

## 4.15 Utilities and Service Systems

This section addresses the Project's potential impacts on certain utilities and services: wastewater facilities, water supply, storm water infrastructure, solid waste, and energy consumption. The water supply analysis in this section is largely based on the *Irvine Ranch Water District Preliminary Sub-Area Master Plan Addendum for the Koll Center*, prepared by David Evans and Associates, Inc. in May 2017 (DEA, 2017). This section also provides the environmental and regulatory settings and discusses mitigation measures to reduce impacts where applicable.

### 4.15.1 WASTEWATER FACILITIES

#### **Regulatory Setting**

##### ***Federal***

**Clean Water Act.** The Clean Water Act (33 United States Code §§ Section 1251 et seq.) is the cornerstone of water quality protection in the United States. The statute employs a variety of regulatory and non-regulatory tools to sharply reduce direct pollutants discharges into waterways, finance municipal wastewater treatment facilities, and manage polluted runoff. These tools are employed to achieve the broader goal of restoring and maintaining the chemical, physical, and biological integrity of the nation's waters so that they can support "the protection and propagation of fish, shellfish, and wildlife and recreation in and on the water."

**Capacity Assurance, Management, Operation, and Maintenance Program.** In January 2001, the USEPA published a proposed rule intended to clarify and expand permit requirements under the Clean Water Act to further protect public health and the environment from impacts associated with sanitary sewer overflows. The proposed rule is generally referred to as the "Capacity Assurance, Management, Operation, and Maintenance Program Regulation." The proposed Program's regulation requires development and implementation of programs intended to meet the performance standard of eliminating sanitary sewer overflows; to provide overflow emergency response plans, system evaluations, and capacity assurance plans; to conduct program audits; and to implement public communication efforts.

##### ***Regional and Local***

**Orange County Sanitation District Capital Facilities Charges.** The Orange County Sanitation District (OCSD) Capital Facilities Charge (Ordinance No. OCSD-40) is imposed when a property newly connects to the OCSD system or a previously connected property expands its use. Revenue generated from the charge is used for the acquisition, construction, and reconstruction of OCSD's wastewater collection, treatment, and disposal facilities; to repay principal and interest on debt instruments; or to repay federal or state loans for the construction and reconstruction of sewage facilities, together with costs of administration and provisions for necessary reserves.

**City of Newport Beach Sewer System Management Plan.** The Sewer System Management Plan (July 2009) provides a plan and schedule to properly manage, operate, and maintain all parts of the City's sanitary sewer system. By planning ahead and ensuring all parts are maintained, the City is able to minimize risk of sanitary sewer overflows and mitigate any that may occur. The plan also outlines the

emergency response program, operation and maintenance, overflow emergency response plan, and design and performance provisions.

**City of Newport Beach Sewer Master Plan 2010.** The 2010 Sewer Master Plan evaluates the City's existing sewer collection system and provides a framework for undertaking the construction of new and replacement facilities in order to maintain proper levels of service for the City's needs. It also ensures that the City meets the statewide General Waste Discharge Requirements issued by the State Water Resources Control Board (SWRCB), effective May 2, 2006. 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.

### **Existing Setting**

The City owns and operates a wastewater collection system that collects and transports wastewater for treatment to the Orange County Sanitation District (OCSD). The project site is an existing surface parking lot with landscaping. No wastewater is currently discharged from the site. Wastewater from the adjacent office buildings currently discharges into existing City sewer lines in Birch Street and Von Karman Avenue.

OCSD's service area encompasses 479 square miles of central and northwest Orange County, and it operates two reclamation plants (OCSD, 2017a). The City owns, operates, and maintains 21 waste water lift stations and 202.4 miles of pipeline that connect to OCSD's trunk system to convey wastewater to OCSD's treatment plants (City of Newport Beach Urban Water Master Plan [UWMP], 2016).

