-of-way.

Before July 1999, discharges from Caltrans' MS4 were regulated by individual NPDES permits issued by the RWQCBs. On July 15, 1999, the SWRCB issued a statewide permit (Order No. 99-06-DWQ) that regulated all discharges from Caltrans MS4s, maintenance facilities, and construction activities.[12] On September 19, 2012, Caltrans' permit was reissued (Order No. 2012-0011-DWQ), and it became effective on July 1, 2013.[13]

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10 State Water Resources Control Board. Industrial Stormwater Program. See https://www.waterboards.ca.gov/water_issues/programs/stormwater/industrial.html, accessed August 27, 2019.

11 State Water Resources Control Board. *Municipal Stormwater Program*. Available at: https://www.waterboards.ca.gov/water_issues/programs/stormwater/municipal.html, accessed October 31, 2019.

12 Caltrans. *Stormwater & Water Pollution Control.* Available online at: https://dot.ca.gov/programs/traffic-operations/ep/stormwater, accessed August 27, 2019.

13 California State Water Resources Control Board. *Order No. 2012-0011-DWQ NPDES No. CAS000003 National Pollutant Discharge Elimination System (NPDES) Statewide Storm Water Permit Waste Discharge Requirements (WDRS) for State of California Department of Transportation*. Available online at: https://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2012/wqo2012_0011_dwq.pdf, accessed August 27, 2019.

The Caltrans permit requires development of a program for communication with local agencies, and coordination with other MS4 programs where those programs overlap geographically with Caltrans facilities. As part of the permit, Caltrans is required to create and annually update a Stormwater Management Plan (SWMP) that is used to outline the regulation of pollutant discharge caused by current and future construction and maintenance activities. SWMP requirements apply to discharges from Caltrans stormwater conveyances, including catch basins and drain inlets, curbs, gutters, ditches, channels, and storm drains. The SWMP applies to discharges consisting of stormwater and non-stormwater resulting from the following:

- maintenance and operation of state-owned highways, freeways, and roads;
- maintenance facilities;
- other facilities with activities that have the potential for discharging pollutants;
- permanent discharges from subsurface dewatering;
- temporary dewatering; and
- construction activities.

Caltrans' Storm Water Management Plan (SWMP) describes the procedures and practices used to reduce or eliminate the discharge of pollutants to storm drainage systems and receiving waters. The SWMP was most recently updated in July of 2016.[14]

California Department of Transportation NPDES Permit

The California Department of Transportation (Caltrans) was originally issued a statewide NPDES permit (Order 99-06-DWQ) in 1999, which requires Caltrans to regulate nonpoint source discharge from its properties, facilities, and activities. The Caltrans permit requires development of a program for communication with local agencies, and coordination with other MS4 programs where those programs overlap geographically with Caltrans facilities. As part of the permit, Caltrans is required to create and annually update a stormwater management plan (SWMP) that is used to outline the regulation of pollutant discharge caused by current and future construction and maintenance activities. SWMP requirements apply to discharges from Caltrans stormwater conveyances, including catch basins and drain inlets, curbs, gutters, ditches, channels, and storm drains. The SWMP applies to discharges consisting of stormwater and non-stormwater resulting from:

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14 Caltrans. 2016. *Statewide Stormwater Management Plan*. Available online at: https://www.waterboards.ca.gov/water_issues/programs/stormwater/docs/caltrans/swmp/swmp_approved.pdf, accessed August 27, 2019.

- maintenance and operation of state-owned highways, freeways, and roads;
- maintenance facilities;
- other facilities with activities that have the potential for discharging pollutants;
- permanent discharges from subsurface dewatering;
- temporary dewatering; and
- construction activities.

The discharges addressed by the SWMP flow through municipal stormwater conveyance systems or flow directly to surface water bodies in the state. These surface water bodies include creeks, rivers, reservoirs, lakes, wetlands, lagoons, estuaries, bays, and the Pacific Ocean and tributaries.

This SWMP applies to the oversight of outside agencies' or non-Caltrans entities' (third parties) activities performed within Caltrans' MS4 to ensure compliance with stormwater regulations. Non-Caltrans activities include highway construction and road improvement projects, as well as residential use and business operations on leased property.

The SWMP must be approved by the SWRCB and, as specified in the permit, it is an enforceable document. Compliance with the permit is measured by implementation of the SWMP. Caltrans' policies, manuals, and other guidance related to storm water are intended to facilitate implementation of the SWMP. Caltrans also requires all contractors to prepare and implement a program to control water pollution effectively during the construction of all projects. In lieu of the more recently adopted General Construction Permit as described above, Caltrans continues to modify its current policies and procedures to be consistent with the new permit.[15]

California Administrative Code, Title 22

Under Title 22, the State Department of Health establishes State-wide effluent bacteriological and treatment reliability standards for recycled water uses. The standards are based on the potential for human contact with recycled water. The regional water quality control board (RWQCB) has established and enforces requirements for the application and use of recycled water. Permits are required from a RWQCB for any recycling operation. Applicants for a permit are required to demonstrate that the

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15 U.S. Environmental Protection Agency. *Program Evaluation Report Statewide NPDES Storm Water Permit for the State of California, Department of Transportation Properties, Facilities, and Activities (District 5) (Order No. 99-06-DWQ).* Available online at: https://www3.epa.gov/region9/water/npdes/pdf/ms4/ca/021108-caltrans-report.pdf, accessed August 23, 2019.

proposed recycled water operation is in compliance with Title 22 and will not exceed the ground and surface water quality objectives in the regional basin management plan.[16]

3.19.2.2.3 Regional

The water quality control plans and groundwater protection responsibilities for the SCAG region are described in Section 3.10, *Hydrology and Water Quality*.

Urban Water Management Plans

Under California Water Code Division 6, Part 2.6, Section 10610-10656, the Urban Water Management Planning Act (UWMPA) requires urban water suppliers that supply more than 3,000 acre-feet of water annually, or serve more than 3,000 connections, to submit an Urban Water Management Plan (UWMP). [17] The UWMP is a public document prepared by water suppliers to support their long-term resource planning over a 20-year period and ensure adequate water supplies are available to meet existing and future water demands. The UWMP must be submitted to the DWR every 5 years, and must demonstrate progress toward reduction in 20 percent per capita urban water consumption by the year 2020, as required in the Water Conservation Bill of 2009, Senate Bill X7-7.[18, 19] There are 138 service districts in the SCAG region required to develop a UWMP, which is typically prepared and submitted to DWR within 30 days and reviewed 60 days prior to public hearing for plan adoption and implementation. The preparation of the plan includes guidebook, workshops, and programming for comprehensive strategies to conserve water.

3.19.2.2.4 Local

Utility Master Plans & Utility Capital Improvement Programs

Jurisdictions usually have utility master plans or other planning documents that identify and prioritize projects needed to maintain adequate levels of utility service in the jurisdiction.

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16 Water Education Foundation. *Water Recycling and Title 22*. Available online at: https://www.watereducation.org/aquapedia/water-recycling-and-title-22, accessed August 23, 2019.

17 California State Water Control Board. *California Water Code Division 6 Part 2.6. Urban Water Management Plan*. Available online at: https://water.ca.gov/LegacyFiles/urbanwatermanagement/docs/water_code-10610-10656.pdf, accessed August 23, 2019.

18 California Department of Water Resources. *Urban Water Management Plans*. Available online at: https://water.ca.gov/Programs/Water-Use-And-Efficiency/Urban-Water-Use-Efficiency/Urban-Water-Management-Plans, accessed August 23, 2019.

19 California Department of Water Resources. SB X7-7. Available online at: https://water.ca.gov/Programs/Water-Use-And-Efficiency/SB-X7-7, accessed August 23, 2019.

General Plans

Local policies related to utilities and service systems are established in each jurisdiction's general plan. In general, jurisdictions have policies in place that state that utility and service systems must be provided at the same time (or in advance of) need. In addition to these general policies, jurisdictions may have more specific policies tailored to performance objectives including wastewater treatment services.

3.19.2.3 ENVIRONMENTAL IMPACTS

3.19.2.3.1 Thresholds of Significance

For the purposes of this PEIR, SCAG has determined that adoption and/or implementation of Connect SoCal could result in significant adverse impacts with regards to wastewater if the Plan would result in any of the following:

- Require or result in the relocation or construction of new or expanded wastewater treatment or storm drainage facilities, the construction or relocation of which could cause significant environmental effects;

- Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments

3.19.2.3.2 Methodology

The methodology for determining the significance of impacts to utilities and service systems, compares existing conditions to the expected future use of potable water supplies, wastewater, storm water facilities, and landfills with the Plan. The criteria above were applied to compare current conditions to future 2045 Plan conditions. Consideration was given to existing capacity and expected growth as well as transportation projects.

Implementation of the Plan would affect the use of utility and service systems in the SCAG region. The analysis of these impacts is programmatic at the regional level. With regards to wastewater, the Plan's potential to exceed capacity of local infrastructure and require the relocation or construction of new or expanded facilities or result in a determination that projected demand in addition to current demand will be used to determine the significance of the projects effects.

