5.17 UTILITIES AND SERVICE SYSTEMS

This section of the Draft Environmental Impact Report (DEIR) discusses the current conditions for utility providers, including water, wastewater, stormwater, solid waste, electricity, and natural gas services, and the effects of the Laguna Niguel City Center Mixed Use Project (proposed project) on these providers. The analysis in this section is based, in part, on the following technical studies:

- *Town Center Water Supply Assessment*, Dudek, December 2019.
- *Laguna Niguel Town Center Project, Water Supply Assessment*, written correspondence from Matt Collings, Assistant General Manager of Moulton Niguel Water District, November 15, 2021.

A complete copy of this study and the letter from the Moulton Niguel Water District (MNWD) are in the technical appendices to this Draft EIR (Appendices N1 and N2).

5.17.1 Wastewater Treatment and Collection

5.17.1.1 ENVIRONMENTAL SETTING

Regulatory Background

Federal

Clean Water Act

The Clean Water Act 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, Section 1251 et seq.). Under the act, the US Environment Protection Agency 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 Clean Water Act 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 or that may contaminate sewage sludge. Pretreatment standards are pollutant discharge limits which 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 need to develop a sewer master plan if they 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. 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

South Orange County Wastewater Authority NPDES Permits

Wastewater discharge requirements for the South Orange County Wastewater Authority (SOCWA) wastewater treatment plants are detailed in NPDES No. CA0107417 (Order No. R9-2012-0012 as amended by Order No. R9-2014-0105 and Order No. R9-2017-0013) and NPDES No. CA0107611 (Order No. R9-2012-0013). The permits include the conditions needed to meet minimum applicable technology-based requirements. The permit includes limitations more stringent than applicable federal technology-based requirements where necessary to achieve the required water quality standards.

South Orange County Wastewater Authority Ordinance 2015-1

The purpose of the SOCWA Waste Discharge Pretreatment and Source Control Program (County ordinance 2015-1) is to comply with the federal pretreatment standards. The ordinance prevents the introduction of pollutants that may interfere with sewerage facilities operations and prevent biosolids contamination.

The ordinance details rules and regulation related to fats, oils, and grease and gives the wastewater district enforcement tools, including a permit system, to control these substances coming into the sewer system.

Moulton Niguel Water District Standards Specifications

The MNWD "Standard Specifications for Construction of Potable Water, Recycled Water, and Wastewater Facilities" details design criteria for water mains, recycled water facilities, and sewer pipes. The document gives applicants (developer/builder) a general understanding of the design criteria for sewer facilities associated with new development or redevelopment projects (MNWD 2018).

Local

Laguna Niguel Municipal Code

The Municipal Code identifies land use categories, development standards, and other general provisions that ensure consistency between the City's General Plan and proposed development projects. The following provision from the Municipal Code regulates wastewater services:

- **Division 4 (Sanitary Sewer Collection Systems).** This division regulates the City's sanitary sewer collection system with detailed sewer design criteria and plan check requirements. Sewer construction standards are also detailed, including allowed material types, earthwork requirements, manhole standards, and inspections.

Existing Conditions

The MNWD provides sewer service to Laguna Niguel, including the project site. Wastewater from the MNWD's service area is treated at three SOCWA treatment plants and the 3A Treatment Plant, which is jointly owned by Santa Margarita Water District and MNWD. The treatment plants are listed in Table 5.17-1.

Table 5.17-1 SOCWA Wastewater Treatment Facilities

Facility and City	Design Capacity (mgd)	Average Daily Flows (mgd)	Residual Capacity (mgd)
Regional Treatment Plant, Laguna Niguel	12	8.5	3.5
J. B. Latham Treatment Plant, Dana Point	13	6.7	6.3
3A Treatment Plant, Mission Viejo	6	2	4
Coastal Treatment Plant, Laguna Beach	6.7	2.9	3.8
Total	**37.7**	**19.4**	**18.3**

Sources: SOCWA 2019a, 2019b, 2019c; San Diego RWQCB 2012; SMWD 2019; Emami 2020.
Notes: mgd = million gallons per day

Two existing land uses generate wastewater on-site: the county maintenance yard and the Laguna Niguel Library. It is assumed that wastewater generation is 95 percent of indoor water demand.[1] The library is a one-story building of approximately 14,400 square feet; therefore, wastewater generation by the library is estimated at 862 gallons per day (gpd). The county maintenance yard consists of two single-story buildings—one permanent, one modular—totaling about 9,100 square feet. Wastewater generated by the maintenance yard is approximately 778 gpd. Therefore, the total wastewater generation on-site is estimated at 1,668 gpd, as shown in Table 5.17-2.

Table 5.17-2 Estimated Existing Wastewater Generation On-Site

		Wastewater Generation (gpd)	
Land Use	Size (SF)	Per 1,000 SF[1]	Total
Library	14,400	61.8	890
County Maintenance Yard	9,100	85.5[2]	778
Total	**23,050**	—	**1,668**

Source: Dudek 2019.
[1] Wastewater generation factors are 95 percent of the water demand rates specified in the water supply assessment.
[2] The generation factor is for retail use; no generation factor for maintenance facilities is provided in the water supply assessment.

5.17.1.2 THRESHOLDS OF SIGNIFICANCE

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

[1] The 95 percent factor is used to account for leaks in the sewer pipes that transport the wastewater to the sewage treatment plant.

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-3 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.

5.17.1.3 PLANS, PROGRAMS, AND POLICIES

PPP USS-1 The proposed project will be designed, constructed, and operated in accordance with SOCWA Ordinance 2015-1. All wastewater discharges into SOCWA facilities shall be required to comply with the discharge standards to protect the public sewage system.

PPP USS-2 The proposed project's sewer infrastructure improvements will be designed, constructed, and operated in accordance with the applicable regulations in the Moulton Niguel Water District's standard specifications.

5.17.1.4 ENVIRONMENTAL IMPACTS

Impact Analysis

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

Impact 5.17-1: Existing facilities would be able to accommodate project-generated wastewater demands. [Threshold U-1]

Wastewater generation at project buildout is estimated to be approximately 98,665 gpd, as shown in Table 5.17-3. Wastewater generation factors for the proposed project were derived from water demand factors in the water supply assessment (WSA) based on the assumption that wastewater generation is approximately 95 percent of indoor water demand.