OCSD has two treatment plants: Plant No. 1 in Fountain Valley and Plant No. 2 in Huntington Beach. OCSD's Plant No. 1 in Fountain Valley has a capacity of 320 million gallons per day (mgd) and Plant No. 2 in Huntington Beach has a capacity of 312 mgd (City of Newport Beach UWMP, 2016). Expansion plans by OCSD are always ongoing and designed to address the incremental increase in sewage generation as a result of new development.

According to the City's UWMP, both plants share a common ocean outfall but Plant No. 1 currently provides all secondary treated wastewater to OCWD's Groundwater Replenishment System for beneficial reuse. On average, 120 mgd of effluent is sent to the Groundwater Replenishment System, a joint-project between the Orange County Water District (OCWD) and OCSD that began operating in 2008. After treatment, OCSD releases the treated water into the Pacific Ocean through a 120-inch-diameter offshore pipeline that extends five miles from the City of Huntington Beach shoreline to a discharge point approximately 200 feet below the ocean surface.

### **Thresholds of Significance**

The following significance criteria are from the City of Newport Beach Environmental Checklist. Would the Project:

**Threshold 4.15-1** Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

**Threshold 4.15-2** Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

**Threshold 4.15-5** 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?

**Environmental Impacts**

The Proposed Project would increase wastewater generation on the project site. Projected wastewater demand for the Project is shown in *Table 4.15-1*. The Project includes 260 residential dwelling units and approximately 3,000 sf of retail uses. As identified in Table 4.15-1, the projected peak wastewater generation is anticipated to be 231,958 gallons per day (gpd).

Bldg.	Land Use	Dwelling Units	Retail		Demand Factor (gpd/unit)	Average Day Demand (ADD) in GPD	Peak Demand Factor 3.15 x ADD (gpd/unit)	Peak Demand (gpd)
			Floor Area (sf)	Seats				
1	High Density Residential	87	n/a	n/a	245	21,315	770	66,990
	Retail	n/a	1,768	118	50	5,900	158	18,644
2	High Density Residential	86	n/a	n/a	245	21,070	770	66,220
	Retail	n/a	1,232	83	50	4,150	158	13,114
3	High Density Residential	87	n/a		245	21,315	770	66,990
<b>Total</b>		<b>260</b>	<b>3,000</b>	<b>201</b>	<b>n/a</b>	<b>73,750</b>	<b>2,626</b>	<b>231,958</b>

SF = square feet; GPD = gallons per day; n/a = not applicable  
 a. Residential sewer generation rates are taken from Section IV. Sewer System of the Newport Beach Design Criteria  
 b. Retail sewer generation rates are provided by *OCSD Wastewater Flow Estimates for Development Planning*. 50 gal/seat generation factor used for restaurants. 1 seat assumed per 15 sf of building space.  
 Source: DEA, 2017.

The Proposed Project includes the construction of an 8-inch sanitary sewer line in the spine street and a 6-inch sewer lateral connecting to each of the three buildings. There are three, 8-inch service connections in Birch Street and Von Karman Avenue.

Wastewater originating from the project site would ultimately be treated by facilities owned and operated by the OCSD. Project wastewater flows would be directed to OCSD’s Treatment Plant No. 1 and/or No. 2. Plant No. 1 maintains a treatment capacity of 320 mgd and currently treats an average daily influent wastewater flow of approximately 117 mgd, and Plant No. 2 maintains a treatment capacity of 312 mgd and currently treats an average daily influent wastewater flow of approximately 67 mgd.

*Table 4.15-2* summarizes facility capacities for wastewater treatment with development of the Proposed Project. As discussed above, the projected peak wastewater generation is 231,958 gpd. The remaining

capacity of the two plants would have sufficient capacity to treat project-generated wastewater. The Project would not require the construction of new wastewater treatment facilities.

