5.15 UTILITIES AND SERVICE SYSTEMS

This section of the Draft Environmental Impact Report (DEIR) evaluates the potential for the Proposed Project to impact utilities and services systems. Utilities and services systems include wastewater (sewage) conveyance and treatment; water supply, treatment, and distribution systems; and solid waste collection and disposal. This section also discusses stormwater drainage, energy (electricity and natural gas), and telecommunications infrastructure. The information in this section is based in part on the following technical reports:

- *Hydraulic Network Analysis for Fire& Domestic Water Service, Creekside*, KHR Associates, June 23, 2020 ("Water Study")
- *Hydraulic Sewer Modeling Analysis of the City of San Juan Capistrano Sewer System for The Creekside Development Project*, Tetra Tech, May 19, 2020 ("Sewer Study")

Copies of these reports are included in Appendix M and Appendix N, respectively, to this DEIR. The information in this section is also based in part on written service letters submitted to:

- CR&R (Solid Waste Service Provider)

Copies of the responses are included in Appendix K, *Public Services Correspondence*, of this DEIR.

5.15.1 Environmental Setting

5.15.1.1 REGULATORY BACKGROUND

Water Supply and Distribution Systems

Federal

Federal Clean Water Act

The Clean Water Act (CWA) establishes regulatory requirements for potable water supplies, including raw and treated water quality criteria.

State

Urban Water Management Planning Act

The Urban Water Management Planning Act (California Water Code, Division 6, Part 2.6, §§ 10610 et seq.) was enacted in 1983 and applies to municipal water suppliers that serve more than 3,000 customers or supply more than 3,000 acre-feet per year of water. The Urban Water Management Plan (UWMP) Act requires these suppliers to prepare and update their UWMPs every five years to demonstrate an appropriate level of reliability in supplying anticipated short-term and long-term water demands during normal, dry, and multiple-dry years. The UWMP Act specifies the data necessary to document the existing and projected future water demand over

a 20-year projection and requires that the projected demands be presented in 5-year increments for the 20-year projection.

The City of San Juan Capistrano adopted the 2015 UWMP in April 2018. The UWMP evaluates citywide water supply and demand reliability for 20 years into the future. San Juan Capistrano's 2015 UWMP concluded there was an adequate and reliable supply of water to provide for existing demand and estimated growth through year 2040, based on information then available.

Senate Bills 610 and 221, Water Supply Planning

Senate Bill 610 (SB 610) (2001) amended the Urban Water Management Planning Act to mandate that a city or county approving certain projects subject to CEQA: 1) identify any public water system that may supply water for the project and 2) request those public water systems to prepare a specified water supply assessment.[1] The assessment must include:

- A discussion of whether the public water system's total projected water supplies available during normal, single dry, and multiple dry water years during a 20-year projection would meet the projected water demand associated with the Proposed Project, in addition to the public water system's existing and planned future uses, including agricultural and manufacturing uses.
- The identification of existing water supply entitlements, water rights, or water service contracts relevant to the identified water supply for the Proposed Project and water received in prior years pursuant to those entitlements, rights, and contracts.
- A description of the quantities of water received in prior years by the public water system under the existing water supply entitlements, water rights, or water service contracts.
- A demonstration of water supply entitlements, water rights, or water service contracts.
- The identification of other public water systems or water service contract holders that receive a water supply or have existing water supply entitlements, water rights, or water service contracts with the same source of water as the public water system.
- Additional information is required if groundwater is included in the supply for the Proposed Project.

The water supply assessment must be included in any environmental document prepared for the project and may include an evaluation of any information in that environmental document. The assessment must determine if the projected water supplies will be sufficient to satisfy the demands of the project as well as existing and planned future uses.

Additionally, SB 610 requires new information to be included as part of a UWMP if groundwater is identified as a source of water available to the supplier. Information must include a description of all water supply projects

[1] Under Water Code § 10912(a)(7), SB 610 applies to a CEQA project that "would demand an amount of water equivalent to, or greater than, the amount of water required by a 500 dwelling unit project." Additional criteria are listed in Section 5.15.2.4, *Cumulative Impacts*. A water supply assessment was prepared for the Proposed Project.

and programs that may be undertaken to meet total projected water use. SB 610 prohibits eligibility for funds from specified bond acts until the UWMP is submitted to the state.

Furthermore, SB 221 requires written verification that there is sufficient water supply available for applicable new residential subdivisions. The verification must be provided before commencement of construction.

20x2020 Water Conservation Plan

The 20x2020 Water Conservation Plan, issued by the Department of Water Resources in 2010 pursuant to the Water Conservation Act of 2009 (SBX7-7), established a water conservation target of 20 percent reduction in water use by 2020 compared to 2005 baseline use.

Governor's Drought Declaration

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

On April 1, 2015, Governor Brown issued Executive Order B-29-15, finding that, among other things, "…conditions of extreme peril to the safety of persons and property continue to exist in California due to water shortage and drought conditions…" and ordering the "State Water Resources Control Board [to] impose restrictions to achieve a statewide 25 percent reduction in potable urban water usage through February 28, 2016."

On February 2, 2016, based on Governor Brown's November 2015 Executive Order, the State Water Board approved an updated and extended emergency regulation that continues mandatory reductions through October 2016, unless revised before then. The extended regulation continues the conservation structure that has spurred dramatic savings so far and gives greater consideration to some factors that influence water use: climate; population growth; and significant investments in new local, drought-resilient water supplies such as wastewater reuse and desalination.

Recognizing persistent yet less severe drought conditions throughout California, on May 18, 2016, the State Water Board adopted an emergency water conservation regulation that replaces the February 2 emergency regulation. The May 2016 regulation will be in effect from June 2016 through January 2017 and requires locally developed conservation standards based upon each agency's specific circumstances. It replaces the prior percentage reduction-based water conservation standard with a localized "stress test" approach. These standards require local water agencies to ensure a three-year supply assuming three more dry years like the ones the state experienced from 2012 to 2015. Water agencies that would face shortages under three additional dry years are required to meet a conservation standard equal to the amount of shortage.

Executive Order B-40-17 lifted the drought emergency in California counties except for Fresno, Kings, Tulare, and Tuolumne. The executive order retains prohibitions on wasteful water use and advances measures for water conservation in the state.

California Green Building Standards

California Green Building Standards (CALGreen) Code, Division 4.3, Water Efficiency and Conservation, establishes provisions to conserve water used indoors, outdoors, and in wastewater conveyance in residential development. CALGreen is updated on a three-year cycle; the current 2019 CALGreen took effect in January 2020.

Local

Municipal Code

Title 6, Chapter 11 (Water Management) provides requirements to protect the public water supply of the City from the possibility of contamination or pollution; to promote the elimination or control of existing cross-connections between the customer's in-plant potable water system and nonpotable water systems, plumbing fixtures, and industrial piping systems; and to provide for the maintenance of a continuing program of cross-connection control that will systematically and effectively prevent the contamination or pollution of all potable water systems.

The City adopted an Urgency Ordinance in June 2015 (Municipal Code Title 6, Chapter 12) updating the City's Water Conservation policy in response to the California Governor's drought emergency declaration and water conservation regulations issued by the State Water Resources Control Board. The ordinance sets forth permanent water conservation requirements as well as a Water Shortage Contingency Plan consisting of five stages of water shortages with restrictions and prohibitions on water use for each phase.

Title 8, Chapter 20, Water Efficient Landscape Ordinance, establishes quality and sustainability of landscaping irrigation systems related to runoff, efficient water use, and landscape health and diversity.