The existing land uses on-site are estimated to generate about 1,668 gpd of wastewater (see Table 5.17-2). The Laguna Niguel Library and the county maintenance yard would be demolished as part of the project. Therefore, the estimated net wastewater generation at project buildout would be 96,997 gpd.

Table 5.17-3 Estimated Wastewater Generation

Land Use	Quantity	Wastewater Generation (gpd)	
		Per Unit for Residential Per 1,000 SF for All Other Land Uses[1]	Total
Multifamily Residential	275 units	171	47,025
Commercial/Retail	34,340 SF	85.5	2,936
Library	16,290 SF	61.8	1,007
Office	81,451 SF	61.8	5,034
Restaurant	42,770 SF	997.5	42,663
		Total-	**98,665**
Existing Wastewater Generation	-	**-**	**(1,668)**
Net Increase	-	**-**	**96,997**

Source: Dudek 2019.
[1] Wastewater generation factors are 95 percent of the water demand rates specified in the WSA.

The SOCWA Regional Treatment Plant, which has a residual capacity of 3.5 million gallons per day (mgd), would treat the wastewater generated by the project site. This treatment plant has sufficient residual capacity for project-generated wastewater, and proposed project buildout would not require construction of new or expanded wastewater treatment facilities. Impacts would be less than significant.

MNWD has no deficiencies in the sewer system with regularly planned capital improvement projects. Furthermore, MNWD has enough capacity to serve the proposed project (Emami 2020).

Level of Significance Before Mitigation: Less than significant.

Impact 5.17-2: Project-generated wastewater could be adequately treated by the wastewater service provider for the project. [Threshold U-3]

As detailed above, the proposed project would conservatively generate a net increase of 96,997 gpd of wastewater (see Table 5.17-3). The four SOCWA wastewater treatment plants have 18.3 mgd of residual capacity to treat project-generated wastewater. SOCWA would not require the construction or expansion of existing facilities, and impacts would be less than significant.

Furthermore, the treatment plants are required by federal and state law to meet applicable standards of treatment plant discharge requirements subject to Order No. R9-2012-0013 NPDES No. CA0107611. The permit includes the conditions needed to meet minimum applicable technology-based requirements. The NPDES permit regulates the amount and type of pollutants that the system can discharge into receiving waters. The treatment plants are operating and would continue to operate in compliance with state waste discharge requirements and federal NPDES permit requirements, as described in the NPDES permit and order. Furthermore, the proposed project would comply with SOCWA Ordinance 2015-1, and sewer infrastructure improvements would be designed, constructed, and operated in accordance with the applicable regulations in the MNWD Standard Specifications.

Therefore, the additional wastewater (quantity and type) that would be generated by the proposed project would not impede the treatment plants' ability to continue to meet their wastewater treatment requirements. Impacts on wastewater treatment would be less than significant.

Level of Significance before Mitigation: With implementation of PPP US-1 and PPP US-2, Impact 5.17-2 would be less than significant.

5.17.1.5 CUMULATIVE IMPACTS

Other projects in SOCWA's service area would generate increased population and employment, thus increasing wastewater generation. SOCWA's service area is roughly similar to two areas of Orange County for which demographic projections were made in the "Orange County Projections 2014: Modified" prepared by the Center for Demographic Research at California State University, Fullerton.[2] The populations of the two regions combined are forecast to increase from 605,049 in 2015 to 675,287 in 2040, an increase of 70,238 or 11.6 percent. Employment is forecast to increase in the two combined areas by about 41,264, or 17.6 percent, between 2015 and 2040 (CDR 2016).

The total residual capacity at SOCWA's four wastewater treatment plants is about 18.3 mgd, that is, approximately 49 percent of the combined total capacity of the four facilities. The service population for the area served by the four treatment plants prepared by SOCWA includes the combination of residents and employees and totals 839,549 in 2015 and 951,051 in 2040. The net increase of residents plus employees between 2015 and 2040 is estimated at about 13.3 percent; thus, wastewater generation in SOCWA's service area is estimated to increase by about 13.3 percent between 2015 and 2040.[3] Thus, there is adequate wastewater treatment capacity in the region to accommodate wastewater generation from other existing and foreseeable future projects in combination with the proposed project, and cumulative impacts would be less than significant. Project impacts would not be cumulatively considerable.

5.17.1.6 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Upon implementation of regulatory requirements and standard conditions of approval, the following impacts would be less than significant: 5.17-1 and 5.17-2.

5.17.1.7 MITIGATION MEASURES

No mitigation measures are required.

5.17.1.8 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Impacts would be less than significant and no mitigation measures are required.

[2] The two areas, C-43 and D-40, extend from the east county boundary to the east boundary of the city of Irvine and include a small area in the southeast end of the city of Newport Beach (CDR 2012).

[3] Service population (residents plus employees) was estimated as 839,549 in 2015 and 951,051 in 2040, a net increase of 111,502. The approximately 13.3 percent increase in service population equals 111,502/839,549.

5.17.2 Water Supply and Distribution Systems

5.17.2.1 ENVIRONMENTAL SETTING

Regulatory Background

Federal

Clean Water Act

The Federal 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 of 1983 (Water Code Sections 10610 et seq.) requires water suppliers to:

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

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.[4] 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.

[4] Under Water Code Section 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 5.14.2.4, *Cumulative Impacts*. A water supply assessment was prepared for the proposed project.

- 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 WSA must include an assessment that determines if the projected water supplies will be sufficient to satisfy the demands of the project as well as existing and planned future uses. A WSA was prepared for the proposed project and is included as Appendix N1 to this DEIR.

SB 610 also requires that new information be included as part of an urban water management plan (UWMP) if groundwater is identified as a source of water available to the supplier. Information must include a description of all water supply projects 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.

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 the 2005 baseline use.

2018 Water Conservation Legislation

In 2018, the California Legislature enacted two policy bills (SB 606 and Assembly Bill [AB] 1668) to establish long-term improvements in water conservation and drought planning to adapt to climate change and longer and more intense droughts in California. The Department of Water Resources and the State Water Resources Control Board (SWRCB) will develop new standards for:

- Indoor residential water use
- Outdoor residential water use
- Commercial, industrial, and institutional water use for landscape irrigation with dedicated meters
- Water loss

Urban water suppliers are required to stay within annual water budgets based on their standards for their service areas and to calculate and report their urban water use objectives in an annual water use report. For example, SB 606 and AB 1668 define a 55-gallon-per-person daily standard for indoor residential use until 2025, when it

decreases to 52.5 gallons, and further decreases to 50 gallons by 2030. The legislation also includes changes to UWMP preparation requirements (DWR 2021).