Plant	Average Treatment	Capacity	Remaining Capacity	
			Existing	After Project
No. 1	117 mgd	320 mgd	203 mgd	202.96
No. 2	67 mgd	312 mgd	245 mgd	244.96
<b>Total</b>	<b>184 mgd</b>	<b>632 mgd</b>	<b>448 mgd</b>	<b>447.96</b>

mgd = million gallons per day  
 Note: Assumes half of wastewater generated by the Project goes to Plant No. 1 and half goes to Plant No. 2. However, either plant would have the capacity to treat all of the Project's wastewater.  
 Sources: OCSD, 2017b and DEA, 2017.

The wastewater treatment requirements issued by the RWQCB for OCSD's treatment plant were developed to ensure that adequate levels of treatment would be provided for the wastewater flows emanating from all land uses within its service area. Therefore, the wastewater from the Project would not cause the treatment plant to exceed these treatment requirements.

**Impact Summary:** *Less Than Significant.* Although implementation of the Project would increase generation of wastewater, Project flows would not exceed the established wastewater treatment requirements. Anticipated wastewater generation would require the construction of water and sewer pipeline facilities within the development footprint. The Project would result in less than significant impacts to wastewater facilities.

### **Cumulative Impacts**

Given the existing available capacity, the wastewater treatment needs of the Project—together with related past, present, and reasonably foreseeable future projects—would not result in the need for new or expanded wastewater treatment facilities that could result in significant environmental impacts or that could cause the wastewater treatment to exceed the capacity of the wastewater treatment facilities. The cumulative utilities impact with respect to wastewater treatment capacity would be less than significant.

The wastewater treatment requirements issued by the RWQCB for OCSD's treatment plant were developed to ensure that adequate levels of treatment would be provided for the wastewater flows emanating from all land uses within its service area. When combined with existing conditions and expected growth, the Project's estimated sewage flows would not exceed the existing or projected capacity or ability to transport sewage to the treatment plant or exceed treatment or water quality standards. No significant cumulative impact is anticipated, and the Project's contribution is not considered cumulatively considerable.

### **Mitigation Program**

#### ***Project Design Features***

No project design features have been identified by the Applicant.

***Standard Conditions and Requirements***

No standard conditions and requirements apply to the Project.

***Mitigation Measures***

No mitigation measures are required to reduce impacts to wastewater services.

**Level of Significance After Mitigation**

Potential impacts to wastewater services would be less than significant.

## 4.15.2 WATER SUPPLY

**Regulatory Setting**

**Federal Safe Drinking Water Act.** The Safe Drinking Water Act (SDWA) was originally passed by Congress in 1974 to protect public health by regulating the nation's public drinking water supply. The law was amended in 1986 and 1996, and requires many actions to protect drinking water and its sources: rivers, lakes, reservoirs, springs, and ground water wells. The SDWA applies to every public water system in the United States. The SDWA authorizes the USEPA to set national health-based standards for drinking water to protect against both naturally-occurring and man-made contaminants that may be found in drinking water. The USEPA, states, and water systems work together to make sure that these standards are met.

Originally, the SDWA focused primarily on treatment as the means of providing safe drinking water at the tap. The 1996 amendments greatly enhanced the existing law by recognizing source water protection, operator training, funding for water system improvements, and public information as important components of safe drinking water. This approach ensures the quality of drinking water by protecting it from source to tap.

**California Urban Water Management Planning Act.** The Urban Water Management Planning Act of 1983 (California Water Code §§ 10610 et seq.) requires urban water suppliers to develop urban water management plans. While generally aimed at encouraging water suppliers to implement water conservation measures, it also creates long-term planning obligations to meet existing and future needs. In accordance with the CWC, urban water suppliers with 3,000 or more service connections or supplying 3,000 or more acre-feet (AF) of water per year are required to assess the reliability of its water sources over a 20-year planning horizon and to update the data in the urban water plans every 5 years.