The mitigation measures in the PEIR are divided into two categories: SCAG mitigation and project-level mitigation measures. SCAG mitigation measures shall be implemented by SCAG over the lifetime of the

Plan. For projects proposing to streamline environmental review pursuant to SB 375, SB 743 or SB 226 (as described in Section 1.0 Introduction), or for projects otherwise tiering off this PEIR, the project-level mitigation measures described below (or comparable measures) can and should be considered and implemented by Lead Agencies and Project Sponsors during the subsequent, project- or site-specific environmental reviews for transportation and development projects as applicable and feasible. However, SCAG cannot require implementing agencies to adopt mitigation, and it is ultimately the responsibility of the implementing agency to determine and adopt project-specific mitigation.

3.19.2.3.3 Impacts and Mitigation Measures

Impact USWW-1 **Require or result in the relocation or construction of new or expanded wastewater treatment or storm drainage facilities, the construction or relocation of which could cause significant environmental effects**

Significant and Unavoidable – Mitigation Required.

Implementation of some transportation projects and anticipated growth under the Plan would involve construction of new storm water drainage facilities and may require construction of new or expanded wastewater treatment facilities.

Projects that increase impervious surface area, including expanding roadways, and new development may increase urban runoff. This would result in greater quantities of contaminants to receiving waters that may currently be impaired and would require the construction of new storm water drainage facilities or expansion of existing ones. Construction activities related or identified in the Plan could increase pollutant loads carried by storm water runoff. For example, road cut erosion can increase long-term siltation in local receiving waters. The Los Angeles Basin includes approximately 100,000 acres of transportation related impervious surfaces.[20] According to the USGS, there is an inverse relationship between water quality as well as flooding and impervious area.[21] This relationship tends to become problematic when impervious surfaces within a watershed exceed 10 percent of land area. Where this percentage is greater than 25 percent, water quality is generally degraded and inhospitable for habitat or for recreation activities.[22] In addition, many of the pollutants in urban runoff are attributable to

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20 Los Angeles Basin. *Stormwater Conservation Study*. Available online at: https://www.usbr.gov/lc/socal/basinstudies/AppendixB.pdf, accessed September 9, 2019.

21 USGS. *Impervious Surfaces and Flooding.* Available online at: https://www.usgs.gov/special-topic/water-science-school/science/impervious-surfaces-and-flooding?qt-science_center_objects=0#qt-science_center_objects, accessed September 9, 2019.

22 Center for Watershed Protection. 1988. Rapid Watershed Planning Handbook – A Resource Guide for Urban Subwatershed Management. Ellicott City, MD.

landscape irrigation, highway runoff, and illicit dumping. Highway runoff is a component of urban runoff contributing oil and grease, sediment, nutrients, heavy metals, and toxic substances.

The Plan would increase impervious surfaces in the SCAG region through a combination of transportation projects and development, resulting in construction or expansion of storm water drainage facilities. As shown in **Table 3.19.2-2, Existing Lane Miles by County,** and **Table 3.19.2-3, 2045 Plan Lane Miles by County**, the Plan would increase total lane miles in the region, with the most increase in San Bernardino County (from 14,871 to 17,067 lane miles). Among all facilities toll has the most increase in lane miles from 453 in 2016 to 1,463 lane miles in 2045 with the Plan.

Table 3.19.2-2
Existing Lane Miles by County

County	Freeway (Mixed-Flow)	Toll*	Truck	Expressway /Parkway	Principal Arterial	Minor Arterial	Collector	Freeway (HOV)	Ramp	Total (All Facilities)
Imperial	380	-	-	337	271	556	2,469	-	36	44,048
Los Angeles	4,604	83	17	8	8,380	8,983	6,933	483	908	30,398
Orange	1,327	334	16	4	3,589	2,776	1,008	252	374	9,680
Riverside	1,785	36	2	126	1,152	2,972	4,906	80	249	11,307
San Bernardino	2,558	-	5	97	1,753	3,900	6,121	114	323	14,871
Ventura	536	-	-	-	810	997	1,048	8	122	3,521
Total	**11,189**	**453**	**41**	**571**	**15,955**	**20,184**	*22,484*	*935*	*2,012*	*73,824*

Note:
**Toll includes truck and High-occupancy toll (HOT)*
Source:
SCAG modeling, 2019.

Table 3.19.2-3
2045 Plan Lane Miles by County

County	Freeway (Mixed-Flow)	Toll*	Truck	Expressway/Parkway	Principal Arterial	Minor Arterial	Collector	Freeway (HOV)	Ramp	Total (All Facilities)
Imperial	417	-	-	323	316	595	2,462	-	38	4,152
Los Angeles	4,797	352	153	6	8,474	9,067	6,957	378	939	31,123
Orange	1,419	565	16	4	3,847	3,101	1,090	244	379	10,663
Riverside	1,863	267	13	122	1,512	3,600	5,705	45	363	13,490
San Bernardino	2,597	279	55	142	2,075	4,654	6,781	138	347	17,067
Ventura	568	-	-	-	860	1,007	1,059	60	122	3,676
Total	*11,661*	*1,463*	*237*	*597*	*17,084*	*22,023*	*24,053*	*864*	*2,189*	*80,170*

Note:
**Toll includes truck and High-occupancy toll (HOT)*
Source: SCAG modeling, 2019. Connect SoCal: Highways & Arterials Appendix..

Municipal wastewater is related to water use. Most of the water that is not used in landscaping becomes wastewater. California residents used an estimated average 85 gallons of water per day in 2016.[23] However, water demand varies substantially by community and by land use type and therefore wastewater is anticipated to similarly vary substantially by community. The reuse and recycling of wastewater would reduce the amount of wastewater to be discharged to the ocean, although the total benefits from wastewater reduction would be limited.

Wastewater generation rates are closely tied to population growth. The total population is expected to grow by approximately 16 percent across the SCAG region by 2045, wastewater generation would proportionally increase by up to 16 percent (although this increase is likely to be unevenly spread across the region with some wastewater agencies may experience greater increases than others). In addition to increased demand for wastewater treatment facilities, increases in housing and population would increase wastewater flows in existing wastewater conveyance infrastructure (sewers). Individual development projects would either be accommodated by existing infrastructure, or project proponents and/or local jurisdictions would be required to make improvements to wastewater infrastructure (replacing sewers and upgrading wastewater treatment facilities). In less developed areas of the region,

23 Legislative Analyst's Office. *Residential Water Use Trends and Implications for Conservation Policy*. Available online at: https://lao.ca.gov/Publications/Report/3611, accessed September 11, 2019.

new housing and employment developments could require additional wastewater infrastructure (new sewers and possibly new treatment facilities).

Due to anticipated transportation projects and anticipated growth under the Plan, construction of new storm water drainage or wastewater treatment facilities or expansion of existing facilities may be needed, thereby potentially resulting in a significant impact, requiring the consideration of mitigation measures.

Mitigation Measures

SCAG Mitigation Measure

SMM-USWW-1: SCAG shall work with local jurisdictions and wastewater agencies to encourage regional-scale planning for improved wastewater and stormwater management. Future impacts to wastewater and stormwater facilities shall be avoided to the extent practical and feasible through cooperative planning, information sharing, and comprehensive pollution control measure development within the SCAG region. This cooperative planning shall occur as part of current and existing coordination, an integral part of SCAG's ongoing regional planning efforts.

Project Level Mitigation Measures

See **PMM-HYD-1.**

PMM-USWW-1: In accordance with provisions of sections 15091(a)(2) and 15126.4(a)(1)(B) of the *State CEQA Guidelines*, a Lead Agency for a project can and should consider mitigation measures to reduce substantial adverse effects on utilities and service systems, particularly for construction of wastewater facilities, as applicable and feasible. Such measures may include the following or other comparable measures identified by the Lead Agency:

- During the design and CEQA review of individual future projects, implementing agencies and projects sponsors shall determine whether sufficient wastewater capacity exists for the proposed projects. There CEQA determinations must ensure that the proposed development can be served by its existing or planned treatment capacity. If adequate capacity does not exist, project sponsors shall coordinate with the relevant service provider to ensure that adequate public services and utilities could accommodate the increased demand, and if not, infrastructure improvements for the

appropriate public service or utility shall be identified in each project's CEQA documentation. The relevant public service provider or utility shall be responsible for undertaking project-level review as necessary to provide CEQA clearance for new facilities.

Level of Significance after Mitigation

As discussed above, regulations and polices would reduce impacts but given the regional scale of the analysis in this PEIR, it is not possible to determine if all impacts would be fully mitigated by existing regulations and policies. Therefore, this PEIR identifies project-level mitigation measures consistent with applicable regulations and polices designed to reduce impacts. Lead Agencies may choose to include project-level mitigation measures in environmental documents as they determine to be appropriate and feasible. However, because of the regional nature of the analysis and SCAG's lack of authority to impose project-level mitigation measures, this PEIR finds impacts related to wastewater and storm water facilities could be significant and unavoidable even with implementation of mitigation. l

Impact USWW-2 **Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.**

Significant and Unavoidable – Mitigation Required.