Mandatory Water Conservation

Following the declaration of a state of emergency on July 15, 2014, due to drought conditions, the SWRCB adopted Resolution No. 2014-0038 for emergency regulation of statewide water conservation efforts. These regulations, which went into effect on August 1, 2014, were intended to reduce outdoor urban water use and persuade all California households to voluntarily reduce their water consumption by 20 percent. Water companies with 3,000 or more service connections are required to report monthly water consumption to the SWRCB. The SWRCB readopted the regulations several times, until Governor Brown issued Executive Order B-40-17 in April 2017, ending the drought emergency and directing the SWRCB to rescind portions of its existing drought emergency water conservation regulations but maintain the portions that prohibit wasteful water use practices until permanent requirements are in place. The prohibitions that are still in effect address: 1) the application of potable water to outdoor landscapes in a manner that causes excess runoff; 2) the use of a hose to wash a motor vehicle except where the hose is equipped with a shut-off nozzle; 3) the application of potable water to driveways and sidewalks; 4) the use of potable water in nonrecirculating ornamental fountains; and 5) the application of potable water to outdoor landscapes during and within 48 hours after measurable rainfall. Also, urban water suppliers are still required to submit monthly water monitoring reports to the SWRCB (SWRCB 2014).

Governor's Drought Declaration

Governor Gavin Newsom declared a drought state of emergency on April 21, 2021, and asked state agencies to partner with local water districts and utilities to make Californians aware of drought and encourage actions to reduce water usage by promoting the DWR's Save Our Water Campaign and other water conservation programs. The proclamation also included measures to be implemented by the DWR, SWRCB, the Department of Fish and Wildlife, and the Department of Food and Agriculture that include coordinated state and local actions to address issues stemming from continued dry conditions. The governor issued subsequent drought emergency proclamations on May 10 and July 8, 2021. The May 10 proclamation included further measures to be implemented by DWR, SWRCB, the Department of Fish and Wildlife, and the Department of Food and Agriculture. The July 8 proclamation called on Californians to voluntarily reduce water use by 15 percent from their 2020 levels. Suggested water conservation measures included:

- Irrigating landscapes more efficiently.
- Running dishwashers and washing machines only when full.
- Finding and fixing leaks.
- Installing water-efficient showerheads and taking shorter showers.
- Using a shut-off nozzle on hoses and taking cars to commercial car washes that use recycled water.

The SWRCB was instructed to track and report monthly on the state's progress toward achieving a 15 percent reduction in statewide urban water use compared to 2020 use.

Regional

Moulton Niguel Water District Urban Water Management Plan 2020

The MNWD UWMP is required under Water Code Sections 10610 through 10656, the Urban Water Management Planning Act, effective January 1, 1984. The act requires all urban water suppliers to prepare, adopt, and file a UWMP with DWR every five years. The MNWD UWMP outlines current water demands, sources, and supply reliability for the City by forecasting water use based on climate, demographics, and land use changes in the City. The plan also provides demand management measures to increase water use efficiency for various land use types and details a water supplies contingency plan in case of shortage emergencies.

Local

Laguna Niguel Municipal Code

- **Division 5, Article 3 (Water Efficient Landscaping Regulations).** This article establishes water-efficient landscaping regulations that apply to new construction and landscape rehabilitation projects by public agencies or private residential and non-residential projects with landscaped areas. The estimated water use allowed for landscaped areas must not exceed the calculated maximum applied water allowance or must be equivalently water efficient in a manner acceptable to the City. Irrigation of all landscaped areas is subject to penalties and incentives for water conservation and water waste prevention as determined and implemented by the local water purveyor.

Existing Conditions

MNWD provides water to the project site; it provides water to about 170,000 people in a 37-square-mile service area, including nearly all of the cities of Laguna Niguel and Aliso Viejo and parts of the cities of Laguna Hills, Mission Viejo, San Juan Capistrano, and Dana Point.

Water Supply Sources

MNWD relies on water imported by the Metropolitan Water District of Southern California (Metropolitan) through the Municipal Water District of Orange County (MWDOC) and local recycled water.

Imported Water

Historically, most of the imported supply has come from the Colorado River Aqueduct. Improvements made to Metropolitan's system now allow greater flexibility in conveying northern California supplies from the SWP to Lake Mathews and in incorporating transfers, exchanges, and storage programs into Metropolitan's supply portfolio.

Imported water is treated at Metropolitan's Robert Diemer Filtration Plant near Yorba Linda, which has capacity for 520 mgd. In 2020, MNWD imported potable water supplies amounted to 23,083 acre-feet (af).

MNWD owns capacity rights to regional pipelines that convey imported water from Metropolitan's facilities to MNWD. However, capacity rights in pipelines do not guarantee supply, which is subject to availability from Metropolitan and MWDOC. Additionally, as a matter of practice, Metropolitan does not provide annual contractual entitlements or specific allotments of imported water to its member agencies, such as MWDOC, or to local agencies that are supplied by Metropolitan member agencies. Instead, Metropolitan uses a regional framework, and its member agencies annually advise Metropolitan how much water they anticipate needing for the next five years. Metropolitan and its member agencies use an ongoing process to develop a forecast of future water demands. Through a comprehensive planning process, Metropolitan calculates regional demand projections and, together with information about existing and proposed local projects and effects of conservation, determines the amount of imported and other supplies to secure to meet the demands of its member agencies. Based on this approach, Metropolitan is able to fulfill delivery requests from its member agencies such as MWDOC, and MWDOC is able to fulfill the delivery requests from its water agency members such as MNWD (MNWD 2021).

MWDOC delivers water from Metropolitan to MNWD through two Metropolitan-operated transmission mains, the East Orange County Feeder No. 2 and the Allen-McColloch Pipeline.