Wastewater Treatment and Collection

Federal

Federal Clean Water Act

The CWA establishes regulations to control the discharge of pollutants into the waters of the United States and regulates water quality standards for surface waters (US Code, Title 33, §§ 1251 et seq.). Under the act, the US Environment Protection Agency (USEPA) is authorized to set wastewater standards and runs the National Pollutant Discharge Elimination System (NPDES) permit program. Under the NPDES program, permits are required for all new developments that discharge directly into Waters of the United States. The federal CWA requires wastewater treatment of all effluent before it is discharged into surface waters.

General Pretreatment Regulations for Existing and New Sources of Pollution

The General Pretreatment Regulations establish responsibilities of federal, state, and local government; industry; and the public to implement National Pretreatment Standards to control pollutants that pass through or interfere with treatment processes in publicly owned treatment works (POTW) or which may contaminate sewage sludge. Pretreatment standards are pollutant discharge limits that apply to industrial users.

State

State Water Resources Control Board: Statewide General Waste Discharge Requirements

The General Waste Discharge Requirements specify that all federal and state agencies, municipalities, counties, districts, and other public entities that own or operate sanitary sewer systems greater than one mile in length that collect and/or convey untreated or partially treated wastewater to a publicly owned treatment facility in California need to develop a sewer master plan. The plan evaluates existing sewer collection systems and provides a framework for undertaking the construction of new and replacement facilities in order to maintain proper levels of service. The master plan includes inflow and infiltration studies to analyze flow monitoring and water use data, a capacity assurance plan to analyze the existing system with existing land use and unit flow factors, a condition assessment and sewer system rehabilitation plan, and a financial plan with recommended capital improvements and financial models.

Regional

San Diego Regional Water Quality Control Board NPDES Permit

Wastewater treatment requirements for effluent from the JB Latham Treatment Plant in Dana Point, which treats wastewater from the Project Site, are set forth in Order No. R9-2012-0012 as amended by Order No. R9-2014-0105 and issued by the San Diego Regional Water Quality Control Board (RWQCB) in 2012.

The South Orange County Wastewater Authority (SOCWA), which owns and operates the Latham plant and three other wastewater treatment plants, has established limits on concentrations of various substances that may be discharged into sewers conveying wastewater to SOCWA facilities—including metals, certain toxins, oil and grease, and radioactive materials—for the protection of its facilities, the public, and the environment. The limits are set forth in SOCWA Ordinance 2015-1.

Solid Waste

Federal

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act of 1976 (Title 40 of the Code of Federal Regulations), Part 258, contains regulations for municipal solid waste landfills and requires states to implement their own permitting programs incorporating the federal landfill criteria. The federal regulations address the location, operation, design (liners, leachate collection, run-off control, etc.), groundwater monitoring, and closure of landfills.

State

Assembly Bills 939, 341, and 1826

Assembly Bill 939 (Integrated Solid Waste Management Act of 1989; Public Resources Code §§ 40050 et seq.) established an integrated waste-management system that focused on source reduction, recycling, composting, and land disposal of waste. AB 939 required every California city and county to divert 50 percent of its waste from landfills by the year 2000. Compliance with AB 939 is measured in part by comparing solid waste disposal rates for a jurisdiction with target disposal rates. Actual rates at or below target rates are consistent with AB 939. AB 939 also requires California counties to show 15 years of disposal capacity for all jurisdictions in the county or show a plan to transform or divert its waste.

Assembly Bill 341 (Chapter 476, Statutes of 2011) increased the statewide solid waste diversion goal to 75 percent by 2020. The law also mandates recycling for commercial and multifamily residential land uses as well as schools and school districts.

Assembly Bill 1826 (California Public Resources Code Sections 42649.8 et seq.), signed into law in September 2014, requires recycling of organic matter by businesses generating such wastes in amounts over certain thresholds. This law also requires that local jurisdictions across the state implement an organic waste recycling program to divert organic waste generated by businesses, including multifamily dwellings that consist of five or more units. Single-family dwellings are not required to recycle food waste including food-soiled paper.

California Green Building Standards Code

The 2019 California Green Building Standards Code (CALGreen; Title 24, California Code of Regulations, Part 11) requires that at least 65 percent of the nonhazardous construction and demolition waste from residential construction operations be recycled and/or salvaged for reuse.

Local

Municipal Code

City of San Juan Capistrano Municipal Code Sections 6-3.08 et seq. require construction and demolition projects in the City to divert at least 65 percent of construction materials from landfills.

Stormwater Drainage

Federal

Clean Water Act

The federal CWA is the principal statute governing water quality. It establishes the basic structure for regulating discharges of pollutants into the waters of the United States and gives the USEPA authority to implement pollution control programs, such as setting wastewater standards for industry. The statute's goal is to completely end all discharges and to restore, maintain, and preserve the integrity of the nation's waters. The CWA regulates direct and indirect discharge of pollutants; sets water quality standards for all contaminants in surface waters; and makes it unlawful for any person to discharge any pollutant from a point source into navigable waters

unless a permit is obtained under its provisions. The CWA mandates permits for wastewater and stormwater discharges; requires states to establish site-specific water quality standards for navigable bodies of water; and regulates other activities that affect water quality, such as dredging and the filling of wetlands. The CWA funds the construction of sewage treatment plants and recognizes the need for planning to address nonpoint sources of pollution. Section 402 of the CWA requires a permit for all point source (a discernible, confined, and discrete conveyance, such as a pipe, ditch, or channel) discharges of any pollutant (except dredge or fill material) into waters of the United States.

National Pollutant Discharge Elimination System

Under the NPDES program (under Section 402 of the CWA), all facilities that discharge pollutants from any point source into Waters of the United States must have a NPDES permit. The term "pollutant" broadly applies to any type of industrial, municipal, and agricultural waste discharged into water. Point sources can be POTWs, industrial facilities, and urban runoff. (The NPDES program addresses certain agricultural activities, but the majority are considered nonpoint sources and are exempt from NPDES regulation.) Direct sources discharge directly to receiving waters, and indirect sources discharge to POTWs, which in turn discharge to receiving waters. Under the national program, NPDES permits are issued only for direct, point-source discharges. The National Pretreatment Program addresses industrial and commercial indirect dischargers. Municipal sources are POTWs that receive primarily domestic sewage from residential and commercial customers. Specific NPDES program areas applicable to municipal sources are the National Pretreatment Program, the Municipal Sewage Sludge Program, Combined Sewer Overflows, and the Municipal Storm Water Program.

The NPDES has a variety of measures designed to minimize and reduce pollutant discharges. All counties with storm drain systems that serve a population of 100,000 or more, as well as construction sites one acre or more in size, must file for and obtain an NPDES permit. Another measure for minimizing and reducing pollutant discharges to a publicly owned conveyance or system of conveyances (including roadways, catch basins, curbs, gutters, ditches, man-made channels, and storm drains designed or used for collecting and conveying stormwater) is the EPA's Storm Water Phase I Final Rule. The Phase I Final Rule requires an operator (such as a city) of a regulated municipal separate storm sewer system (MS4) to develop, implement, and enforce a program (e.g., best management practices [BMPs], ordinances, or other regulatory mechanisms) to reduce pollutants in postconstruction runoff to the City's storm drain system from new development and redevelopment projects that result in the land disturbance of greater than or equal to one acre. In California, the EPA has delegated implementation of NPDES regulations to the State Water Resources Control Board. Nine RWQCBs exercise rulemaking and regulatory activities in nine regions or "basins." The City of San Juan Capistrano is in the jurisdiction of the San Diego RWQCB. The MS4 permit for the part of Orange County in the San Diego RWQCB region is Order No. R9-2013-0001, as amended by Order Nos. R9-2015-0001 and R9-2015-0100. The San Diego RWQCB enforces the MS4 permit respecting co-permittees on the specified permit, including the City of San Juan Capistrano. The City is responsible for controlling or limiting urban pollutants generated by construction and post-construction activities from reaching their MS4s. The Proposed Project is, therefore, subject to the requirements of the South Orange County MS4 Permit as it is applied by the permittee and its co-permittees.