Implementation of the Plan could result in a determination by one or more of the wastewater treatment providers in the region that there is inadequate capacity to serve the future population demand in addition to the provider's existing commitments, resulting in a significant impact. Wastewater generation rates are closely tied to population growth, and the total population is expected to grow by approximately 3.2 million or 16 percent across the SCAG region by 2045 (although this increase is likely to be unevenly spread across the region with some wastewater agencies experiencing greater increases than others). Therefore, wastewater generation could increase by 16 percent as well. Implementation of transportation projects contained in the Plan as well as anticipated growth under the Plan may increase demand for wastewater treatment facilities. Development projects would either be accommodated by existing infrastructure, or project proponents and local jurisdictions would be required, to make improvements to wastewater infrastructure (sewers and treatment facilities). In less developed areas of the region, new housing and commercial developments could require additional wastewater infrastructure (new sewers and treatment facilities). The higher density development reflected in the Plan's land use strategies could also require construction of new and/or replacement wastewater infrastructure including sewers with greater conveyance capacity in urban and urbanizing areas. In

addition, additional wastewater entering the existing wastewater treatment facilities may overload the current capacity levels of some wastewater treatment facilities. Therefore, impacts would be significant, requiring the consideration of mitigation measures.

Mitigation Measures

SCAG Mitigation Measures

See **SMM USWW-1, SMM HYD-1** through **SMM HYD-3.**

Project Level Mitigation Measure

See **PMM USWW-1.**

Level of Significance after Mitigation

As discussed above, regulations and polices would reduce impacts but given the regional scale of the analysis in this PEIR, it is not possible to determine if all impacts would be fully mitigated by existing regulations and policies. Therefore, this PEIR identifies project-level mitigation measures consistent with applicable regulations and polices designed to reduce impacts. Lead Agencies may choose to include project-level mitigation measures in environmental documents as they determine to be appropriate and feasible. However, because of the regional nature of the analysis and SCAG's lack of authority to impose project-level mitigation measures, this PEIR finds impacts with respect to wastewater treatment capacity could be significant and unavoidable even with implementation of mitigation.

3.19.2.4 SOURCES

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3.19.3 WATER SUPPLY

3.19.3.1 ENVIRONMENTAL SETTING

3.19.3.1.1 Water Supplies

California's water supply is a hotly debated topic, with limited water resources stretched tightly between the environment, agriculture, and residential uses. Severe weather patterns linked to climate change have exacerbated the water issue, resulting in record low snowpack in several recent years (although the 2018/2019 snowpack was high) and record high heat waves. Supply water includes natural, managed, and reclaimed water. Natural sources consist of surface water bodies like rivers and lake, and groundwater resources stored in underground aquifers. Manmade sources include run-off water that is captured, treated, and stored in reservoirs. Reclaimed water is wastewater, treated at a treatment plant and typically reused for uses like industrial operations and irrigation. As reclaimed water is often non-potable, it must be conveyed in a separate system to ensure no possibility of direct human consumption. Another source of potable freshwater that is being considered throughout regions of the world include desalination, which removes the dissolved salt in seawater.

Surface and groundwater within the SCAG region are insufficient to support the region's growing population. In the SCAG region, approximately three quarters of potable water comes from imported sources.[1] Restrictions on imported water as well as drought conditions have necessitated water conservation measures. These conservation measures have slightly lessened the use of potable water in many areas of the region. In addition, the demand for water is being partially fulfilled by the increasing use of reclaimed water for non-potable purposes such as greenbelt irrigation and industrial processing and servicing.

Counties within the SCAG region use groundwater and surface water to meet water demand. Integrated Regional Water Management Plans (IRWMPs) and Urban Water Management Plans (UWMPs), developed for cities and counties throughout the region, help guide water management and supply and demand projections. Water is imported by the Metropolitan Water District of Southern California (MWD) and the State Water Project (SWP), and groundwater is pumped from various local wells.

1 Southern California Association of Governments (SCAG). 2008. Regional Comprehensive Plan: Water. Available online at: http://www.scag.ca.gov/Documents/f2008RCP_Water.pdf, accessed September 26, 2019.

Watershed Management

Watershed management relates to sustaining watersheds at an acceptable level of quality, contributing to resource quality, and maintaining groundwater supplies. The watersheds in the SCAG region are shown in **Section 3.10, Hydrology** (**Figure 3.10-2, Watersheds in the SCAG Region)**. These large watersheds are further divided into smaller sections by internal surface water drainage areas and groundwater basins.

Colorado River

The Colorado River is a major source of water for Southern California, and is imported via the Colorado River Aqueduct, owned and operated by MWD.

Under water delivery contracts with the United States, California entities have enjoyed legal entitlements to Colorado River water, beginning with the 1922 Colorado River Compact.[2] California was entitled to 4.4 million-acre feet (af), as well as half on any surplus, as defined by the U.S. Department of the Interior. Typically, the river's surplus has allowed California entities to take an additional 800,000 af annually.

However, with increased urbanization in the Colorado River Basin states and limitation agreements between those states, surplus water for California was eliminated; the State will gradually return to its original allotment of 4.4 million af. Given these new terms, California water agencies are pursuing various strategies to offset this gradual, but certain loss of future water supply. Examples of these strategies include additional reservoir and storage agreements, new water transfers between agricultural and urban users, and more water conservation and recycling.[3]

The Colorado River Hydrologic Region (see discussion below) is of particular concern because it encompasses the Coachella Valley in the West Basin and the desert in the East Basin. Irrigation needs in the Coachella Valley are met almost exclusively by water imported from the Colorado River. Historical extraction of groundwater in the Coachella Valley has caused overdraft. Currently, an extensive groundwater recharge project is being undertaken by the Coachella Valley Water District that recharges Colorado River Water into spreading basins. Within the East Basin, irrigation and domestic water is provided by the Colorado River with only approximately 1 percent groundwater use and little direct reclamation. Agricultural runoff and some domestic wastewater do get returned to the Colorado River. Therefore, the water at the southern end of the watershed is a mixture of Colorado River water, agricultural runoff, and reclaimed water.

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2 U.S. Bureau of Reclamation. *Colorado River Compact, 1922.* Available online at: https://www.usbr.gov/lc/region/pao/pdfiles/crcompct.pdf, accessed September 9, 2019.

3 Metropolitan Water District of Southern California. 2016. *2015 Urban Water Management Plan*. Available online at: https://www.mwdoc.com/wp-content/uploads/2017/05/UWMP_May-2016-v2.pdf, accessed January 14, 2019.

State Water Project

The State Water Project supplies water to Southern California via the California Aqueduct, with delivery points in Los Angeles, San Bernardino, and Riverside Counties. SWP was constructed and is managed by the Department of Water Resources (DWR), and is the largest state-owned, multipurpose water project in the country. State Water Project has historically provided 25 to 50 percent of MWD's water, anywhere from 450,000 af to 1.75 million af annually.[4] In 2019, the State Water Project allocated 75 percent, or 3.1 million acre feet, of water to the state supply due to the previous winter's robust storms that resulted in above average snowpack and reservoir levels.[5] The State Water Project provides water to approximately 27 million people and irrigation water for roughly 750,000 acres of agricultural lands annually.

Los Angeles Aqueduct

The Los Angeles Aqueduct, originally built in 1913, carries water 233 miles south from Owens Valley to the City of Los Angeles. The original aqueduct project was extended in 1940 to the Mono Basin. The system was supplemented by a second project, parallel to the first, completed in 1970. Los Angeles Aqueduct deliveries from the Mono Basin and Owens Valley have ranged from a 2015 low of 36,000 af and a high of 467,000 af in 1998. Since 1990, average deliveries have been approximately 240,000 af per year. Due to environmental considerations, approximately half of the Los Angeles Aqueduct water supply has been reallocated to supply environmental mitigation and enhancement projects.[6]

Transfers

In an effort to diversify water sources and reduce reliance on specific water imports, water agencies have engaged in water transfer agreements. These contractual agreements, made with irrigation districts, reduce water use on agricultural lands either through agricultural conservation or fallowing land.[7] The water "freed" by these reductions is transferred to a municipal water district, where it may be used or

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4 California Department of Water Resources. 2013. *California Water Plan, Volume 1 – The Strategic Plan*. Available online at: https://water.ca.gov/Programs/California-Water-Plan/Water-Plan-Updates, accessed September 16, 2019.

5 California Department of Water Resources. 2019. *State Water Project Allocations Increase to 75 Percent*. Available online at: https://water.ca.gov/News/News-Releases/2019/June/State-Water-Project-Allocations-Increase-to-75-Percent, accessed September 26, 2019.

6 Metropolitan Water District of Southern California. 2016. *Integrated Water Resources Plan*.Available online at: http://www.mwdh2o.com/PDF_About_Your_Water/2015%20IRP%20Update%20Report%20(web).pdf , accessed September 26, 2019.

7 Some urban agencies also have the ability to enter "spot" water markets and to purchase water on an "as needed" basis.

stored in aquifers for future use, a practice called water banking. Water banking is also done during wet years, when rainwater is collected and directed toward recharge facilities for future use.