Imported Water Reliability

Metropolitan's SWP supplies have been impacted by the ongoing restrictions on SWP operations in accordance with the biological opinions of the US Fish and Wildlife Service and National Marine Fisheries Service issued in 2008 and 2009, respectively. Also, the drought operations plan prepared on April 8, 2014, lays out the proposed operations and conditions of the SWP during multiple dry years to maximize regulatory flexibility while remaining within the boundaries of existing law and regulations. In dry, below-normal conditions, Metropolitan has increased the supplies received from the California Aqueduct by developing flexible Central Valley/SWP water storage and transfer programs. The goal of the storage/transfer programs is to develop additional dry-year supplies that can be conveyed with available storage and pumping capacity to maintain deliveries through the California Aqueduct during dry hydrologic conditions and regulatory restrictions.

State and federal resource agencies and various environmental and water user entities are currently engaged in developing the Bay Delta Conservation Plan/California WaterFix, aimed at addressing Delta ecosystem restoration, water supply conveyance, and flood control protection and storage development.

Storage is a major component of Metropolitan's dry year resource management strategy. Metropolitan's likelihood of having adequate supply capability to meet projected demands, without implementing its water supply allocation plan, is dependent on its storage resources.

Metropolitan evaluated supply reliability by projecting supply and demand conditions for the single- and multiyear drought cases based on conditions affecting the SWP (Metropolitan's largest and most variable supply). For this supply source, the single driest year was 1977, and the driest three-year period was 1990 to 1992. The evaluation determined that the region can provide reliable water supplies not only under normal conditions but also under both the single-driest-year and the multiple-dry-year hydrologies for the 20-year horizon and beyond.

Water Surplus and Drought Management Plan and Water Supply Allocation Plan

Metropolitan's ability to ensure water supply availability and reliability to its member agencies is based in part on its water surplus and drought management plan (WSDM). Metropolitan developed and adopted the WSDM Plan to provide policy guidance and manage regional water supply actions under both surplus and drought conditions to achieve the overall goal of ensuring water supply reliability to its member agencies. The WSDM Plan distinguishes between shortages, severe shortages, and extreme shortages. These terms have specific meanings in the WSDM Plan relating to Metropolitan's ability to deliver water to its member agency customers:

- **Shortage.** Metropolitan can meet full-service demands and partially meet or fully meet interruptible demands, using stored water or water transfers as necessary.
- **Severe Shortage.** Metropolitan can meet full-service demands only by using stored water, transfers, and possibly calling for extraordinary conservation.
- **Extreme Shortage.** Metropolitan allocates available supply to full-service customers.

Each year, Metropolitan evaluates the level of supplies available and existing levels of water in storage to determine the appropriate management stage. Each stage is associated with specific resource management actions designed to: (1) avoid an extreme shortage to the maximum extent possible; and (2) minimize adverse impacts to retail customers if an extreme shortage occurs. When Metropolitan must make net withdrawals from storage to meet demands, it is in a shortage condition. Under most shortage conditions, Metropolitan is still able to meet all end-use demands for water. Additionally, Metropolitan's Water Supply Allocation Plan (WSAP) provides a formula for allocating available water supplies to member agencies in case of extreme water shortages within Metropolitan's service area (Metropolitan 2016).

MWDOC has also developed a WSAP to allocate imported supplies at the retail level in Orange County. Under these WSAPs, the availability of imported water supplies is based primarily on the need for imported supplies relative to the total need for those supplies within the Metropolitan and MWDOC service areas (MNW 2021).

Baker Water Treatment Plant

MNWD and four other south Orange County water districts built the Baker Water Treatment Plant (WTP), a 28.1-mgd facility in Lake Forest. The Baker WTP treats raw imported water from Metropolitan and local surface water supplies potentially available from Irvine Lake. The project is intended primarily to increase the capacity to treat imported raw water from Metropolitan; it does not create a day-to-day new supply but provides increased water supply reliability to customers of MNWD and the Irvine Ranch, El Toro, Santa Margarita, and Trabuco Canyon water districts. The Baker WTP also minimizes water supply impacts in the event of emergency conditions or scheduled maintenance on the Metropolitan delivery system, such as on the Diemer Filtration Plant, Lower Feeder Pipeline, or Allen-McColloch Pipeline.

Additionally, project participants could treat and receive local surface water from Irvine Lake, which is supplied by untreated water from Metropolitan and local surface runoff. MNWD has a capacity right of approximately 8.4 mgd (9,400 acre-feet per year [afy]) from the Baker WTP.

Recycled Water

MNWD currently has 11.4 mgd of capacity for tertiary treatment that meets the recycled water requirements of the California Code of Regulations (CCR) Title 22—9 mgd (12,780 afy) capacity in the SOCWA Joint Regional WTP in Laguna Niguel and 2.4 mgd (2,690 afy) in Plant 3A in Mission Viejo. MNWD also has 1,000 af of seasonal storage for its recycled water distribution system. In 2020, MNWD's tertiary-treated recycled water supplies totaled 5,013 afy (MNWD 2021).

Water Supply Summary

MNWD water supplies are forecast to be sufficient to meet water demands in its service area over the 2025 to 2045 period in normal, single-dry, and multiple-dry year conditions. Forecast MNWD water supplies and demands in normal water conditions over this period are shown in Table 5.17-4.

Table 5.17-4 Normal Year Supply and Demand Comparison

	2025	2030	2035	2040	2045
Supply Totals	32,093	31,782	31,612	31,473	31,280
Demand Totals	32,093	31,782	31,612	31,473	31,280
Difference	**0**	**0**	**0**	**0**	**0**

Source: MNWD 2021.

Water Demands

MNWD's water use target for 2020 under the 20x2020 Water Conservation Plan was 173 gallons per capita per day—that is, a 20 percent reduction from baseline, which is average use between 1990 and 2005. The District met its 2020 target in 2010. MNWD projects that water demands in its service area will increase slightly from 28,096 afy in 2020 to 31,280 afy in 2045 (MNWD 2021).

Existing Water Demands On-Site

Based on water demand factors in the WSA, water use on-site is estimated to be approximately 1,726 gpd (see Table 5.17-5).

Table 5.17-5 Estimated Existing Water Demand On-Site

		Water Demand (gallons per day)	
Land Use	**Square Feet**	**Per 1,000 SF**	**Total**
Library	13,950	65	907
County Maintenance Yard	9,100	90[1]	819
Totals	**23,050**	NA	**1,726**

Source: Dudek 2019.
[1] No generation factor for maintenance facilities is available; therefore, the WSA conservatively used the water demand factor for retail use.