Energy (Electric Power and Natural Gas)

State

California Energy Commission

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

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

California Building Code: Building Energy Efficiency Standards

Energy conservation standards for new residential and non-residential buildings were adopted by the California Energy Resources Conservation and Development Commission (now the CEC) in June 1977. Title 24 requires the design of building shells and building components to conserve energy. The standards are updated periodically to allow for consideration and possible incorporation of new energy efficiency technologies and methods. On June 10, 2015, the CEC adopted the 2016 Building Energy Efficiency Standards, which went into effect on January 1, 2017. The 2019 Building Energy Efficiency Standards went into effect January 1, 2020.

The 2019 standards move toward cutting energy use in new homes by more than 50 percent and will require installation of solar photovoltaic systems for single-family homes and multifamily buildings of three stories and less. The 2019 standards focus on four key areas: 1) smart residential photovoltaic systems; 2) updated thermal envelope standards (preventing heat transfer from the interior to exterior and vice versa); 3) residential and nonresidential ventilation requirements; and 4) nonresidential lighting requirements. Under the 2019 standards, nonresidential buildings will be 30 percent more energy efficient compared to the 2016 standards, and single-family homes will be 7 percent more energy efficient. When accounting for the electricity generated by the solar photovoltaic system, single-family homes would use 53 percent less energy compared to homes built to the 2016 standards.

California Building Code: CALGreen

As described earlier in this section, CALGreen was adopted as part of the California Building Standards Code and established planning and design standards for sustainable site development, energy efficiency (in excess of the California Energy Code requirements), as well as water conservation and material conservation, both of which contribute to energy conservation. The 2019 standards are in effect as of January 1, 2020.

2012 Appliance Efficiency Regulations

The 2012 Appliance Efficiency Regulations (Title 20, CCR Sections 1601 through 1608) include standards for both federally regulated appliances and non–federally regulated appliances. Though these regulations are now often viewed as "business as usual," they exceed the standards imposed by all other states, and they reduce reducing energy demand as well as greenhouse gas (GHG) emissions.

Electric Utility Industry Restructuring Act: Assembly Bill 1890 (1996)

The California Public Utilities Commission regulates investor-owned electric power and natural gas utility companies in California. AB 1890, enacted in 1996, deregulated the power generation industry, allowing customers to purchase electricity on the open market. Under deregulation, the production and distribution of power that were under the control of investor-owned utilities (e.g., Southern California Edison) were decoupled.

5.15.1.2 EXISTING CONDITIONS

Water

The City of San Juan Capistrano Utilities Department provides water to the Project Site. The Project Site is in Service Area 437N. The Utilities Department provides water services to an approximately 14.4 square-mile service area that includes 206 miles of water lines and nine active boost pump stations (San Juan Capistrano 2020). The City obtains its water from three sources: groundwater treated for potable use; low-quality groundwater used for irrigation; and imported water. The Project Site is currently vacant and does not generate a demand for water.

On January 21, 2020, the City Council approved an annexation agreement that will transfer the City's water and sewer systems to the Santa Margarita Water District (SMWD). According to SMWD, the transfer is anticipated to be completed by the summer of 2021 (KHR 2020a).

Groundwater

Potable Groundwater

The City produces groundwater from the San Juan Valley Groundwater Basin, which spans about 26 square miles in valleys in south Orange County, extending about 17 miles inland. The City produces water from eight wells, and groundwater is forecast to comprise about 61 percent of City supplies over the 2020-2040 period. The water is treated for potable use at the City's Groundwater Recovery Plant (GWRP), which has capacity of 6.2 million gallons per day (mgd) (San Juan Capistrano 2018). GWRP production was impacted by the drought and reduced groundwater availability, which cut production to 2 mgd or less since the late summer of 2015 (San Juan Capistrano 2018).

Nonpotable Groundwater

The City produces nonpotable groundwater from two additional City wells, amounting to about 0.45 mgd, for irrigation use on landscaping and golf courses. The City anticipates that it will obtain 1.25 mgd of nonpotable groundwater by 2030 from the Santa Margarita Water District and Moulton Niguel Water District, and that its

nonpotable supplies will be about 1.76 mgd—that is, about 23 percent of City water supplies—in 2035-2040. The City expects to get nearly all its nonpotable water from SOCWA by 2035 (San Juan Capistrano 2018).

The San Juan Valley Basin (Basin) is managed by the San Juan Basin Authority; the City has rights to the first 5,800 acre-feet per year from the Basin under a 2002 Implementation Agreement between the City and the Basin Authority (San Juan Capistrano 2018).

Imported Water

The City purchases water from the Municipal Water District of Orange County that is imported from the Colorado River and from northern California via the SWP. Imported water is forecast to comprise about 22 percent of City water supplies over the 2020-2040 period (San Juan Capistrano 2018). The Colorado River Aqueduct is owned and operated by the Metropolitan Water District of Southern California (MWD), and the SWP is owned and operated by the California Department of Water Resources. Water diversions from the Colorado River are governed under a 2003 agreement between four southern California water agencies, the State of California, and the US Department of the Interior. Water supplies available via the SWP are determined by the Department of Water Resources via contracts with the 29 SWP contractors, and are subject to various legal and regulatory constraints, including federal court decisions pursuant to the federal Endangered Species Act.

Water Supplies Summary

Table 5.15-1 summarizes water supplies by source over the 2015-2040 period.

Table 5.15-1 City of San Juan Capistrano Water Supplies Summary by Source (acre-feet per year)

Source	2015	2020	2025	2030	2035	2040
Groundwater, potable (GWRP)	2,572	4,800	4,800	4,800	4,800	4,800
Groundwater, non-potable and recycled water	502	1,900	1,918	1,918	1,918	1,918
Imported Water	5,457	1,918	1,918	1,918	1,918	1,918
Total	**8,531**	**8,618**	**8,688**	**8,688**	**8,688**	**8,688**

Source: City of San Juan Capistrano 2015 Urban Water Management Plan.

Water Conveyance

The San Juan Capistrano Utilities Department operates 206 miles of water lines and nine booster pump stations. Existing water mains adjacent to the Project Site include a 24-inch water main in Rancho Viejo Road and a 12-inch water main in Malaspina Road. There is also a separate 8-inch reclaimed water main in Rancho Viejo Road, and another 16-inch water main that parallels the I-5 freeway.

The Project Site is currently vacant and does not generate a water demand.

Fire Flow

Public fire hydrants are currently located on-site within an easement for a public water line, as well as along the east side of Rancho Viejo Road to the north of the site (north of Malaspina Road) and to the south of the site (adjacent the Fluidmaster property to the south). Fire flow tests, conducted by the Orange County Fire Authority at on-site public hydrants #10 (tested for flow) and #15 (tested for static pressure), indicated a static pressure of 70 pounds per square inch (psi), a residual pressure of 68 psi, an observed flow of 650 gallons per minute (gpm), and a flow of 3,697 gpm calculated at 20 psi.

The locations of the two fire hydrants tested, as well as the existing water pipeline network in proximity to the Project Site, are depicted in Figure 4 of the Water Study (contained in Appendix M to this DEIR).

Wastewater

The South Orange County Wastewater Authority operates three wastewater treatment plants: the JB Latham Treatment Plant, the Regional Treatment Plant, and the Coastal Treatment Plant. The City of San Juan Capistrano, including the Project Site, is served by the Latham Plant in Dana Point, which has a capacity of 13 mgd (SOCWA 2020). Existing wastewater flow to the plant is about 6.7 mgd, leaving a remaining capacity of approximately 6.3 mgd. Effluent from the Latham Plant is discharged to the San Juan Creek Ocean Outfall and is not used as recycled water (OC Public Works 2018).