Demand management is a critical component of the UWMP process. This was codified in 2009 when the Water Conservation Bill of 2009 (SBX7-7) was passed. SBX7-7 requires a statewide 20 percent reduction in urban per capita water use by Dec. 31, 2020. AB 2067 and SB 1420 also speak to water use reduction strategies. As amended, the Act will require eligible water suppliers to provide a “narrative description” that addresses the nature and extent of each water demand management measure implemented over the last five years, the measures the supplier plans to implement to achieve its water use targets in accordance with SBX7-7. Urban Water Management Plans consisting of the information and details required by AB 2067 and SB 1420 were due July 1, 2016.

**Urban Water Management Plan.** The Irvine Ranch Water District's (IRWD) UWMP is required under Water Code Sections 10610 through 10656 of 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 IRWD's UWMP outlines current water demands, sources, and supply reliability to the IRWD by forecasting water use based on climate, demographics, and land use changes in the service area. 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. The IRWD adopted the updated 2015 UWMP in June 2016.

**20x2020 Water Conservation Plan.** The 20x2020 Water Conservation Plan, issued by the California Department of Water Resources (DWR) in 2010 pursuant to the Water Conservation Act of 2009 (SBX7-7), established a statewide water conservation target of 20 percent reduction in water use by 2020 compared to the State's 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. 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. 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. On April 7, 2017, the State ended the drought emergency.

#### ***City of Newport Beach Municipal Code***

- Chapter 14.16 of Title 14 of the City's Municipal Code, Water Conservation and Supply Level Regulations, seeks to reduce water consumption in the City through (1) permanent water conservation requirements during non-shortage conditions and (2) four levels of water supply shortage response actions to be implemented within the City during times of declared water shortage. The program would prevent waste or unreasonable use of water; maximize the efficient use of water; and ensure a reliable and sustainable minimum supply of water for public health, safety, and welfare. On April 25, 2017, the City Council repealed its resolution declaring a level two water supply shortage.
- Chapter 14.17 of Title 14, Water Efficient Landscaping, also establishes procedures and standards for the design, installation, and maintenance of water-efficient landscapes in conjunction with new construction projects within the City to promote the conservation and efficient use of water and to prevent the waste of available water resources.

**City of Newport Beach General Plan Natural Resources Element.** The *City of Newport Beach General Plan's* Natural Resources Element identifies the City's natural resources and policies for their preservation, development, and use. The element addresses water supply (as a resource) and water quality (including

potable drinking water). A consistency analysis of the Proposed Project's specific goals and policies with the City's relevant plans, policies, and regulations is presented in Section 4.9, *Land Use and Planning*.

### **Existing Conditions**

The project site is in the IRWD service area. IRWD serves a 181-square mile area with an estimated population of 381,470. IRWD supplies water through a mixture of imported water, surface water, groundwater, and reclaimed water (IRWD, 2016). The site is in the Irvine Business Complex (IBC) redevelopment area and has a Sub-Area Master Plan (SAMP) associated with the IBC (DEA, 2017).

### ***Imported Water Supply***

According to the IRWD UWMP, IRWD currently meets 27 percent of its potable water needs through water purchased and supplied by the Metropolitan Water District (MWD) through the Municipal Water District of Orange County (MWD OC). The potable water is a blend of Colorado River water and State Water Project (SWP) water through the Diemer Filtration Plant in Yorba Linda. The SWP is operated by the Department of Water Resources (DWR). IRWD also received potable water from the Weymouth Filtration Plan via the Orange County Feeder. IRWD also purchases untreated water supplies from MWD, as needed, to supplement its reclaimed water system during peak demand periods.

IRWD's non-potable water supplies consist of reclaimed water, untreated imported water, surface water and non-potable groundwater. The non-potable water supply includes untreated water from MWD OC and is used for certain agricultural and landscape demands that cannot be met with reclaimed water and to supplement reclaimed water system during peak months. The imported untreated water pipeline is delivered through the shared Baker Pipeline connected to MWD's system (IRWD, 2017).