5.17.2.2 THRESHOLDS OF SIGNIFICANCE

According to Appendix G of the CEQA Guidelines and the City's CEQA Manual, 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.

5.17.2.3 PLANS, PROGRAMS, AND POLICIES

PPP USS-3 The proposed project shall implement water-efficient landscaping features in accordance with Division 5, Article 3 of the Laguna Niguel Municipal Code.

PPP USS-4 The proposed project's water infrastructure improvements will be designed, constructed, and operated in accordance with the applicable regulations in the Moulton Niguel Water District Standard Specifications.

5.17.2.4 ENVIRONMENTAL IMPACTS

Impact Analysis

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

Impact 5.17-3: Existing facilities would be able to accommodate project-generated water demands. [Threshold U-1]

The WSA estimated that buildout of the proposed project would generate a water demand of approximately 142,015 gpd, or 158.3 afy. The proposed project's potable water demand is estimated at 146.3 afy, and the recycled water demand is 12 afy. The WSA was based on land use square footages that have since been modified. The WSA overestimates indoor and outdoor water demand, but its conservative outdoor water demands are maintained here. Table 5.17-6 estimates indoor water demand based on the water demand factors in the WSA and the updated square footages for the proposed project, as shown in Chapter 3 of this DEIR. As shown in the table, the proposed project's potable water demand is 116.6 afy, and the recycled water demand remains at 12 afy.

Table 5.17-6 Estimated Water Demand at Project Buildout

Land Use[1]	Quantity	Water Demand (gpd)		Water Demand (afy)
		Per Unit for Residential Per 1,000 SF for All Other Land Uses	Total	
Multifamily Residential	275 units	180	49,500	55.4
Commercial/Retail	34,340 SF	90	3,091	3.5
Library	16,290 SF	65	1,059	1.2
Office	81,451 SF	65	5,294	5.9
Restaurant	42,770 SF	1,050	44,909	50.3
Landscape (potable water demand) [1]	4,469	55	246	0.3
Projected Potable Demand	-	-	**104,099**	**116.6**
Landscape (*recycled water demand*) [1]	194,644	55	10,705	12.0
		Total Projected Demand	**114,804**	**128.6**
		Existing Water Demand	**(1,726)** [2]	**(1.9)** [2]
		Net Increase	**113,078**	**126.7**

Source: Dudek 2019.
[1] Conservative square footage amounts from the WSA were used here. Potable water demand for landscaping is for fountains and pools. Recycled water is used for irrigation of landscaped areas.
[2] Existing water demands relate only to indoor water demands.

The MNWD issued a letter (see Appendix N2) indicating that the proposed project's water demand, as detailed in the WSA, was incorporated in the district's 2020 UWMP. The updated land use square footages, as shown in Table 5.17-6, result in a water demand that is less than the water demand allocated for the proposed project in the WSA; therefore, MNWD noted that it does not require an updated WSA.[5]

As detailed in the 2020 UWMP, MNWD has adequate water supplies to meet the demand within its service area, including the proposed project, during normal, single-dry, and multiple-dry water years over the next 20-year period.

Furthermore, the proposed project would implement the water-efficient requirements as detailed in the City's Municipal Code, and water infrastructure improvements will be designed, constructed, and operated in accordance with the applicable regulations in the MNWD Standard Specifications.

Additionally, MNWD has existing recycled water lines in the project area with enough capacity to serve the proposed project's recycled water needs (Emami 2020).

Level of Significance Before Mitigation: With implementation of PPP US-3 and PPP US-4, Impact 5.17-3 would be less than significant.

[5] It should be noted that the MNWD letter included in Appendix N2 underestimates the water demand numbers for the proposed project. The letter indicates that the water demand for the proposed project would be 77 afy, whereas this EIR anticipates a net increase of approximately 127 afy. Since the higher water demand of approximately 158 afy from the WSA was incorporated in the 2020 UWMP, MNWD's conclusion that an updated WSA is not required is still valid.

Impact 5.17-4: 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 detailed in Table 5.17-6, the proposed project would generate a water demand of approximately 114,804 gpd. The library and the county maintenance yard currently have a total water demand of 1,726 gpd. Since the maintenance yard will be demolished and the library will slightly expand, the proposed project would have a net water demand of 113,078 gpd. The WSA concluded that MNWD would have adequate water supply to serve the proposed project. Thus, MNWD would not require the construction or expansion of existing facilities.

Level of Significance Before Mitigation: Less than significant.

5.17.2.5 CUMULATIVE IMPACTS

Other projects would increase population and employment in MNWD's service area, thus increasing water demands. The population in the MNWD is estimated to increase from 170,326 in 2020 to 172,802 in 2045, an increase of 2,566 or 1.5 percent (MNWD 2021). Forecast districtwide MNWD water supplies and demands are discussed above in Section 5.17.2.1, *Environmental Setting*. MNWD forecasts that it will have sufficient water supplies to meet demands in its service area over the 2025 to 2045 period, in normal, single-dry, and multiple-dry year conditions. No significant cumulative impact would occur, and project impacts would not be cumulatively considerable.

5.17.2.6 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Upon implementation of regulatory requirements and standard conditions of approval, the following impacts would be less than significant: 5.17-3 and 5.17-4.

5.17.2.7 MITIGATION MEASURES

No mitigation measures are required.

5.17.2.8 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Impacts would be less than significant and no mitigation measures are required.

5.17.3 Storm Drainage Systems

5.17.3.1 ENVIRONMENTAL SETTING

Regulatory Background

Federal

Clean Water Act

The 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 US Environmental Protection

Agency 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 discharges of any pollutant (except dredge or fill material) into waters of the United States.[6]

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 publicly owned treatment works (POTW), 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. Nonmunicipal sources include industrial and commercial facilities. Specific NPDES program areas applicable to industrial/commercial sources are: Process Wastewater Discharges, Non-process Wastewater Discharges, and the Industrial Storm Water Program. NPDES issues two basic permit types: individual and general. Also, the Environmental Protection Agency has recently focused on integrating the NPDES program further into watershed planning and permitting (USEPA 2012).

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 Environmental Protection Agency'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 [BMP], 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 Environmental Protection Agency has delegated implementation of NPDES regulations

[6] A "point source" is a discernible, confined, and discrete conveyance, such as a pipe, ditch, or channel.

to the State Water Resources Control Board. Nine Regional Water Quality Control Boards (RWQCB) exercise rulemaking and regulatory activities in nine regions or "basins." The City 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. R9-2015-0001, issued by the San Diego RWQCB in 2015. The San Diego RWQCB enforces the MS4 permit respecting co-permittees on the specified permit, including the City. The City's public works department enforces conditions of the MS4 permit on development and redevelopment projects in the City.