Wastewater Conveyance

The City operates and maintains a sanitary sewer collection and conveyance system that includes 120 miles of pipeline up to 27 inches in diameter and two lift stations (San Juan Capistrano 2020). There is an existing 8-inch sewer main in Rancho Viejo Road. The Project Site is currently vacant and does not generate wastewater.

Solid Waste

The City of San Juan Capistrano contracts with CR&R Environmental Services, a private waste hauler, to collect and dispose of solid waste. CR&R collects trash, recyclable materials, and organic waste.

The solid waste collected in the city is transported to two landfills operated and maintained by the County of Orange Waste and Recycling. In 2018, about 99 percent of the solid waste landfilled from San Juan Capistrano was disposed of at two landfills: the Prima Deshecha Sanitary Landfill in San Juan Capistrano, and the Frank Bowerman Sanitary Landfill in Irvine (CalRecycle 2019a). The two landfills combined have capacity for about 339.3 million cubic yards of solid waste; average daily disposal of about 10,141 tons; and residual daily disposal capacity of approximately 5,359 tons per day, as shown below in Table 5.15-2.

Table 5.15-2 Landfills Serving San Juan Capistrano

Landfill	Remaining Capacity (in cubic yards)	Maximum Permitted Daily Disposal (in tons)	Average Daily Disposal (in tons)[1]	Residual Daily Disposal Capacity (in tons)	Estimated Closing Date
Prima Deshecha Sanitary Landfill 32250 Avenida La Pata San Juan Capistrano, CA 92675	134,300,000	4,000	1,864	2,136	2102
Frank Bowerman Sanitary Landfill 11002 Bee Canyon Road Irvine, CA 92602	205,000,000	11,500	8,277	3,223	2053
Total	**339,300,000**	**15,500**	**10,141**	**5,359**	—

Sources: CalRecycle 2019b, 2019c, 2019d.
[1] Average daily disposal is calculated from 2019 annual disposal based on 300 operating days per year; each landfill is open six days per week, Monday through Saturday, except certain holidays.

The Project Site is currently vacant and does not generate solid waste.

Stormwater Drainage

Based on the Preliminary Drainage Study prepared for the Proposed Project (and contained as an appendix to the Initial Study in Appendix A), Rancho Viejo Road slopes from south to north and Malaspina Road slopes from east to west. The Project Site receives runoff from the hillside on its east portion. The hillside has concrete storm ditches that direct runoff onto the site from two different directions toward the easterly parking lot. Runoff on the property flows westerly toward Rancho Viejo Road along the curb and gutter until it is collected by one of six catch basins near the western property line. All catch basins connect to the City's storm drain lines, which are 15, 18, 21, 36, 42, and 48 inches in diameter. The City storm drain line runs from the southeast corner of the Project Site to the southern portion of the site, passing through the Interstate 5 and residential areas on Camino Capistrano Street to the west. Runoff then travels into San Juan Creek and disperses into the Pacific Ocean at Doheny State Beach (KHR Associates 2020c).

Energy (Electricity and Natural Gas)

San Diego Gas & Electric (SDGE) provides electrical service to the Project Site through a grid of transmission lines and related facilities. SDGE also provides natural gas service to San Juan Capistrano, including the Project Site, through a system of transmission lines, distribution lines, and supply regulation stations. SDGE is a regulated public utility that provides energy service to 3.6 million people through 1.4 million electric meters and 873,000 natural gas meters, spanning 4,100 square miles in San Diego and southern Orange counties. The parent company to SDGE is Sempra Energy (SDGE 2020).

SDGE's total mid-electricity[2] consumption was 21,505 gigawatt-hours (GWh) in 2015 and is forecast to increase to 24,695 GWh in 2028 (CEC 2017). (One GWh is equivalent to one million kilowatt-hours.)

Total natural gas supplies available to SDGE in the year 2019 is estimated at 574 million cubic feet per day (MMCF/day). Supplies are forecasted to remain constant at 574 MMCF/day from 2020 through 2035. Total natural gas consumption in SDGE's service area is forecast to decline slightly from 302 MMCF/day in 2019 to 286 MMCF/day in 2035 (CGEU 2018).

The Project Site is currently vacant and does not generate electricity or natural gas demand.

Telecommunication Facilities

The Project Site is currently developed and in an urbanized area. A variety of companies provide cable, telephone, and internet service in San Juan Capistrano, including Cox Communications and AT&T.

5.15.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project:

U-1 Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.

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

U-3 Result in a determination by the waste water 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.

U-4 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.

U-5 Comply with federal, state, and local management and reduction statutes and regulations related to solid waste.

[2] CEC forecast include three scenarios: a high energy demand case, a low energy demand case, and a mid-energy demand case. The high energy demand case incorporates relatively high economic/demographic growth, relatively low electricity and natural gas rates, and relatively low efficiency program and self-generation impacts. The low energy demand case includes lower economic/demographic growth, higher assumed rates, and higher efficiency program and self-generation impacts. The mid case uses input assumptions at levels between the high and low cases.

The Initial Study, included as Appendix A, substantiates that impacts associated with the following thresholds would be less than significant:

- Threshold U-5

This impact will not be addressed in the following analysis.

5.15.3 Plans, Programs, and Policies

Water

PPP U-1 The Proposed Project shall comply with applicable provisions from the San Juan Capistrano Municipal Code, Title 6, Chapter 11, addressing water management, Title 6, Chapter 12, addressing water conservation, and Title 8, Chapter 20, Water Efficient Landscape Ordinance.

Wastewater

PPP U-2 The Proposed Project will be designed, constructed, and operated in accordance with the South Orange County Wastewater Authority (SOCWA) Ordinance 2015-1. All wastewater discharges into SOCWA facilities shall be required to comply with the discharge standards set to protect the public sewage system.

Solid Waste

PPP U-3 The Proposed Project shall comply with Section 4.408.2 of the 2019 California Green Building Code Standards, which requires new development projects to submit and implement a construction waste management plan in order to reduce the amount of construction waste transported to landfills.

PPP U-4 The Proposed Project shall divert waste in compliance with AB 939.

PPP U-5 The Proposed Project will store and collect recyclable materials in compliance with AB 341. Green waste will be handled in accordance with AB 1826.

PPP U-6 The Proposed Project shall comply with San Juan Capistrano Municipal Code, Sections 6-3.08 et seq., which require construction and demolition projects in the city to divert at least 65 percent of construction materials from landfills.

Stormwater Drainage

PPP U-7 The General Permit for Storm Water Discharges Associated with the Construction and Land Disturbance Activities is NPDES No. CAS000002. Compliance requires filing a Notice of Intent, a Risk Assessment, a Site Map, a Storm Water Pollution Prevention Plan (SWPPP) and associated best management practices (BMPs), an annual fee, and a signed certification statement. Also, the County requires preparation of an erosion and sediment control plan for

projects that disturb more than one acre of land and implementation of BMPs to control erosion, debris, and construction-related pollutants.

PPP U-8 The MS4 Permit requires new development and redevelopment projects to:

- Control contaminants into storm drain systems
- Educate the public about stormwater impacts
- Detect and eliminate illicit discharges
- Control runoff from construction sites
- Implement best management practices and site-specific runoff controls and treatments for new development and redevelopment

PPP U-9 The Proposed Project would be required to comply with the San Juan Capistrano Municipal Code, Title 8, Chapter 14, Water Quality Regulations, which contains regulations pertaining to best management practices and control of urban runoff from new development and construction.

Energy

PPP U-10 The development of the Proposed Project shall comply with applicable regulations of the California Building Code, California Green Building Standards, and Energy Code as amended by the City of San Juan Capistrano Municipal Code.

PPP U-11 All new appliances would comply with the 2012 Appliance Efficiency Regulations (California Code of Regulations, Title 20, Sections 1601 through 1608).