Water Suppliers

The SCAG region is served by many water suppliers, both retail and wholesale; the largest of these agencies is MWD. Created under state law in 1931, MWD serves the urbanized coastal plain from Ventura to the Mexican border in the west to parts of the rapidly urbanizing counties of San Bernardino and Riverside in the east. It provides water to about 90 percent of the urban population of Southern California. MWD is comprised of 26 member agencies, 12 of which supply wholesale water to retail agencies and other wholesalers, and 14 of which are individual cities which directly supply water to their residents.[8] The Imperial Irrigation District (IID), in Imperial County, is the fourth largest irrigation district in the country.[9]

3.19.3.1.2 Water Treatment Facilities

As identified below in **Table 3.19.3-1, Active Water Treatment Facilities in the SCAG Region,** there are 36 water treatment facilities that service the SCAG region. There are no water treatment facilities currently active in the County of the Imperial.

Table 3.19.3-1
Active Water Treatment Facilities in the SCAG Region

County	Design Flow (mgd)
Los Angeles	**17.258**
Alhambra Groundwater Treatment Plant	0.35
Aspan Wall WTP	6.2
Hawthorne Drinking WTP	0.027
Brewer Desalter (Reverse Osmosis Plant)	1.0
El Monte Operable Unit wells	0.131
Gould Electronics Treatment Facility and Wells 14, 15, 16	1.0
Gould Electronics Treatment Facility and Wells SEW-2,-3,-4,-5	0.4
La Puente Valley WTP	3.6
South Coulter Surface WTP	0.0185
Granular Activated Carbon Treatment Plant	0.021

8 Metropolitan Water District. *Metropolitan Facts*. Available online at: http://www.mwdh2o.com/PDF_NewsRoom/6.4.2_District_at_glance.pdf, accessed August 29, 2019.

9 Imperial Irrigation District. *Water Conservation*. Available online at: https://www.iid.com/water/water-conservation, accessed August 29, 2019.

County	Design Flow (mgd)
Delta Plant	.49
Well No. 5 WTP	0.3
Wells 201 and 205 Perchlorate Treatment	3.0
Pebbly Beach Desalinization Plant	0.72
Orange	164.110
Poseidon Huntington Beach Seawater Desalinization Facility	56.59
SCWD Aliso Creek Water Harvesting Project	34.37
Irvine Desalter Project Potable WT System	34.37
San Juan Capistrano GW TP	38.78
Riverside	--
JCSD Wells 27 and 28	--
San Bernardino	**0.511**
Richardson Treatment Plant	--
LLU Wellhead Treatment System	--
Riverside Public Utility's Wellhead Treatment Plants	0.021
San Bernardino MWD Wellhead Treatment Systems	0.49
Ventura	**0.067**
San Nicolas Desalinization Plant	0.067
Grand Total	**181.946**

Source: Cal EPA. 2019. California Integrated Water Quality System Project (CIWQS)- Regulated Facility Report (Detail). https://ciwqs.waterboards.ca.gov/ciwqs/readOnly/CiwqsReportServlet?reportID=9009425&reportName=RegulatedFacilityDetail&inCommand=displayCriteria

California's water-related assets and services are provided by many interdependent systems that historically have been managed on a project-by-project basis. The gap between water supply and water demand decreased substantially between 2001 and 2010 (see **Table 3.19.3-2, California Hydrologic Summary**). This narrowing gap has been further exacerbated in the SCAG region by the 2012-2015 California drought. There are typically three sources of supply water: (1) natural sources, (2) manmade sources, and (3) reclamation. Natural water sources include rivers, lakes, streams, and groundwater stored in aquifers. Manmade sources include runoff water that is treated and stored in reservoirs and other catchment structures. Reclaimed water is wastewater that has been conveyed to a treatment plant and then treated enough that it may be used again for certain uses (such as irrigation). However, reclaimed water is not potable (drinkable) and must be conveyed in a separate system in order to ensure there is no possibility of direct human consumption. See **Table 3.19.3-2, California Hydrologic Summary (in Millions of Acre-Feet)**.

Table 3.19.3-2
California Hydrologic Summary (in Millions of Acre-Feet)

	Water Year									
	2007	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**Average 1998-2015**
Percentage of normal precipitation	62%	77%	77%	104%	134%	75%	77%	56%	78%	
Water Entering the Region										
Precipitation	123	152	152	205	249.4	138.9	142	102.6	143.3	182.2
Inflow from Oregon/Mexico	1.2	1.2	1	0.9	1.3	1.0	0.8	0.8	0.7	1.3
Inflow from Colorado River	4.7	4.9	4.6	4.7	4.2	4.7	5.3	5.8	5.0	4.9
Imports from Other Regions	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total	**129**	**158**	**157**	**211**	**254.9**	**144.6**	**148.1**	**109.2**	**149.0**	**188.4**
Water Demand /Water Leaving the Region										
Consumptive use of applied water[a] (ag., municipal and industrial, wetlands)	28.6	29	28.1	25	26.5	30.6	30.9	30.8	29.4	27.3
Outflow to Oregon/Nevada/ Mexico	0.8	0.9	1	1.1	2.1	0.9	0.9	0.6	0.4	1.1
Exports to other regions	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Statutory required outflow to salt sink	20.3	20.6	18.3	24.4	32.6	22.6	18.8	13.1	16.6	25.3
Additional outflow to salt sink	9.2	10.6	8.6	13.8	28.8	8.0	9.8	3.8	7.2	19.2
Evaporation, evapotranspiration of native vegetation, groundwater subsurface outflows, natural and incidental runoff, agriculture effective precipitation, other outflows	89.8	114	113	149	164.7	102.7	107.4	84.4	115.2	126.8
Total	**149**	**175**	**169**	**214**	**254.6**	**164.8**	**167.8**	**132.7**	**168.8**	**199.6**
Change in Supply										
Surface reservoirs	–8	–3.9	1.1	5.1	6.2	-7.4	-4.1	-5.1	-0.8	-0.6
Groundwater[b]	–11.5	–13.1	–13.1	–8	-5.9	-12.8	-15.8	-18.4	-19.0	-10.6
Total	**–19.5**	**–17**	**–12**	**–2.9**	**0.3**	**-20.2**	**-19.9**	**-23.5**	**-19.8**	**-11.2**

Note:

a Consumptive use is the amount of applied water used and no longer available as a source of supply. Applied water is greater than consumptive use because it includes consumptive use, reuse, and outflows.

b Change in Supply: Groundwater – The difference between water extracted from and water recharged into groundwater basins in a region. All regions and years were calculated using the following equation: change in supply: groundwater = intentional recharge + deep percolation of applied water + conveyance deep percolation and see page - withdrawals. This does not include unknown factors such as natural recharge and subsurface inflow and outflow.

Source:

California Department of Water Resources. Accessed 9 September 2019. California Water Today, Volume 1 – The Strategic Plan. Available at: https://water.ca.gov/Programs/California-Water-Plan/Water-Plan-Updates

California Department of Water Resources. 2019. California Water Plan Update 2018: Supporting Documentation for Water Portfolios. Available at: https://data.ca.gov/dataset/water-plan-water-balance-data/resource/3e5bdae2-6352-4d8f-9e37-018357100fdf.

Surface and groundwater resources are largely managed as separate resources, when they are, in fact, a highly interdependent system of watersheds and groundwater basins. Water quality, land use, and flood management are also integral to the effective management of these systems.[10]

Within the SCAG region, water supply comes from a variety of sources. While the Metropolitan Water District (MWD) imports water from Colorado River and State Water Project and provides wholesale water supply to its coverage area, many cities and some county areas rely on groundwater, especially those along the coast. San Bernardino and Riverside Counties, for example, rely on a mixture of groundwater and surface water.

Following are the descriptions of the two primary hydrologic regions (South Coast and Colorado River) as well as associated regional water budgets.

Water Supply and Use in the South Coast Hydrologic Region

The South Coast Hydrologic Region has a diverse mix of both local and imported water supply sources. Local water sources include water recycling, groundwater storage, and infrastructure enhancements. The region imports water through the State Water Project, the Colorado River Aqueduct, and the Los Angeles Aqueduct. These resources allow the region flexibility in managing supplies and resources in wet and dry years. The MWD wholesales the water to a consortium of 26 member agencies, including 14 cities, 11 municipal water districts, and one county authority that serve nearly 19 million people living in six counties stretching from Ventura to San Diego. MWD imported an average of 1 million af of water per year from the SWP from 1995 to 2010, and just under 1 million af per year from the CRA during the same time period. **Table 3.19.3-3, South Coast Region Water Balance,** shows the water balance of the South Coast Hydrologic Region from 2011 to 2015.

10 California Department of Water Resources. 2013. *California Water Plan, Volume 1 – The Strategic Plan*. Available online at: https://water.ca.gov/Programs/California-Water-Plan/Water-Plan-Updates, accessed September 16, 2019.