Regional and Local

The San Diego RWQCB MS4 Stormwater Permit and Laguna Niguel Local Implementation Plan are described in Section 5.6, *Hydrology and Water Quality*, of this DEIR.

Existing Conditions

The majority of existing runoff by sheet flow is caught in above-grade drainage inlets throughout the project site and diverted into the City's storm drain system southeast from the site in Crown Valley Road. Under existing conditions, runoff is discharged from the site at three places:

- Runoff from the bulk of the project site drains to the south. There are several drainage devices and catch basins on the southern portion of the project site that convey collected runoff to an existing 60-inch storm drain running through the property from Pacific Island Drive in the north to Crown Valley Parkway to the southwest. This storm drain is Orange County Flood Control District Facility No. J03P07 and connects off-site to a 96-inch storm drain pipe, which conveys runoff to Sulphur Creek Channel and Sulphur Creek Reservoir.

- Surface runoff from the north end of the site flows north to Pacific Island Drive. Runoff on Pacific Island Drive flows east to the intersection with Alicia Parkway, then south along Alicia Parkway toward Crown Valley Parkway.

- Runoff drains via surface flow into Crown Valley Parkway at the drive entrance that serves both the Laguna Niguel Library and Laguna Niguel City Hall. Collected runoff then flows east along Crown Valley Parkway before entering the storm drain system discharging to Sulphur Creek Channel.

5.17.3.2 THRESHOLDS OF SIGNIFICANCE

According to Appendix G of the CEQA Guidelines and the City's CEQA Manual, 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.

5.17.3.3 PLANS, PROGRAMS, AND POLICIES

PPP HYD-1 The General Permit for Storm Water Discharges Associated with the Construction and Land Disturbance Activities, NPDES No. CAS000002. Compliance requires filing a Notice of Intent (NOI), a Risk Assessment, a Site Map, a Storm Water Pollution Prevention Plan (SWPPP) and associated best management practices (BMP), 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 HYD-2 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 BMPs and site-specific runoff controls and treatments for new development and redevelopment

PPP HYD-3 As required by the Laguna Niguel Local Implementation Plan and municipal ordinances on stormwater quality management, the proposed project must submit a priority-project-specific final Water Quality Management Plan to the City for approval prior to the City issuing any building or grading permits.

5.17.3.4 ENVIRONMENTAL IMPACTS

Impact Analysis

The following impact analysis addresses the threshold of significance, which is identified in brackets after the impact statement.

Impact 5.17-5: Existing facilities would be able to accommodate project-generated stormwater flows. [Threshold U-1]

As detailed under Impact 5.9-4 of Section 5.9, *Hydrology and Water Quality*, the proposed project would not adversely impact existing and planned stormwater drainage facilities. The following summarizes the analysis under Impact 5.9-4.

The proposed project would remove the existing 60-inch-diameter storm drain running through the property from Pacific Island Drive in the north to Crown Valley Parkway in the southwest. The storm drain would be realigned as shown in Figure 5.9-1, *Water Quality Management Plan*. It would convey flows originating from development north of the site (draining down Highlands Avenue) to the connection point at Crown Valley Parkway, bypassing the proposed project and not contributing any tributary flow. A secondary private storm

drain system would be constructed on the project site to convey the flows from the proposed project through a detention system designed for hydromodification and flood control. This detention system is proposed to be installed under the parking lot of the retail/market area on the south side of the project.

Peak runoff values for the 25-, 50-, and 100-year events are shown in the hydrology maps for the existing and proposed conditions (see Figure 5.9-2, *Existing Conditions Hydrology Map*, and Figure 5.9-3, *Proposed Conditions Hydrology Map*). The preliminary hydrology study indicates that downstream impacts would be mitigated by the proposed detention system, and the adjacent public storm drain facilities would not be adversely affected by the proposed project. Consistent with the Orange County Hydrology Manual and the Orange County Local Drainage Manual, on-site storm drains would be sized based on a 25-year frequency for overflow conditions outside the overall building envelope and 100-year frequency for areas within the enclosed proposed apartment courtyards, which are in sump conditions. Local area drains and drainage pipes (landscape applications) will be designed for a 10-year event. Events exceeding the 10-year event will flow overland in landscape areas to larger catchment devices. Catch basin, drainage pipe sizing, and final sizing for the detention basin would be calculated in the final hydrology and hydraulics report to be submitted and approved by the City's public works department prior to issuance of the construction permit. Area drains and appurtenant piping would be designed in conformance with the Orange County Hydraulics manual. All peak storm flows for the 25-, 50-, and 100-year events would be diverted into the on-site detention system before flowing into the public drain system, which would reduce peak post-development flow rates below existing conditions.

Level of Significance before Mitigation: With implementation of PPP HYD-1 and PPP HYD-3, Impact 5.17-5 would be less than significant.

5.17.3.5 CUMULATIVE IMPACTS

The area considered for hydrology and drainage impacts is the Aliso Creek Watershed. Other projects in the Aliso Creek Watershed would increase amounts of impervious surfaces and thus could generate increased runoff. However, these cumulative projects would also be required to prepare and implement water quality management plans specifying BMPs—including low-impact-development BMPs—that would minimize runoff from those sites. Therefore, related projects are not expected to cause substantial increases in runoff or require construction of substantial new or expanded municipal storm drainage systems. Cumulative impacts would be less than significant, and project impacts would not be cumulatively considerable.

5.17.3.6 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Upon implementation of regulatory requirements and standard conditions of approval, Impact 5.17-5 would be less than significant.

5.17.3.7 MITIGATION MEASURES

No mitigation measures are required.

5.17.3.8 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Impacts would be less than significant and no mitigation measures are required.

5.17.4 Solid Waste

5.17.4.1 ENVIRONMENTAL SETTING

Regulatory Background

Federal

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act of 1976, Part 258, contains regulations for municipal solid waste landfills and requires states to implement their own permitting programs incorporating the federal landfill criteria (Code of Federal Regulations Title 40). 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 and 341

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 mandated recycling for commercial and multifamily residential land uses, schools, and school districts.