5.15.4 Environmental Impacts

5.15.4.1 IMPACT ANALYSIS

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

Impact 5.15-1: Existing facilities would be able to accommodate project-generated utility demands. [Threshold U-1]

Water

The Proposed Project would consist of 188 residential units, which includes 107 single-family units and 81 multifamily units, which would result in a residential population of 581 residents. As shown in Table 5.15-3, the Proposed Project is estimated to generate a demand of 104,580 gallons per day (gpd).

Table 5.15-3 Water Demand

Land Use Type	No. of Residents	Water Flow (GPCD)	Residential Units (gpd)	Average Daily Demand (gpm)
Single-Family Residential	331	180	59,580	41.37
Multifamily Residential	250	180	45,000	31.25
		TOTAL	**104,580**	**72.62**

Source: KHR Associates, 2020a.

The Proposed Project would comply with California state law regarding water conservation measures, such as Title 24 of the California Government Code regarding the use of water-efficient appliances. In addition, the Proposed Project would comply with the City's local water conservation measures, such as Municipal Code Title 8, Chapter 20, Water Efficient Landscape Ordinance, which establishes quality and sustainability of landscaping irrigation systems related to runoff, efficient water use, and landscape health and diversity. The Proposed Project incorporates a number of water conservation elements, including a landscape design that includes drought-tolerant, low- and moderate-water-use plants and meets San Juan Capistrano's Water Efficient Landscape Guidelines.

Based on the City's 2015 UWMP, the City's current total potable water demand is approximately 8,029 acre-foot/year (AFY) and has a water supply of 8,531 AFY. This shows that the City has a remaining capacity of approximately 502 AFY. The Proposed Project would generate a demand of approximately 117 AFY; Therefore, there is sufficient capacity to serve the Proposed Project. In addition, as shown in Table 5.15-1, the City's water supply would increase to approximately 8,688 AFY by 2025. Various factors determine the water demand projection, such as local climate conditions and the evolving hydrology of the region, demographics, land use characteristics, and economics. The Proposed Project would change the land use characteristics at the Project Site from industrial to residential. The Project Site has been vacant since 2013, therefore, currently does not consume any water. The City's total water demand is comprised of 10 percent of non-residential use, which includes commercial, industrial, governmental and institutional uses, 60 percent of residential use (single-family and multi-family), and landscaping and other demand account for approximately 30 percent. Therefore, the proposed change to residential use from industrial would increase the overall water demand composition stated in the 2015 UWMP. However, in terms of demographics, the City's population forecast assumed in the 2015 UWMP is more than the current population; the 2015 UWMP indicated that the population in 2015 was 39,047, and projected that the population would increase to 41,991 in 2020, an increase of 2,944 service population. The existing population (2018) is 35,952 and with the Proposed Project, the population would increase to 36,533. Therefore, the total service population for the City is still within the projections assumed in the 2015 UWMP, and would not increase. The City forecasts that it will have sufficient water supplies to meet demands over the 2020-2040 period in normal, single-dry-year, and multiple-dry-year conditions. Further, MWD's 2015 UWMP finds that it can meet, full-service demands of its member agencies starting 2020 through 2040 during normal, single-dry-year, and multiple-dry-year conditions (San Juan Capistrano 2018). The City is in the process of transferring its water services to SMWD. The 2015 UWMP prepared for SMWD shows that the SMWD has an existing water demand of approximately 26,910 AFY and has a water supply of 34,405 AFY. SMWD has sufficient capacity to accommodate the Proposed Project (SMWD 2016). The 2015 UWMP for SMWD finds that water supplies are projected to meet full-service demands. In addition, MWD finds that it can meet full

service demands for its member agencies between 2020-2040 period during normal, single-dry-year, and multiple-dry-year conditions (SMWD 2016). Therefore, the Proposed Project would not require the City nor SMWD to obtain new or expanded water supplies.

The Proposed Project would build water lines on-site to serve the proposed residential dwelling units. As shown in Figure 3-9, *Water and Wastewater Utility Plan*, the Proposed Project would have two points of connection to existing waterlines adjacent to the Project Site. The Proposed Project would connect to the 24-inch water line in Rancho Viejo Road via a waterline through the main entry. A second point of connection would be on the southeast corner of the Project Site, connecting a proposed 8-inch water line to an existing 10-inch water line in the driveway of Fluidmaster. On-site water lines would be 8 inches. Aside from connecting to existing waterlines, the Proposed Project would not require the expansion of or construction of new water lines outside the Project Site.

Based on the per capita water consumption rate of 180 (GPCD), the total domestic water usage by the Proposed Project is anticipated to be 104,580 gallons per day (gpd). As discussed below, the Project Site would be adequately served by existing water facilities, including both water supplies and water conveyance infrastructure. The construction of the Proposed Project would not require construction of new or expanded wastewater treatment facilities. Therefore, the Proposed Project would result in a less than significant impact with regard to domestic water use.

Recycled Water

The Proposed Project would also connect to the existing 8-inch recycled waterline on Rancho Viejo for landscape irrigation. Recycled water is wastewater that is treated through primary, secondary and tertiary processes and is acceptable for most non-potable water purposes such as irrigation, and commercial and industrial process water per Title 22 requirements. The City's recycled water is a blend of imported recycle water and non-domestic water from low quality wells.

Fire Flow

As discussed above, the Proposed Project would have a domestic water demand of approximately 104,580 gpd. Peaking factors of 2.25 for Maximum Daily Demand (MDD) and 3.38 for Peak Hour Demand (PHD) provided in the California Code of Regulations (§64554 New and Existing Source Capacity) were referenced for the peaking factors used in the Water Report. The factors were increased to be conservative.

The breakdown for Average Daily Demand (ADD), MDD, and PHD for the single-family and multi-family units is provided below:

- MDD = 4.0 x ADD
- PHD = 6.0 x ADD

As shown in Table 5.15-4, the Proposed Project would result in a MDD of 290.48 gallons per minute and a PHD of 435.72 gallons per minute.

Table 5.15-4 Maximum Daily Demand and Peak Hour Demand

Land Use	ADD (gpm)	MDD (gpm)	PHD (gpm)
Single-Family	41.37	165.48	248.22
Multi-Family	31.25	125.00	187.50
TOTAL	**72.62**	**290.48**	**435.72**

Source: KHR Associates, 2020a.

The projected total water demand during a fire is typically taken to be the combined demand of the MDD, fire sprinkler demand[3], and fire hydrant demand[4]. The site will produce a total of 290.48 gpm at MDD, the residential buildings will have fire sprinklers which will require 300 gpm each, and there will be two active hydrants with a demand of 1,500 gpm each for a total of 3,000 gpm. This adds up to 3,590 gpm[5], and is used to design the system to ensure that the necessary fire flow is available at all fire hydrant combinations (see appendix to the Water Study [Appendix M] for this analysis). A minor friction loss calculation was used for adjustment towards the flow. A pipe friction factor of 130 was used for a Ductile Iron Pipe (DIP) material.

The total water demand using peak hour demand, fire sprinkler demand, and fire hydrant demand is 3,735 gpm[6].

Hydraulic Grade line at Fixed Grade Node

The Water Study analyzed the hydraulic grade line in the water pipeline system to determine if it would be sufficient to deliver fire water to the highest building elevation. The Water Study calculated head with Rancho Viejo Road at residual pressure 68 psi. The available hydraulic grade line at fixed grade node is 430.70 feet. The Proposed Project's required head would be 292.92 feet. The Water Study concluded that the hydraulic grade line provides more than adequate head to deliver fire water to the roof of the highest building of the Proposed Project.