Table 3.19.3-3
South Coast Region Water Balance

Water Use	2011	2012	2013	2014	2015
Urban	3,530	3,794	3,967	3,992	3,439
Agricultural	655	680	985	1,061	691
Environmental	240	68	50	66	50
Total	**4,425**	**4,542**	**5,002**	**5,119**	**4,179**
Supplies					
Local Projects	214	237	197	168	164
Local Imported Deliveries	351	229	100	79	35
Colorado River Project	959	905	1,307	1,733	1,601
Federal Projects	2	0	0	0	0
State Project	904	1,174	1,064	646	460
Groundwater Extraction	1,351	1,484	1,824	1,986	1,462
Reuse and Recycled Water	645	513	510	506	457
Total	**4,425**	**4,542**	**5,002**	**5,119**	**4,179**

Note: Figures in thousands of acre-feet of water.
Source: California Department of Water Resources. 2019. California Water Plan Update 2018: Supporting Documentation for Water Portfolios. Available at: https://data.ca.gov/dataset/water-plan-water-balance-data/resource/3e5bdae2-6352-4d8f-9e37-018357100fdf

Water Supply and Use in the Colorado River Hydrologic Region

About 85 percent of the Colorado River Region's urban and agricultural water supply comes from surface water deliveries from the Colorado River. Water from the river is delivered to this region via the All American and Coachella canals, local diversions, and the Colorado River Aqueduct by means of an exchange for SWP water. The Colorado River is an interstate and international river whose use is apportioned among the seven Colorado River Basin states and Mexico by a complex body of statues, decrees, and court decisions known collectively as the "Law of the River." Local surface water, groundwater, and the SWP provide the reminder of water to the region. In addition, many of the alluvial valleys in the regions are underlain by groundwater aquifers that are the sole source of water for many local communities. However, some alluvial valleys contain groundwater of such poor quality it is not suitable for potable uses.

Other cities such as Banning, Coachella, Indio, Palm Desert, Hesperia, and Victorville, are solely dependent on groundwater; while other cities in the SCAG region have supplemented their groundwater supplies with water from the State Water Projects or local streams and reservoirs. **Table 3.19.3-4, Colorado River Region Water Balance,** shows the water balance for the Colorado River Hydrologic Region from 2011 to 2015.

Table 3.19.3-4
Colorado River Region Water Balance

Water Use	2011	2012	2013	2014	2015
Urban	477	591	338	302	269
Agricultural	3,637	4,217	4,616	4,750	3,817
Environmental	44	44	30	45	45
Total	**4,158**	**4,852**	**4,985**	**5,098**	**4,130**
Supplies					
Local Projects	2	2	2	2	2
Local Imported Deliveries	0	0	0	0	0
Colorado River Project	3,260	3,782	3,998	4,115	3,448
Federal Projects	0	0	0	0	0
State Project	133	169	94	19	53
Groundwater Extraction	317	390	222	266	163
Reuse and Recycled Water	446	510	669	697	465
Total	**4,158**	**4,852**	**4,985**	**5,098**	**4,130**

Note: Figures in thousands of acre-feet of water.
Source: California Department of Water Resources. 2019. California Water Plan Update 2018: Supporting Documentation for Water Portfolios. Available at: https://data.ca.gov/dataset/water-plan-water-balance-data/resource/3e5bdae2-6352-4d8f-9e37-018357100fdf

Local Water Supply

Local sources of water account for approximately 30 percent of the total volume consumed annually in the SCAG region.[11] Local sources include surface water runoff, groundwater, and water reclamation. Some local agencies have led efforts to diversify water supply, such as South Coast Water District's Doheny Ocean Desalination Project and West Basin Municipal Water District's Ocean Water Desalination project.

Local Surface Water (within Each Hydrologic Unit [HU] Region)

The infiltration of surface runoff augments groundwater and surface water supplies. However, the regional water demand exceeds the current natural recharge of runoff water. The arid climate, summer drought, and increased impervious surface associated with urbanization contribute to this reduction in natural recharge. Urban and agricultural runoff often contains pollutants that decrease the quality of local water supplies. Runoff captured in storage reservoirs varies widely from year to year depending on the

11 California Department of Water Resources. Accessed 15 September 2015. *California Water Plan Update 2013.* Available at: http://www.waterplan.water.ca.gov/cwpu2013/final/index.cfm

amount of local precipitation. On average, precipitation contributes approximately 38,000 acre-feet per year (afy) within the MWD service area (not including San Diego County). Within the desert regions, the amount is considerably less, owing to climatic differences.

Local Groundwater

Groundwater represents most of the SCAG region's fresh water supply, making up approximately 34 percent of total water use, depending on precipitation levels.[12] The hydrologic regions vary in their dependence on groundwater for urban and agricultural uses (**Table 3.19.3-5, Groundwater Dependence in the SCAG Region**). The DWR estimates that the state has a groundwater overdraft of approximately 1 to 2 maf in average years.[13]

Table 3.19.3-5
Groundwater Dependence in the SCAG Region

Hydrologic Region	Percentage of Total Urban and Agricultural Water Supply Provided by Groundwater
Central Coast[a]	86%
South Coast[b]	34%
South Lahonton[c]	66%
Colorado River[d]	9%

Note:
a Includes part of Ventura County. The remainder is outside of the SCAG Region.
b Includes Orange County, most of San Diego and Los Angeles counties, parts of Riverside, San Bernardino, Ventura, Kern and Santa Barbara counties.
c Includes most of San Bernardino County, as well as Inyo, and parts of Mono, Kern and Los Angeles counties.
d Includes all of Imperial County, most of Riverside, and parts of San Bernardino and San Diego counties.
Source:
California Department of Water Resources. California Water Today, Volume 1 – The Strategic Plan. Available online at: https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/California-Water-Plan/Water-Plan-Updates/Files/Update-2013/Water-Plan-Update-2013-Volume-1.pdf?la=en&hash=D34DCEE71FBC479F6A86490CA639DE5D66D49720, accessed September 9, 2019.

Recent efforts to store recycled water and surplus water in groundwater basins for use during drought periods have proven successful. MWD has 10 projects with various water agencies for groundwater storage, resulting in approximately 421,900 af of added capacity per year. A number of agencies within the region are also active in the recharge of surface water, including the Orange County Water District,

12 California Department of Water Resources. 2013. *California Water Plan, Volume 1 – The Strategic Plan*. Available online at: https://water.ca.gov/Programs/California-Water-Plan/Water-Plan-Updates, accessed September 16, 2019.

13 Ibid.

Los Angeles County Department of Water and Power, Foothill Municipal Water District, San Bernardino County Water and Flood Control District, Coachella Valley Water District, the Water Replenishment District of Southern California, the San Gabriel Valley Municipal Water District, and the Calleguas Municipal Water District.

3.19.3.2 REGULATORY FRAMEWORK

3.19.3.2.1 Federal

Clean Water Act/National Pollutant Discharge Elimination System Permits

The Clean Water Act (CWA) (33 USC Sections 1251 *et seq.*) was enacted by Congress in 1972 and has been amended several times since its adoption. It is the primary federal law regulating water quality in the U.S. Its objective is to reduce or eliminate water pollution in the nation's rivers, streams, lakes, and coastal waters. The CWA prescribes the basic federal laws for regulating discharges of pollutants and sets minimum water quality standards for all surface waters in the U.S. The CWA is administered by the U.S. Environmental Protection Agency (USEPA).[14]

In California, the State Water Resources Control Board (State Water Board) and the nine Regional Water Quality Control Boards (Regional Water Boards) implement many of the Clean Water Act's provisions. The Clean Water Act requires the State to adopt water quality standards and to submit those standards for approval by the U.S. Environmental Protection Agency (US EPA). For point source discharges to surface water, the Clean Water Act authorizes the U.S.EPA and/or approved states (such as California) to administer the National Pollutant Discharge Elimination System (NPDES) program. The NPDES program regulates the discharge of pollutants from point sources. Municipal point sources consist primarily of municipal wastewater treatment plant outfalls and stormwater conveyance system outfalls. The Clean Water Act also establishes a loan program - the State Revolving Fund - for the implementation of water quality improvement projects.

Safe Drinking Water Act

Passed in 1974 and amended in 1986 and 1996, the Safe Drinking Water Act (SDWA) gives the EPA the authority to set drinking water standards. Drinking water standards apply to public water systems, which provide water for human consumption through at least 15 service connections, or regularly serve at least 25 individuals. There are two categories of drinking water standards, the National Primary

14 U.S. Environmental Protection Agency. *Clean Water Act, Section 402: National Pollutant Discharge Elimination System*. Available online at: https://www.epa.gov/cwa-404/clean-water-act-section-402-national-pollutant-discharge-elimination-system, accessed August 29, 2019.