Assembly Bill 1826

Assembly Bill 1826 required businesses to recycle their organic waste on and after April 1, 2016, depending on the amount of waste they generate per week (California Public Resources Code Sections 42649.8 et seq.). This law also requires that on and after January 1, 2016, local jurisdictions across the state implement an organic waste recycling program to divert organic waste generated by businesses, including multifamily residential dwellings that consist of five or more units. Single-family dwellings are not required to have a food waste diversion program.

California Green Building Standards Code

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

Local

Laguna Niguel Municipal Code

Section 9-1-45.17, Trash and Recyclable Materials Storage, is intended to implement the provisions of the California Public Resources Code Section 42900 et seq., which requires local jurisdictions to provide regulations governing adequate areas for collection and loading of recyclable materials in multiple-family residential and nonresidential development projects. This section also addresses the related subject of common trash areas in such projects.

Existing Conditions

Solid Waste Collection

CR&R Environmental Services, Inc., collects solid waste in Laguna Niguel under contract with the City.

Solid Waste Recycling and Disposal

In 2017, about 97 percent of the solid waste landfilled from Laguna Niguel was disposed of at two facilities—the Prima Deshecha Sanitary Landfill in San Juan Capistrano and the Frank Bowerman Sanitary Landfill in Irvine. Both facilities are operated by OC Waste and Recycling (CalRecycle 2019a). The two facilities are described in Table 5.17-7, *Landfills Serving Laguna Niguel.*

Table 5.17-7 Landfills Serving Laguna Niguel

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	134,400,000	4,000	1,763	2,237	2102
Frank Bowerman Sanitary Landfill 11002 Bee Canyon Road Irvine, CA 92602	170,400,000	11,500	7,631	3,869	2075
Total	**304,800,000**	**15,500**	**9,394**	**6,106**	—

Sources: CalRecycle 2019b, 2019c, 2019d; Arnua 2019.
[1] Average daily disposal is calculated from 2017 annual disposal and based on 300 operating days per year. Each landfill is open six days per week, Monday through Saturday, except certain holidays.

Compliance with AB 939 is measured in part by actual disposal rates compared to target rates for residents and employees; actual disposal rates at or below target rates are consistent with AB 939. Target disposal rates for Laguna Niguel are 6.6 pounds per day (ppd) per resident and 29.8 ppd per employee. Actual disposal rates in 2017 were 3.5 ppd per resident and 13.6 ppd per employee (CalRecycle 2019e). Thus, solid waste diversion in Laguna Niguel is consistent with AB 939.

Solid Waste Generation

Existing solid waste generation onsite is estimated at 165 pounds per day, as shown in Table 5.17-8.

Table 5.17-8 Existing Solid Waste Generation On-Site

Land Use	Quantity	Solid Waste Generation, pounds per day	
		Per Square Foot[1]	Total
Library	14,400 square feet	0.007 pound per day	101
County Maintenance Yard	9,100 square feet	0.007 pound per day	64
		Total	**165**

Source: Arnua 2019.
[1] There is no solid waste generation factor for library or maintenance facilities use; therefore, the generation factor for institutional (schools) was used to calculate solid waste generation.

5.17.4.2 THRESHOLDS OF SIGNIFICANCE

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

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.

5.17.4.3 PLANS, PROGRAMS, AND POLICIES

PPP USS-5 The proposed project shall comply with Section 4.408 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 USS-6 The proposed project shall divert waste in compliance with AB 939.

PPP USS-7 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 USS-8 Section 9-1-45.17, Trash and Recyclable Materials Storage, of the Laguna Niguel Municipal Code.

5.17.4.4 ENVIRONMENTAL IMPACTS

Impact Analysis

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

Impact 5.17-6: Existing facilities would be able to accommodate project-generated solid waste. [Threshold U-4]

Buildout of the proposed project is estimated to generate approximately 11,604 pounds of solid waste per day, a net increase of approximately 11,439 pounds per day, as shown in Table 5.17-9. Sufficient landfill capacity is available in the region for estimated solid waste generation by the proposed project, and project development would not require an expansion of landfill capacity.

Table 5.17-9 Estimated Solid Waste Generation

Land Use	Quantity	Per Unit for Residential Per SF for All Other Land Uses	Solid Waste Generation (ppd)
Multifamily Residential	275 units	12.23	3,363
Commercial/ Retail	34,340	0.0312	1,071
Offices	81,451	0.084	6,842
Library	16,290	0.007	114
Restaurant	42,770	0.005	214
		Total	**11,604**
Existing Solid Waste Generation (County Maintenance Yard and Library)			**(165)**
Net Increase, solid waste generation			**11,439**

Source: Arnua 2019.
Note: ppd = pounds per day

Furthermore, the proposed project would comply with the California Green Building Code Standards and divert waste in compliance with AB 939. Recyclable materials would be stored and collected in compliance with AB 341, and green waste would be handled in accordance with AB 1826. The project would also implement the requirements of Section 9-1-45.17 of the Laguna Niguel Municipal Code. Therefore, impacts would be less than significant.

Level of Significance Before Mitigation: With the implementation of PPP USS-6, USS-7, and USS-8, Impact 5.17-6 would be less than significant.

Impact 5.17-7: Existing facilities would comply with related solid waste regulations. [Thresholds U-4 and U-5]

AB 939, the Integrated Waste Management Act of 1989 requires all local governments to develop source reduction, reuse, recycling, and composting programs to reduce tonnage of solid waste going to landfills (California Public Resources Code Sections 40000 et seq.). Cities must divert at least 50 percent of their solid waste generation into recycling. Compliance with AB 939 is measured for each jurisdiction, in part, as actual disposal amounts compared to target disposal amounts. As described in Section 5.17.4.1 under "Existing Conditions," solid waste diversion in Laguna Niguel is consistent with AB 939.

AB 1327, the California Solid Waste Reuse and Recycling Access Act of 1991 required the California Integrated Waste Management Board to develop a model ordinance requiring adequate areas for the collection and loading of recyclable materials in development projects (California Public Resources Code Sections 42900 et seq.). Local agencies were required to adopt and enforce either the model ordinance or an ordinance of their own by September 1, 1993. Space for recyclable material storage is required by Section 9-1-45.19 of the Laguna Niguel Municipal Code, in conformance with AB 1327.