Project Site Water Distribution

The Water Study calculated fire flow rates in gallons per minute (gpm) at existing and new on-site fire hydrants under twelve scenarios (1A through 1M[7]) to meet the required demand of 3,590 gpm for fire, domestic at MDD, and sprinkler system flowing simultaneously. The fire flow calculation method is described in above Fire Flow subheading. Water distribution calculations show that the MDD of 3,590 gpm for water flowing simultaneously to fire hydrants, domestic water use, and sprinkler system is met under all twelve scenarios. An additional calculation was run at the most critical scenario to show that the PHD of 3,735 gpm for water flowing simultaneously to fire hydrants, domestic water use, and sprinkler system is met under all scenarios.

[3] Fire Sprinkler Demand (per Building Floor Area Demand NFPA 13) = 300.00 gpm
[4] Fire Hydrant Demand 1,500.00 gpm (minimum) = 1,500.00 gpm. Based on two 1,500 gpm fire hydrant at 20 psi (minimum allowable per 50% reduction for sprinkler system per UFC Appendix III for Type V - n hr. construction), Maximum building area and type per Site Plan.
[5] Equation: MDD + Fire Sprinkler (1) + Fire Hydrant (2) = 290.48gpm + 300gpm + (2 x 1,500gpm) = 3,590gpm
[6] Equation: PHD + Fire Sprinkler (1) + Fire Hydrant (2) = 435.72gpm + 300gpm + (2 x 1,500gpm) = 3,735gpm
[7] No Scenario 1I.

Appendix to the Water Study (Appendix M) shows the water demand and pressure at each fire hydrant and fire sprinkler used in different scenarios, and water flow and velocity calculated for each scenario.

The Water Study indicates adequate water pressure and flow to meet a sustained 1,500 gpm at both public hydrants flowing simultaneously (3,000 gpm, total), along with domestic water at MDD being delivered at 290.48 gpm and fire sprinklers flowing at 300 gpm. Fire water service can be provided for the Proposed Project without adversely impacting the City's existing water system. Therefore, the Proposed Project would result in a less than significant impact in regards to fire flow.

Conclusion

The Proposed Project would be designed to provide appropriately-sized new domestic and fire water services, and on-site water systems to meet projected demands during a major fire event. The Proposed Project would be required to comply with all applicable federal, state, and local laws and regulations regarding water use and management, such as Municipal Code Section Title 5, Chapter 11, Water Management. Therefore, the Proposed Project would result in a less than significant impact.

Wastewater

A sewer modeling analysis was prepared for the Proposed Project (see Appendix N). The 2016 updated version of the City's hydraulic model of the sanitary sewer system was used to evaluate the impact of the estimated flows from the Proposed Project. The results from the model were used to assess the sewer capacity, pipe velocities, and depth-to-diameter (d/D) ratios in the City's collection system downstream of the Proposed Project, as well as any potential impact to the City's allocated treatment plant capacity in the City's 2004 Sanitary Sewer Master Plan. Estimated flows from the Proposed Project were evaluated with existing system dry-weather and wet-weather flows as well as the ultimate master plan buildout conditions.

The Proposed Project would have three 8-inch sewer-main lateral connections from the Project Site to the existing 8-inch sewer main in Rancho Viejo Road. The sewer manhole connection points are designated in the hydraulic model as D06121, D06120, and a new manhole immediately south.

Based on the distribution of individual house connections, the average and peak flow in each main lateral is as follows:

- **Average Flows**
  - North sewer main lateral to existing manhole D06121: 52 percent or 0.050 cubic feet per second (cfs)
  - Mid sewer main lateral to existing manhole D06120: 21 percent or 0.020 cfs
  - Main entrance sewer main lateral to new manhole: 27 percent or 0.026 cfs
- **Peak Flows**
  - North sewer main lateral to existing manhole D06121: 0.155 cfs
  - Mid sewer main lateral to existing manhole D06120: 0.063 cfs
  - Main Entrance sewer main lateral to new manhole: 0.080 cfs

The total average daily flow for the Proposed Project is therefore 0.096 cfs, or approximately 62,046 gallons per day (gpd). Projected flows were reviewed using the Municipal Code Section 9-4.523 capacity standard of 110 gallons per capita per day and an occupancy factor of about three persons per dwelling unit. Based on the proposed 188 residential units, the projected wastewater flow for the Proposed Project would be 62,040 gpd. A peaking factor of 3.1 was used for average daily flow. Therefore, the proposed wastewater flows are in conformance with the City's municipal code.

Hydraulic Model

The H20MAP Sewer hydraulic computer model of the City's sanitary sewer system was used to evaluate the estimated flows from the development. The hydraulic modeling and evaluation were performed using the following scenarios:

- **Baseline Scenarios**
  - Existing Dry Weather Flow Baseline Conditions
  - Existing Wet Weather Flow Baseline Conditions
  - Master Plan Dry Weather Flow Baseline Conditions
  - Master Plan Wet Weather Flow Baseline Conditions

- **Proposed Project Scenarios**
  - Existing Dry Weather Flow Conditions with Proposed Project Flows
  - Existing Wet Weather Flow Conditions with Proposed Project Flows
  - Master Plan Dry Weather Flow Conditions with Proposed Project Flows
  - Master Plan Wet Weather Flow Conditions with Proposed Project Flows

Proposed average daily wastewater flows from the Proposed Project were input into the hydraulic model at Manholes D06121, D06120, and new manhole immediately to the south. A dry weather diurnal flow curve for the Proposed Project was input into the model in accordance with previously generated diurnal flow curves for similar development. Figure 1 of the Sewer Study shows a vicinity map of the study area and the collection system in the vicinity of Proposed Project. As indicated, the existing 8-inch sewer line in Rancho Viejo Road collects flow from the adjacent properties along the eastern side. Sewer flows then proceed to the north and then west along Junipero Serra Road. From here, flows are conveyed south along Camino Capistrano and eventually to the southern part of the city. Figure 2 of the Sewer Study shows the location of the downstream collection system prior to discharge to the JB Latham wastewater treatment plant.

Evaluation

Each hydraulic model scenario was evaluated using the 48-hour flow hydrograph with peaking factors and diurnal flow curve, as previously described. An extended period simulation was performed for the hydraulic analysis.

A city sewer is considered hydraulically deficient if it exceeds a pipe's maximum depth-to-diameter ratio (d/D) based the city's master plan criteria. For pipes 12 inches and less, the d/D ratio for the dry weather design flow

should not exceed 0.5, and for sewer lines 15 inches and larger, the maximum ratio is 0.75. For wet weather flows, the maximum sewer capacity is a depth of flow (d) equal to or less than 100 percent of the diameter (D), i.e., a d/D ratio less than or equal to 1.0 (depth of 8 inches for an 8-inch diameter sewer). Note that wet weather flow is the rainwater that enters the sewer from a 4-year storm event as monitored for the City's 2004 Master Plan.

Tetra Tech reviewed the capacity and hydraulic conditions in all of the sewer trunk lines downstream of the points of connection of the proposed residential flows. Average and peak flows as well as d/D ratios for both dry weather and wet weather conditions were reviewed.

For the City's existing sewer system, Table 1 of the Sewer Study summarizes the hydraulic model results at three key locations for existing baseline conditions and the inclusion of the proposed residential flows from the Proposed Project:

- **Location 1:** 8-inch sewer line segment immediately downstream of the flow addition on Ranch Viejo Road at Malaspina Road (Pipe 5D54, D06121D061131)
- **Location 2:** 12-inch sewer on Junipero Serra Road at Camino Capistrano (Pipe 64D5D, C06170C061121)
- **Location 3:** 24-inch sewer trunk line as the last City segment running parallel to San Juan Creek (Pipe 12520, B17105/B171021)

For the ultimate master plan conditions, Table 2 of the Sewer Study summarizes the model analysis for both the average and peak flows and d/D ratios at the key pipe segments, comparing both baseline conditions and proposed residential flows.