Drinking Water Regulations (NPDWR) and the National Secondary Drinking Water Regulations. The NPDWR are legally enforceable standards that apply to public water systems. NPDWR standards protect drinking water quality by limiting the levels of specific contaminants that can adversely affect public health and are known or anticipated to occur in water.[15]

3.19.3.2.2 State

Porter-Cologne Water Quality Control Act

The Porter-Cologne Act is the principal law governing water quality regulation in California. It establishes a comprehensive program to protect water quality and the beneficial uses of water. The Porter-Cologne Act applies to surface waters, wetlands, and ground water and to both point and nonpoint sources of pollution. Pursuant to the Porter-Cologne Act (California Water Code section 13000 *et seq.*), the policy of the State is as follows:

- That the quality of all the waters of the State shall be protected;
- That all activities and factors affecting the quality of water shall be regulated to attain the highest water quality within reason; and
- That the State must be prepared to exercise its full power and jurisdiction to protect the quality of water in the State from degradation.

The Porter-Cologne Act established nine Regional Water Boards (based on hydrogeologic barriers) and the State Water Board, which are charged with implementing its provisions and which have primary responsibility for protecting water quality in California. The State Water Board provides program guidance and oversight, allocates funds, and reviews Regional Water Boards decisions. In addition, the State Water Board allocates rights to the use of surface water. The Regional Water Boards have primary responsibility for individual permitting, inspection, and enforcement actions within each of nine hydrologic regions. The State Water Board and Regional Water Boards have numerous NPS-related responsibilities, including monitoring and assessment, planning, financial assistance, and management.

The Regional Water Boards regulate discharges under the Porter-Cologne Act primarily through issuance of NPDES permits and waste discharge requirements (WDRs for point and nonpoint source discharges. Anyone discharging or proposing to discharge materials that could affect water quality (other than to a community sanitary sewer system regulated by an NPDES permit) must file a report of waste discharge.

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15 U.S. Environmental Protection Agency. *Safe Drinking Water Act (SDWA).* Available online at: https://www.epa.gov/sdwa, accessed August 29, 2019.

The Porter-Cologne Act also implements many provisions of the Clean Water Act, such as NPDES permitting program. Section 401 of the Clean Water Act gives the State Water Board the authority to review any proposed federally permitted or federally licensed activity that may impact water quality and to certify, condition, or deny the activity if it does not comply with State water quality standards.

The Porter-Cologne Act also requires adoption of water quality control plans (Basin plans) that contain the guiding policies of water pollution management in California. A number of statewide water quality control plans have been adopted by the State Water Board. In addition, basin plans have been adopted by each of the Regional Water Boards and get updated as necessary and practical. These plans identify the existing and potential beneficial uses of waters of the State and establish water quality objectives to protect these uses. The basin plans also contain implementation, surveillance, and monitoring plans. Statewide and regional water quality control plans include enforceable prohibitions against certain types of discharges, including those that may pertain to nonpoint sources. Portions of water quality control plans, the water quality objectives and beneficial use designations, are subject to review by U.S.EPA, when approved they become water quality standards under the Clean Water Act.[16]

California Administrative Code

California Administrative Code Title 24 contains the California Building Standards, including the California Plumbing Code (Part 5), promotes water conservation. Title 20 addresses Public Utilities and Energy and includes appliance efficiency standards that promote water conservation. In addition, a number of State laws listed below require water-efficient plumbing fixtures in structures:

- Title 20, California Administrative Code, Section1604(g) establishes efficiency standards that give the maximum flow rate of all new showerheads, lavatory faucets, sink faucets, and tub spout diverters.
- Title 20 California Administrative Code Section1606 prohibits the sale of fixtures that do not comply with established efficiency regulations.
- Title 24, California Administrative Code, Sections 25352(i) and (j) address pipe insulation requirements, which can reduce water used before hot water reaches equipment or fixtures. Insulation of water-heating systems is also required.
- Health and Safety Code Section17921.3 requires low-flush toilets and urinals in virtually all buildings.

16 California Water Boards. 2019. *Porter-Cologne Water Quality Control Act*. Available online at: https://www.waterboards.ca.gov/laws_regulations/docs/portercologne.pdf, accessed August 29, 2019.

Under Title 22, the State Department of Health establishes State-wide effluent bacteriological and treatment reliability standards for recycled water uses. The standards are based on the potential for human contact with recycled water. The regional water quality control board (RWQCB) has established and enforces requirements for the application and use of recycled water. Permits are required from a RWQCB for any recycling operation. Applicants for a permit are required to demonstrate that the proposed recycled water operation is in compliance with Title 22 and will not exceed the ground and surface water quality objectives in the regional basin management plan.[17]

The Water Conservation Act of 2009

These sections of the Water Code, enacted as SB X7-7—The Water Conservation Act of 2009, set water conservation targets and efficiency improvements for urban and agricultural water suppliers, Sections 10608.16 and Sections 10608.48, respectively. The legislation establishes a State-wide target to reduce urban per capita water use by 20 percent by 2020. Urban retail water suppliers are required, individually or on a regional basis, to develop an urban water use target by December 31, 2010, to meet their target by 2020, and to meet an interim target (half of their 2020 target) by 2015. Urban water suppliers cannot impose conservation requirements on process water (water used in production of a product) and are required to employ two critical efficient water management practices—water measurement and pricing. Urban retail water suppliers must include in a water management plan, to be completed by July 2011, the baseline daily per capita water use, water use target, interim water use target, and compliance daily per capita water use.[18]

California Urban Water Management Planning Act

This part of the State Water Code (Section 10610) states that each urban water supplier that provides water to 3,000 or more customers, or that provides over 3,000 AF of water annually, should make every effort to ensure the appropriate level of reliability in its water service sufficient to meet the needs of its various categories of customers during normal, dry, and multiple dry years by preparing a UWMP and updating it every five years. The Act describes the contents of UWMPs and requires each agency's UWMP to assess the reliability of the agency's water resources over a 20-year planning horizon.[19]

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17 California Department of Public Health. 2014. *Regulations Related to Recycled Water*. Available online at: https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/documents/lawbook/RWregulations_20140618.pdf, accessed August 29, 2019.

18 California Department of Water Resources. 2019. *SB X7-7*. Available online at: https://water.ca.gov/Programs/Water-Use-And-Efficiency/SB-X7-7, accessed August 29, 2019.

19 California Department of Water Resources. 2019. *Urban Water Management Plan*. Available online at: https://water.ca.gov/Programs/Water-Use-And-Efficiency/Urban-Water-Use-Efficiency/Urban-Water-Management-Plans, accessed August 29, 2019.

California Senate Bill 610

Referred to as SB 610, the intent of this part of the State Water Code is to ensure that sufficient water supplies are available for growing communities. Water Code Section 10910 requires any project subject to CEQA of a specified minimum size to require a local public water provider with more than 3,000 service connections to prepare a water supply assessment (WSA) for the project. The WSA must document sources of water supply, quantify water demands, and compare future water supply and demand to show that sufficient water will be available to serve the development project. Water supply must be assessed for normal, single dry, and multiple dry water years during a 20-year forecast.[20] If supplies are found to be insufficient to serve the project, the WSA must include plans for acquiring sufficient supplies. The WSA must be included in the CEQA document for the project.[21]

California Senate Bill 221

SB 221 applies to subdivisions of more than 500 dwelling units (Water Code Section 10912). Like SB 610, it is intended to ensure an adequate water supply for new development. SB 221 requires that approval of a tentative map showing the design and improvement of a proposed subdivision shall include a requirement that a sufficient water supply is available.[22,23]

California Groundwater Management Act

The Groundwater Management Act (AB 3030, Water Code Sections 10750 et seq.) provides guidance for applicable local agencies to develop voluntary groundwater management plans (GMP) in State-designated groundwater basins. GMPs can allow agencies to raise revenue to pay for measures influencing the management of the basin, including extraction, recharge, conveyance, facilities' maintenance and water quality.[24]

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20 California Legislative Information. *Part 2.10. Water Supply Planning to Support Existing and Planned Future Uses [10910-10915}, Section 10910.*.

21 California Department of Water Resources. *Guidebook for Implementation of Senate Bill 610 and Senate Bill 221 of 2001.* Available online at: https://water.ca.gov/LegacyFiles/pubs/use/sb_610_sb_221_guidebook/guidebook.pdf, accessed August 29, 2019.

22 Ibid.

23 California Legislative Information. *Part 2.10. Water Supply Planning to Support Existing and Planned Future Uses [10910-10915], Section 10912.*

24 California Department of Water Resources. *1992 Assembly Bill 3030 (AB3030).*

California Model Water Efficient Landscape Ordinance

The California Model Water Efficient Landscape Ordinance (MWELO) sets restrictions on outdoor landscaping. Because the City of Lincoln is a "local agency" under the MWELO, it must require project applicants to prepare plans consistent with the requirements of the MWELO for review and approval by the City. The MWELO was most recently updated by the Department of Water Resources and approved by the California Water Commission on July 15, 2015. All provisions became effective on February 1, 2016. The revisions, which apply to new construction with a landscape area greater than 500 square feet, reduced the allowable coverage of high-water-use plants to 25 percent of the landscaped area. The MWELO also requires use of a dedicated landscape meter on landscape areas for residential landscape areas greater than 5,000 square feet or nonresidential landscape areas greater than 1,000 square feet, and requires weather-based irrigation controllers or soil-moisture based controllers or other self-adjusting irrigation controllers for irrigation scheduling in all irrigation systems.[25]

Governor's Executive Order B-29-15 issued on April 1, 2015

Key provisions of Executive Order B-29-15 included ordering the State Water Resources Control Board to impose restrictions to achieve a 25-percent reduction in potable urban water usage through February 28, 2016; directing DWR to lead a statewide initiative, in partnership with local agencies, to collectively replace 50 million square feet of lawns and ornamental turf with drought tolerant landscapes, and directing the California Energy Commission to implement a statewide appliance rebate program to provide monetary incentives for the replacement of inefficient household devices.[26]

3.19.3.2.3 Regional

The water quality control plans and groundwater protection responsibilities for the SCAG region are described in **Section 3.10, Hydrology and Water Quality.**

Urban Water Management Plans

Under California Water Code Division 6, Part 2.6, Section 10610-10656, the Urban Water Management Planning Act (UWMPA) requires urban water suppliers that supply more than 3,000 acre-feet of water annually, or serve more than 3,000 connections, to submit an Urban Water Management Plan (UWMP).