Furthermore, the proposed project is required to store and collect recyclable materials in compliance with AB 341 and handle green waste in accordance with AB 1826.

The project would comply with laws and regulations governing solid waste disposal, and impacts would be less than significant.

Level of Significance Before Mitigation: With the implementation of PPP USS-6, USS-7, and USS-8, Impact 5.17-7 would be less than significant.

5.17.4.5 CUMULATIVE IMPACTS

The area considered for cumulative impacts is Orange County, the service area of the three landfills owned and operated by OC Waste & Recycling. Other projects in Orange County would increase solid waste generation. The population of Orange County is forecast to increase by nearly 389,900, or 12.7 percent, between 2012 and 2040; employment in the county is forecast to increase by 372,400, or 24.4 percent, between 2012 and 2040 (see Section 5.12*, Population and Housing*, of this DEIR). The two landfills listed in Table 5.17-7 have combined residual daily disposal capacity of over 6,106 tons per day—that is, 39 percent of their combined maximum permitted daily disposal—and the earlier of the two facilities' estimated closing dates is 2075. There is sufficient landfill capacity in the county for solid waste generation by other projects in combination with the proposed project, and cumulative impacts would be less than significant. Project impacts would not be cumulatively considerable.

5.17.4.6 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Upon implementation of regulatory requirements and standard conditions of approval, Impacts 5.17-6 and 5.17-7 would be less than significant.

5.17.4.7 MITIGATION MEASURES

No mitigation measures are required.

5.17.4.8 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Impacts would be less than significant and no mitigation measures are required.

5.17.5 Other Utilities

5.17.5.1 ENVIRONMENTAL SETTING

Regulatory Background

State

California Energy Commission

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

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

California Building Code: Building Energy Efficiency Standards

Energy conservation standards for new residential and nonresidential 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. The 2019 Building Energy Efficiency Standards were adopted in May 2018 and went into effect January 1, 2020.

The 2019 standards move toward cutting energy use in new homes by more than 50 percent from 2016 standards 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; 4) and 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

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); and water conservation and material conservation, both of which contribute to energy conservation. The 2019 CALGreen standards became effective January 1, 2020.

2012 Appliance Efficiency Regulations

The 2012 Appliance Efficiency Regulations include standards for both federally regulated appliances and non-federally regulated appliances (20 CCR Sections 1601 through 1608). 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 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 were no longer under the sole control of investor-owned utilities (e.g., Southern California Edison).

Existing Conditions

Electricity

The project site is in the service area of Southern California Edison (SCE). Total electricity consumption in SCE's service area was 103,597 gigawatt-hours in 2020 (CEC 2022).[7]

Natural Gas

The Southern California Gas Company (SoCalGas) provides natural gas to the plan area. SoCalGas's service area spans much of the southern half of California, from Imperial County in the southeast to San Luis Obispo County in the northwest, to part of Fresno County in the north, to Riverside County and most of San Bernardino County in the east. Total natural gas demand in the year 2019 was 2,409 million cubic feet per day (MMcf/day). Available supplies are forecast to increase from 3,175 MMcf/day in 2020 to 3,435 in 2035. Total estimated natural gas consumption in SoCalGas's service area is forecast to decline from 2,462 MMcf/day in 2020 to 2,103 MMcf/day in 2035 (CGEU 2020).

5.17.5.2 THRESHOLDS OF SIGNIFICANCE

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

U-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.

[7] One gigawatt-hour is equivalent to one million kilowatt-hours.

5.17.5.3 PLANS, PROGRAMS, AND POLICIES

PPP USS-5 New buildings are required to achieve the current California Building Energy and Efficiency Standards (California Code of Regulations Title 24, Part 6) and California Green Building Standards Code (CALGreen) (Title 24, Part 11).

PPP USS-6 All new appliances would comply with the 2012 Appliance Efficiency Regulations (California Code of Regulations Title 20, Sections 1601 through 1608).

5.17.5.4 ENVIRONMENTAL IMPACTS

Impact Analysis

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

Impact 5.17-8: Existing facilities would be able to accommodate project-generated electricity and gas demands. [Threshold U-1]

Electricity

Project operation is expected to use approximately 6.44 million kilowatt hours (kWh) annually (refer to Table 5.5-2). The electricity demand generated by the proposed project would be less than 0.03 percent of the SCE's yearly electricity consumption. Project development would not require SCE to obtain new or expanded electricity supplies, and impacts would be less than significant.

Natural Gas

Project operation is estimated to use about 11.34 million kilo British Thermal Units (kBTU) per year (refer to Table 5.5-3). Available supplies are forecast to increase from 3,175 MMcf/day in 2020 to 3,435 in 2035. Total estimated natural gas consumption in SoCalGas's service area is forecast to decline from 2,462 MMcf/day in 2020 to 2,103 MMcf/day in 2035 (CGEU 2020). SoCalGas forecasts that it will have sufficient natural gas supplies to meet project gas demands, and project development would not require SoCalGas 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). All new appliances would comply with the 2012 Appliance Efficiency Regulations (Title 20, CCR Sections 1601 through 1608).

Level of Significance before Mitigation: With implementation of PPP USS-6 and PPP U-7, Impact 5.17-7 would be less than significant.

5.17.5.5 CUMULATIVE IMPACTS

The area considered for cumulative impacts to electricity supplies and facilities is SCE's service area, and the area considered for natural gas is SoCalGas's service area. Forecast total electricity and natural gas supplies for the service areas are identified above. 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, energy-efficiency standards and programs mandated by the California Public Utilities Commission, renewable electricity goals, and conservation savings linked to Advanced Metering Infrastructure (CGEU 2020).

It is anticipated that electricity and natural gas demands by most other projects would be accounted for in the demand forecasts listed above. Other projects would be subject to independent CEQA review, including analysis of impacts to electricity and natural gas supplies. Implementation of all feasible mitigation measures would be required for any significant impacts identified. Cumulative impacts would be less than significant, and project impacts would not be cumulatively considerable.

5.17.5.6 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Upon implementation of regulatory requirements and standard conditions Impact 5.17-8 would be less than significant.

5.17.5.7 MITIGATION MEASURES

No mitigation measures are required.

5.17.5.8 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Impacts would be less than significant and no mitigation measures are required.

5.17.6 References

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5. Environmental Analysis
UTILITIES AND SERVICE SYSTEMS

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