For Location 1, the existing baseline 8-inch sewer line includes flows based on an industrial usage pattern, which is primarily during the daytime hours. The hydraulic model indicates existing peak flows are about 35,000 gpd. The actual current flows may be less since the existing industrial building is abandoned. The existing average and peak d/D ratios are 0.05 and 0.09, respectively, indicating minimal flow in this pipe segment. The average and peak d/D ratios for this segment with the Proposed Project increase to 0.12 and 0.17, respectively.

At the intersection of Junipero Serra Road and Camino Capistrano (Location 2) in the existing 12-inch sewer line, the d/D ratio increases under average daily flow conditions from a baseline of 0.26 to 0.29, which includes the Proposed Project flows. These d/D capacity ratios conform to the recommended pipe capacity criteria. Wet weather flow conditions were also reviewed for these trunk lines and do not exceed the recommended pipe capacity limits.

For Location 3, Pipe 12520 is a 24-inch line at the downstream end of the City's collection system, and the hydraulic model indicates a d/D ratio increase from the Proposed Project of 0.01—from 0.42 to 0.43 at average dry weather flow conditions and from 0.59 to 0.60 at peak flow conditions—which is less than the maximum acceptable capacity ratio of 0.75. The analysis indicates that the City's downstream trunk lines can support the additional flows from the Proposed Project both for existing conditions and ultimate buildout conditions.

Treatment Plant

SOCWA operates the JB Latham Regional Treatment Plant, which is a conventional activated sludge wastewater treatment with secondary treatment design liquid treatment capacity of 13.0 mgd. The City of San Juan Capistrano, which is one of four member agencies that own treatment capacity in the Latham Plant, owns 4.0 mgd of this capacity. For the current existing baseline conditions, the average daily City wastewater flow to the treatment plant is estimated at 3.82 mgd. The proposed residential flows from the Proposed Project will add an average daily flow of 0.06 mgd to the City's total capacity, for a total flow of 3.88 mgd. Ultimate master plan average daily flow conditions will increase the baseline flow from 4.50 mgd to 4.56 mgd.

In addition, as discussed above, the JB Latham Treatment Plant has a remaining capacity of approximately 6.3 mgd (OC Public Works 2018). The Proposed Project's wastewater generation represents less than 1 percent of the remaining capacity at the JB Latham Treatment Plant.

Conclusion

The results from the Sewer Study indicate that there would not be a significant impact from the Proposed Project flows discharging into the City's sewer collection system at the source and downstream to the wastewater treatment plant.

The Proposed Project would not require the expansion or construction of new wastewater lines outside the Project Site. The Project Site would be adequately served by existing wastewater facilities, including both wastewater treatment capacity and conveyance infrastructure. The construction of the Proposed Project would not require construction of new or expanded wastewater treatment facilities. Therefore, the Proposed Project would result in a less than significant impact.

Solid Waste

Construction

Construction of the Proposed Project would demolish an approximately 123,000-square-foot industrial building and auxiliary structures on-site, which are currently vacant, and construct 188 dwelling units. Demolition of the existing building and associated structures on-site would result in demolition debris. In addition, construction waste would be generated in the form of excess building materials used during the construction phase. No other significant volume of refuse would be generated by construction activities. The Proposed Project would be required to comply with San Juan Capistrano Municipal Code Section 6-3.08, which requires construction and demolition projects to divert at least 65 percent of construction materials from landfills. Solid waste from construction activities would be accommodated by the County's existing landfills. No additional waste-hauling vehicles would be required during the demolition and construction phases of the Proposed Project (Dibley 2020). Therefore, the Proposed Project would not have the potential to cause significant impacts related to solid waste generation during construction, and impacts would be less than significant.

Operation

Solid waste generated by the Proposed Project would be collected by CR&R and hauled to either the Prima Deshecha Landfill or the Frank Bowerman Landfill. Together, these two landfills currently process an average of approximately 10,141 tons per day, with a maximum capacity of 15,500 tons per day. Therefore, the Prima Deshecha Landfill and Frank Bowerman Landfill currently have residual capacity of 5,359 tons per day and currently operate at approximately 65.4 percent of the combined daily design capacity.

Project operation is estimated to generate about 1,478.7 pounds per day (0.74 ton per day) of solid waste (Table 5.15-5). Therefore, the total solid waste generated by the Proposed Project represents less than one percent of the remaining capacity of the Prima Deshecha Landfill and Frank Bowerman Landfill's currently available daily capacity; there is adequate capacity to serve the Proposed Project. The Proposed Project would comply with AB 341 and AB 1826, which require that multifamily residential land uses have recycling and organic waste recycling. Additionally, CR&R has indicated that it would not need additional vehicles to service the Proposed Project (Dibley 2020). Impacts would be less than significant.

Table 5.15-5 Solid Waste Generation

Land Use Type	Solid Waste Generation (pounds per dwelling unit per day)	Proposed Project	Total per Day (lbs/day)
Single-Family Residential	9.8	107 du	1,048.6
Multifamily Residential	5.31	81 du	430.1
	TOTAL	**188 units**	**1,478.7 lbs/day**

Source: CalRecycle. 2020e.

Stormwater Drains

The Proposed Project would increase impervious surfaces on the Project Site from approximately 8.39 acres to 13.40 acres, a net increase of approximately 32 percent (KHR Associates 2020b).

Runoff on the Project Site currently flows westerly toward Rancho Viejo Road along the curb and gutter until it is collected by one of the six catch basins near the westerly property line. All catch basins connect to the City's storm drain, which runs from the southeast corner of the Project Site to the southern portion, passing through the Interstate 5 and residential areas on Camino Capistrano Street to the west.

As discussed in Chapter 3, *Project Description*, the Proposed Project would provide drainage systems on-site that would connect to the City storm drain network, which includes catch basins throughout the Project Site. These catch basins would connect to a City storm drain line with a 42-inch storm drainpipe that increases to a 48-inch storm drainpipe. To manage Project Site runoff, the proposed stormwater facilities would follow water quality treatment control best management practices—specifically, modular wetlands. These modular wetlands, which would be located throughout the Project Site, would collect water from the catch basins and treat it before it goes into the City storm drains.

The Hydrology Report prepared for the Proposed Project determined that the Proposed Project would increase flow rate compared to existing conditions. However, the on-site storm drain system (including tanks) would have a capacity to store up to 15,692 cubic feet of water, which is sufficient to hold the required volume of stormwater before the runoff is allowed to be discharged into the existing storm drain pipe (KHA Associates 2020). The Proposed Project would further incorporate a number of site design best management practices. The Proposed Project would result in a less than significant impact to stormwater drains.

Energy

Electricity

Project operation is expected to use approximately 1.34 million kilowatt hours (kWh) annually (refer to Table 5.4-2 in Section 5.4, *Energy*). Total mid-electricity consumption in SDGE's service area is forecast to increase by approximately 3,190 GWh between 2015 and 2028 (CEC 2017). The Proposed Project would generate less than 1 percent of the anticipated energy demand growth between 2015 and 2028. The electricity demand due to the project is within the forecast increase in SDGE's electricity demands. Buildout of the Specific Plan would connect to existing utility infrastructure. As discussed in Section 3, *Project Description*, all on-site dry utilities would be provided through underground infrastructure except the above-ground transformers. Project development would not require SDGE to obtain new or expanded electricity supplies, and impacts would be less than significant.

Natural Gas

Project operation is estimated to use about 0.0132 MMCF/day (or 4.88 million kilo British thermal units per year; refer to Table 5.4-3 in Section 5.4, *Energy*). SDGE's natural gas capacity are forecasted to remain constant at 574 MMCF/day between 2020 and 2035. Total natural gas consumption in SDGE's service area is forecast to decline slightly from 302 MMCF/day in 2019 to 286 MMCF/day in 2035 (CGEU 2018). Therefore, SDGE would have sufficient natural gas supplies to meet project gas demands. The Proposed Project would connect to existing utility infrastructure and would not require SDGE to obtain new or expanded gas supplies. Impacts would be less than significant.