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25 California Department of Water Resources. *Model Water Efficient Landscape Ordinance.* Available online at: https://water.ca.gov/LegacyFiles/wateruseefficiency/docs/MWELO09-10-09.pdf, accessed August 29, 2019.

26 California Water Boards. 2015. *Executive Order B-29-15 State of Emergency Due to Sever Drought Conditions.* Available online at: https://www.waterboards.ca.gov/waterrights/water_issues/programs/drought/docs/emergency_regulations/econ_analysis.pdf, accessed August 29, 2019.

The UWMP is a public document prepared by water suppliers to support their long-term resource planning over a 20-year period and ensure adequate water supplies are available to meet existing and future water demands. The UWMP must be submitted to the DWR every 5 years, and must demonstrate progress toward reduction in 20 percent per capita urban water consumption by the year 2020, as required in the Water Conservation Bill of 2009, Senate Bill X7-7. There are 138 service districts in the SCAG region required to develop a UWMP, which is typically prepared and submitted to DWR within 30 days and reviewed 60 days prior to public hearing for plan adoption and implementation. The preparation of the plan includes guidebook, workshops, and programming for comprehensive strategies to conserve water.[27]

3.19.3.2.4 Local

Utility Master Plans & Utility Capital Improvement Programs

Jurisdictions usually have utility master plans or other planning documents that identify and prioritize projects needed to maintain adequate levels of utility service in the jurisdiction.

General Plans

Local policies related to utilities and service systems are established in each jurisdiction's general plan. In general, jurisdictions have policies in place that state that utility and service systems must be provided at the same time (or in advance of) need. In addition to these general policies, jurisdictions may have more specific policies tailored to performance objectives including wastewater treatment services.

3.19.3.3 ENVIRONMENTAL IMPACTS

3.19.3.3.1 Thresholds of Significance

For the purposes of this PEIR, SCAG has determined that adoption and/or implementation of Connect SoCal could result in significant adverse impacts with regards to water supply if the Plan would result in any of the following:

- Require or result in the relocation or construction of new or expanded water facilities, the construction or relocation of which could cause significant environmental effects;

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27 California Department of Water Resources. *California Water Code Division 6 Part 2.6. Urban Water Management Planning.* Available online at: https://water.ca.gov/LegacyFiles/urbanwatermanagement/docs/water_code-10610-10656.pdf, accessed August 29, 2019.

- Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years.

3.19.3.3.2 Methodology

The methodology for determining the significance of impacts to utilities and service systems compares existing conditions to the expected future use of potable water supplies, wastewater, stormwater facilities, and landfills with the Plan. The criteria above were applied to compare current conditions to future 2045 Plan conditions.

Implementation of the Plan would affect the use of utility and service systems in the SCAG region. The analysis of these impacts is programmatic at the regional level. With regards to water supply, the Plan's potential to exceed capacity of local infrastructure and require the relocation or construction of new or expanded facilities or result in a determination that projected demand in addition to current demands is used to determine the significance of the projects effects.

The mitigation measures in the PEIR are divided into two categories: SCAG mitigation and project-level mitigation measures. SCAG mitigation measures shall be implemented by SCAG over the lifetime of the Plan. For projects proposing to streamline environmental review pursuant to SB 375, SB 743 or SB 226 (as described in Section 1.0 Introduction), or for projects otherwise tiering off this PEIR, the project-level mitigation measures described below (or comparable measures) can and should be considered and implemented by Lead Agencies and Project Sponsors during the subsequent, project- or site-specific environmental reviews for transportation and development projects as applicable and feasible. However, SCAG cannot require implementing agencies to adopt mitigation, and it is ultimately the responsibility of the implementing agency to determine and adopt project-specific mitigation.

3.19.3.3.3 Impacts and Mitigation Measures

Impact USWS-1 **Require or result in the relocation or construction of new or expanded water facilities, the construction or relocation of which could cause significant environmental effects.**

Significant and Unavoidable – Mitigation Required.

Population in the SCAG region is expected to increase by 3.2 million people by 2045 which may result in a significant impact to the existing water infrastructure in the region. In 2014, California passed Proposition 1 in order to guarantee approximately $7.12 billion for water infrastructure projects,

including $725 million for projects that treat wastewater or saltwater.[28] Moreover, the DWR announced in June 2019 that $14 million in grant funding will be appropriated for projects that increase water quality, supply, and infrastructure.[29] A number of desalination projects have been proposed or are under construction within the SCAG region, including the West Basin Desalination Project which could produce 20 million gallons per day (mgd) (with potential expansion to 60 million gallons per day),[30] the Doheny Ocean Desalination Project which could produce 5 million gallons per day (with potential expansion to 15 mgd),[31] and the Huntington Beach Desalination Plant which could produce 50 mgd.[32] Additionally, Los Angeles and Orange Counties will develop pilot projects to increase stormwater capture. Specifically, the Mayfair Park Capture Project and Caruthers Park Water Capture Project Los Angeles County will capture an estimated 710 and 780 acre-feet/year, respectively.[33] In Orange County, the San Juan Aquifer Recovery Project is in the preliminary design phases for a stormwater capture project in the San Juan Watershed.[34] In February 2019 the City of Los Angeles announced its commitment to 100 percent recycled water at the Hyperion, L.A. Glendale, Tillman, and Terminal Island water treatment facilities by 2035.[35]

Therefore, there is anticipated to be an increase in water supply within the SCAG region from recycling and desalination. California residents used an estimated average 85 gallons of water per day in 2016.[36] Assuming per capita water consumption remains consistent, the SCAG region could require approximately 312.4 million more gallons of water per day to meet the increase in population. In recent years, as a result of increased water conservation, urban water demand has remained relatively constant despite growing population. However, there may be a limit to how much water can be saved through

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28 Legislative Analyst's Office. 2014. *Water Quality, Supply, and Infrastructure Improvement Act of 2014. AB 1471 (Chapter 188, Statues of 2014), Rendon. Bond Measure.*

29 California Department of Water Resources. *$14 Million Awarded in Grant Funding for Water Desalination Projects.* Available online at: https://water.ca.gov/News/Blog/2019/June-2019/14-Million-Awarded-in-Grant-Funding-for-Water-Desalination-Projects, accessed September 12, 2019.

30 West Basin Municipal Water District. *Full Draft EIR.* Available online at: http://westbasindesal.com/draft-eir.html, accessed September 11, 2019.

31 South Coast Water District. Doheny Ocean Desalination Project. Available online at http://scwd.org/depts/engineering/projects/water_supply_projects/oceandesal3/default.htm, accessed September 11, 2019.

32 Poseidon Water. *Huntington Beach Desalination Project*. Available online at: http://www.poseidonwater.com/huntington-beach-desalination-plant.html, accessed September 12, 2019.

33 State Water Resources Control Board. *Potential Pilot Projects Identified by Interested Parties.* Available online at: https://www.waterboards.ca.gov/water_issues/programs/stormwater/storms/potential_projects.shtml, accessed September 11, 2019.

34 Ibid.

35 California Water News Daily. 2019. *Los Angeles Mayor Garcetti Announces Goal to Recycle 100 Percent of City's Wastewater by 2035*. Available online at: http://californiawaternewsdaily.com/conservation/los-angeles-mayor-garcetti-announces-goal-to-recycle-100-percent-of-citys-wastewater-by-2035/, accessed September 11, 2019.

36 Legislative Analyst's Office. *Residential Water Use Trends and Implications for Conservation Policy*.

conservation and even with increases in water efficiency, increasing population could increase water demand. As a result, new water facilities will likely need to be constructed or expanded in order to meet this demand. Water facility projects vary in sizes and locations, but larger regional-scale facilities may be constructed in sensitive environments (e.g. desalination plants adjacent to the ocean). The construction of these larger-scale facilities could result in significant impacts because of their size, prominence and location.