Furthermore, the Proposed Project would comply with the requirements of the current California Building Energy and Efficiency Standards (Title 24, Part 6) and the California Green Building Standards Code (CALGreen) (Title 24, Part 11).

Telecommunications

Primary telecommunication providers in the City of San Juan Capistrano include AT&T and Cox Communications. Construction of the Proposed Project would not increase the demand for telecommunication facilities. As discussed in Section 5.11, *Population and Housing*, the Proposed Project's 188 dwelling units are anticipated to generate approximately 581 new residents and would be within SCAG's population and housing growth forecast for the City. The Proposed Project's increase of 581 residents and 188 dwelling units would therefore not generate a significant increase in demand for telecommunication services. The Proposed Project would be served by existing telecommunication facilities and would not necessitate the need for new

telecommunication facilities. The Proposed Project's impacts on telecommunication services would be less than significant.

Level of Significance Before Mitigation: Less Than Significant.

Impact 5.15-2: Available water supplies are sufficient to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years. [Threshold U-2]

As discussed under Impact 5.15-1, the City and SMWD forecast that it will have sufficient water supplies to meet demands over the 2020-2040 period in normal, single-dry-year, and multiple-dry-year conditions. Further, MWD's 2015 UQMP finds that it can meet full-service demands of its member agencies starting 2020 through 2040 during normal, single-dry-year, and multiple-dry-year conditions (San Juan Capistrano 2018 and SMWD 2016). Therefore, the Proposed Project would not require the City to obtain new or expanded water supplies.

Level of Significance Before Mitigation: Less Than Significant.

Impact 5.15-3: Project-generated wastewater could be adequately treated by the wastewater service provider for the project. [Threshold U-3]

The Proposed Project would connect to existing sewer lines around the Project Site, as shown in Figure 3-9, *Water and Wastewater Utility Plan*, in Chapter 3, *Project Description*.

The Proposed Project would increase sewer flows from existing conditions. As discussed under Impact 5.15-1, the Proposed Project's wastewater generates represents less than 1 percent of the JB Latham Treatment Plant's remaining capacity. There is adequate residual wastewater treatment capacity in the region for project-generated wastewater, and buildout of the Proposed Project would not require construction of new or expanded wastewater treatment facilities.

Level of Significance Before Mitigation: Less Than Significant.

Impact 5.15-4: Existing facilities would be able to accommodate project-generated solid waste and comply with related solid waste regulations. [Thresholds U-4]

As discussed under Impact 5.15-1, the solid waste generated by the Proposed Project would represent less than 1 percent of the remaining daily capacity of Prima Deshecha and Frank Bowerman landfills. Therefore, the existing facilities would be able to accommodate the project-generated solid waste. Construction and operation of the Proposed Project would comply with all applicable regulatory requirements. During construction, the Proposed Project would comply with City of San Juan Capistrano Municipal Code Section 6-3.08, which requires construction and demolition projects to divert at least 65 percent of construction materials from landfills. The multifamily residential portion of the Proposed Project would comply with AB 341 and AB 1826.

Level of Significance Before Mitigation: Less Than Significant.

5.15.5 Cumulative Impacts

Water

Other cumulative projects in the service area would increase water demands. The City forecasts that it will have sufficient water supplies over the 2020-2040 period to meet water demands. Other projects of certain sizes and types would be required to have water supply assessments prepared. If the City did not already have sufficient projected water supplies for such projects, it would be required to provide its plans for acquiring the needed supplies, including the cost and time frame needed. The City would be required to consider the results of water supply assessments in its CEQA findings on such projects. Cumulative impacts would be less than significant, and project impacts would not be cumulatively considerable.

Wastewater

SOCWA operates three wastewater treatment plants that have a combined design treatment capacity of 31.7 million gallons per day. Because the Proposed Project would represent less than 1 percent of the average daily influent of the JB Latham Treatment Plant, SOCWA is expected to have adequate wastewater treatment capacity for wastewater generation by cumulative developments in its service area. No significant cumulative impact is anticipated, and buildout of the Proposed Project would not contribute to a significant cumulative impact.

Solid Waste

Cumulative impacts are considered for Orange County, the service area for OC Waste and Recycling, which owns and operates three landfills—Frank R. Bowerman, Prima Deshecha Landfill, and Olinda Alpha Landfill. City of San Juan Capistrano is primarily served by the Frank R. Bowerman and Prima Deshecha Landfills, and therefore, solid waste generate by the proposed project and cumulative projects would be sent to these two landfills. The Frank R. Bowerman and Prima Deshecha Landfill have a combined daily maximum throughput of 15,500 tons per day. Frank R. Bowerman Landfill has a remaining capacity of 205,000,000 cubic yards, and an estimated cease date of 2053 (CalRecycle 2019c). Prima Deshecha Land fill has a remaining capacity of 134,300,000 cubic yards, and an estimated cease date of 2102 (CalRecycle 2019b). Therefore, there is adequate landfill capacity to accommodate the existing and future projects in the city. No significant cumulative impact to landfill capacity would occur, and the Proposed Project would not contribute to a significant cumulative impact.

Stormwater Drainage

Development projects in the watershed may increase the amount of impervious surfaces in the watershed and therefore may increase flow rates and volumes of runoff entering storm drains in the region. Other projects in the watershed would be required by MS4 permits to be sized and designed to ensure on-site retention of the volume of runoff produced from a 24-hour, 85th percentile storm event, which is similar to a two-year storm. Other impacts to storm drainage would be analyzed in separate CEQA processing for each cumulative project, and mitigation measures would be required as appropriate to minimize significant impacts.

Energy

The area considered for cumulative impacts to electricity and natural gas supplies and facilities is SDGE's service area. Forecast total electricity and natural gas supplies for the service areas are identified above. Similar to the Proposed Project, other projects would increase electricity and natural gas demands.

Electricity demand forecasts are based on climate zones; economic and demographic growth forecasts from Moody's Analytics, IHS Global Insight, and the California Department of Finance; forecast electricity rates; effects of reasonably foreseeable energy efficiency and energy conservation efforts; anticipated partial electrification of portions of the transportation sector, including increasing adoption of light-duty plug-in electric vehicles; demand response measures, such as electricity rates that increase during high-demand times of day; and effects of climate change (CEC 2017).

Natural gas demand forecasts are based on economic outlook; California Public Utilities Commission–mandated energy efficiency standards and programs; renewable electricity goals; and conservation savings linked to Advanced Metering Infrastructure (CGEU 2018).

It is anticipated that electricity and natural gas demands by most other projects would be accounted for in the above-referenced demand forecasts. Similar to the Proposed Project, each development would be required to comply with Title 24, which contains energy efficiency measures. Projects would be subject to independent CEQA review, including analysis of impacts to electricity and natural gas supplies. Implementation of all feasible mitigation measures would be required for any significant impacts identified. Cumulative impacts would be less than significant, and project impacts would not be cumulatively considerable.

Telecommunications

As discussed in section 5.11, *Population and Housing*, the Proposed Project and cumulative projects are within the planned growth forecast for the City. Therefore, the Proposed Project and cumulative projects would not generate a significant increase in demand for telecommunication services. No significant cumulative impacts on telecommunication services would occur, and the Proposed Project would not contribute to a significant cumulative impact.

5.15.6 Level of Significance Before Mitigation

Upon implementation of regulatory requirements and standard conditions of approval, the following impacts would be less than significant: 5.15-1, 5.15-2, 5.15-3, and 5.15-4.

5.15.7 Mitigation Measures

No mitigation measures are required.

5.15.8 Level of Significance After Mitigation

The Proposed Project would result in a less than significant impact prior to mitigation. No mitigation measures are required.

5.15.9 References

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