Mitigation Measures

SCAG Mitigation Measure

SMM USWS-1: SCAG shall coordinate with local agencies as part of SCAG's Sustainability Program regarding the implementation of Urban Greening, Greenbelts and Community Separator land use strategies. Primary features of land use strategies address the following:

- Increased trail and greenway connectivity;
- Improved water quality, groundwater recharge and watershed health;
- Reduce urban runoff;
- Expand the urban forest;
- Provision of wildlife habitat and increased biodiversity;
- Expand recreation opportunities and beautification;
- Preserving agrarian economies;
- Restore severed wildlife corridors.

Project Level Mitigation Measures

PMM USWS-1: In accordance with provisions of sections 15091(a)(2) and 15126.4(a)(1)(B) of the *State CEQA Guidelines*, a Lead Agency for a project can and should consider mitigation measures to ensure sufficient water supplies, as applicable and feasible. Such measures may include the following or other comparable measures identified by the Lead Agency:

a) Reduce exterior consumptive uses of water in public areas, and should promote reductions in private homes and businesses, by shifting to drought-tolerant native

landscape plantings, using weather-based irrigation systems, educating other public agencies about water use, and installing related water pricing incentives.

b) Promote the availability of drought-resistant landscaping options and provide information on where these can be purchased. Use of reclaimed water especially in median landscaping and hillside landscaping can and should be implemented where feasible.

c) Implement water conservation best practices such as low-flow toilets, water-efficient clothes washers, water system audits, and leak detection and repair.

d) For projects located in an area with existing reclaimed water conveyance infrastructure and excess reclaimed water capacity, use reclaimed water for non-potable uses, especially landscape irrigation. For projects in a location planned for future reclaimed water service, projects should install dual plumbing systems in anticipation of future use. Large developments could treat wastewater onsite to tertiary standards and use it for non-potable uses onsite.

Level of Significance after Mitigation

As discussed above, regulations and polices would reduce demand for water which could result in reduced need to construct new water facilities, but construction of new large-scale water facilities is reasonably foreseeable given the expected population increase and anticipated demand for water. Therefore, given the regional scale of the analysis in this PEIR, it is not possible to determine if all impacts would be fully mitigated by existing regulations and policies. Therefore, this PEIR identifies project-level mitigation measures consistent with applicable regulations and polices designed to reduce impacts. Lead Agencies may choose to include project-level mitigation measures in environmental documents as they determine to be appropriate and feasible. However, because of the regional nature of the analysis and lack of project-specific detail, including project locations, and SCAG's lack of authority to impose project-level mitigation measures, this PEIR finds impacts with respect to new or expanded water facilities could be significant and unavoidable even with implementation of mitigation.

Impact USWS-2 Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years.

Significant and Unavoidable – Mitigation Required.

The Plan could result in insufficient water supplies from existing entitlements and resources resulting in significant impacts. Transportation projects and development projects anticipated to occur under the Plan have the potential to result in water use that could exceed available water supply. Potential factors that would lead water supply capabilities being exceeded include vulnerability and uncertainty of water supply, in relation to climate variability, resulting from increased temperatures and wildlife fires, as well as regulatory or legislative decisions that could affect the availability of imported water.

Water agencies in the SCAG region produce Urban Water Management Plans (UWMPs) and other long-range planning studies to provide a system adequate to supply water demand. At current usage rates, existing water supplies and infrastructure would not be sufficient to meet demand in 2045. The volume of water and water delivery infrastructure available within the SCAG region may not be sufficient to meet the future multiple dry year or average year water demand in 2045 without substantial reduction in water demand. **Table 3.19.3-6, Metropolitan Water District's Local Supplies for Average and Dry Years,** shows the anticipated water supply for the MWD area, which makes up a portion of the SCAG region, for 2020, 2030, and 2040.

Table 3.19.3-6
Metropolitan Water District's Local Supplies for Average and Dry Years

	2020		2030		2040	
	Average Year	**Dry Year**	**Average Year**	**Dry Year**	**Average Year**	**Dry Year**
Local Groundwater						
From Natural Recharge	1,011,000	1,007,000	1,004,000	1,005,000	1,005,000	1,006,000
Replenishment	292,000	298,000	297,000	297,000	297,000	297,000
Local Projects						
Groundwater Recovery	143,000	139,000	163,000	162,000	167,000	167,000
Recycling	436,000	427,000	486,000	482,000	509,000	507,000
Seawater Desalination	51,000	56,000	51,000	56,000	51,000	56,000
Local Runoff Stored	110,000	102,000	110,000	102,000	110,000	102,000
Los Angeles Aqueduct	261,000	113,000	264,000	125,000	268,000	133,000
IID-SDCWA Transfer and Canal Lining	274,000	274,000	282,000	282,000	282,000	282,000
Total	**2,578,000**	**2,416,000**	**2,657,000**	**2,511,000**	**2,689,000**	**2,550,000**

Source:
The Metropolitan Water District of Southern California. 2016. 2015 Urban Water Management District. Available online at: http://www.mwdh2o.com/PDF_About_Your_Water/2.4.2_Regional_Urban_Water_Management_Plan.pdf, accessed September 12, 2019.

Based on projected population growth under the Plan, the demand for municipal water would increase. Many agencies are implementing aggressive water conservation, recycling and planning strategies (water

transfer and water banking) to sustain the supply of water during wet and dry years. The City of Los Angeles for example has maintained relatively constant water demand over the past ten years as a result of water conservation despite increasing population. Additionally, the Plan's land use strategies encourage compact development and smaller single-family lots in urbanized areas such as HQTAs. Compact development tend to consume water more efficiently (lower per capita consumption). Nonetheless, when considering the Plan as a whole for the region, there is potential for demand in the region to exceed existing and reasonably foreseeable water supplies, due to increased population, drought conditions, and unreliable water supply in the region, constituting a significant impact.

Meeting future water demand is the responsibility of local and regional water agencies. Water supplies are either produced locally from groundwater and surface water sources or are imported via the Los Angeles Aqueduct, the California Aqueduct, the Colorado River Aqueduct, the All American Canal, or the Coachella Canal. Other means of providing water without increasing imported supplies include reclamation and recycling, conservation, water transfers, groundwater banking, developing brackish groundwater, and ocean desalination.

The Urban Water Management Plan Act of 1990 requires that local water agencies prepare plans showing projected water supplies and demands for average years and multiple dry years. These plans are updated every five years. As part of the statewide continued efforts on reducing water usage, the UWMP has been amended to further require urban water suppliers to include narrative descriptions of their water demand management measures in the UWMPs. The descriptions include discussions on progress on water demand management measures implemented over the last five year, and identify additional measures and water saving practices that will help suppliers achieve water use reduction targets. Additionally, the amended Act requires UWMPs to quantify distribution system water losses as a new category of past and current water use and allows water use projections to account for estimated water savings resulting from implementation of applicable codes, building design standards, ordinances, and transportation and land use plans.

The Metropolitan Water District of Southern California prepared the Integrated Water Resources Plan (IRP)[37] that provides a roadmap for maintaining regional water supply. The framework places an increased emphasis on regional collaboration. Earlier plans dating back to 1996 set a regional reliability goal of meeting full-service demands at the retail level under all foreseeable hydrologic conditions. This updated plan seeks to stabilize Metropolitan's traditional imported water supplies and to continue developing additional local resources.

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37 Metropolitan Water District of Southern California. *Integrated Water Resources Plan*. Available online at: http://www.mwdh2o.com/PDF_About_Your_Water/2015%20IRP%20Update%20Report%20(web).pdf, accessed August 28, 2019.

Over 80 percent of the projected population in the SCAG region for the year 2045 is within the MWD service area.[38] It is anticipated that moderate density development in suburban areas, and compact development in urbanized areas, would reduce the need to extract and haul waters to distances outside of the urbanized and undeveloped areas. Supplying the water necessary to meet future demand and/or minimizing that demand based on anticipated land use distribution would mitigate anticipated impacts. Each water district develops its own policy for determining its planning horizon and for acquiring and building water facilities. Water districts would provide water for the growth planned and authorized by the appropriate land use authority. However, given the challenges to imported water supplies, meeting future demand is difficult. Therefore, impacts would be significant, requiring the consideration of mitigation measures.

Mitigation Measures

SCAG Mitigation Measure

See **SMM USWS-1**.

Project Level Mitigation Measures

See **PMM-USWS-1.**

Level of Significance after Mitigation

As discussed above, regulations and polices would reduce impacts but given the regional scale of the analysis in this PEIR, it is not possible to determine if all impacts would be fully mitigated by existing regulations and policies. Therefore, this PEIR identifies project-level mitigation measures consistent with applicable regulations and polices designed to reduce impacts. Lead Agencies may choose to include project-level mitigation measures in environmental documents as they determine to be appropriate and feasible. However, because of the regional nature of the analysis and the lack of project specific-detail, including project components and locations, and SCAG's lack of authority to impose project-level mitigation measures, this PEIR finds impacts related to sufficient water supplies could be significant and unavoidable even with implementation of mitigation.

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38 Metropolitan Water District of Southern California. n.d. Members Agency Map. Available online at: http://mwdh2o.com/PDF_In_The_Community/3.3_service_area_map.pdf, accessed August 29, 2019.

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