### ***Groundwater***

Over 50 percent of IRWD's overall supply comes from local groundwater wells in the Orange County Groundwater Basin, Irvine Sub-Basin, and Lake Forest Area Wells (IRWD, 2016).

Orange County Water District (OCWD) manages the local groundwater resources. The Orange County Groundwater Basin is a 350-square-mile aquifer located beneath northern and central Orange County. OCWD regulates the basin by a basin production percentage. The basin production percentage is the percentage of groundwater that an agency can pump based on its total potable water demand. The average has been between 60 to 80 percent depending on groundwater conditions, but it is assumed a 70 percent will be the standard through 2040 (City of Newport Beach UWMP, 2016).

Groundwater conditions in the Orange County Groundwater Basin are influenced by the natural hydrologic conditions of rainfall, groundwater seepage and stream flow. Incidental recharge accounts for a significant amount of the Orange County Groundwater Basin's producible yield including precipitation and subsurface inflow. The recent average production from the main Basin is approximately 330,000 acre-feet per year (AFY). IRWD produces the majority of its groundwater from the main portion of the Basin (IRWD, 2017).

IRWD also produces non-potable supplies from the Irvine Sub-Basin. The Irvine Sub-Basin forms the southernmost portion of the Orange County Groundwater Basin. The Irvine Sub-Basin has a perennial

groundwater yield estimated at 13,000 AF. IRWD can produce approximately 4,100 AFY of non-potable water from the Irvine Sub-Basin to supplement IRWD's reclaimed water distribution system (IRWD, 2017). IRWD also historically operated six wells within the Lake Forest Sub-Basin, which has low production capability. Currently IRWD produces approximately 340 AFY of potable water from this groundwater area (IRWD, 2017).

### ***Reclaimed Water Supplies***

Through an agreement with the OCWD, the City purchases between 300 and 800 AFY of reclaimed water (City of Newport Beach UWMP, 2015). The City has no ability to treat water to produce reclaimed water; however, OCWD has an established infrastructure in place. The City began providing reclaimed water in 1999. OCWD provides water through the Green Acres Project, which has the capability to delivery up to 1,000 AFY. The City has investigated future sites or locations for reclaimed water, and is looking into the possibility of inter-district reclaimed water transfers to provide reclaimed water to some associations and recreation facilities.

The IRWD Michelson Water Recycling Plant, located approximately 1.2 miles east of the project site, converts sewage into reclaimed water each day. The Michelson Water Recycling Plant has a permitted capacity of 18 mgd and Los Alisos Water Recycling Plant has a permitted capacity of 5.5 mgd. IRWD's permits for the operation of the two plants allow only irrigation and other customer uses of reclaimed water, and do not permit stream discharge. Approximately 20 percent of IRWD's current water supply is met with reclaimed water which is enough to provide landscaping irrigation for 80 percent of IRWD's business and community customers. For the Proposed Project, reclaimed water mains exist in Von Karman Avenue as well as regular water mains in Von Karman Avenue and Birch Street. The Project proposes to use reclaimed water for all the on-site landscaping.

### ***Water Supply and Demand***

According to the IRWD UWMP, IRWD's 2015 water supply was approximately 92,220 AF, which was combination of 18,696 AF of imported water, 2,826 AF of surface water, 50,833 AF of groundwater and 22,866 AF of reclaimed water. *Table 4.15-3* shows the forecasted water supply for IRWD through 2035.

<b>Water Source</b>	<b>Treatment Level</b>	<b>2020</b>	<b>2025</b>	<b>2030</b>	<b>2035</b>
Imported Water	Potable	41,929	41,929	41,929	41,929
Groundwater	Potable	53,171	65,523	65,523	65,523
Imported Water	Untreated	17,826	17,826	17,826	17,826
Reclaimed Water	Non-Potable	28,757	28,757	28,757	28,757
Groundwater	Non-Potable	3,514	3,514	3,514	3,514
<b>Total</b>	–	<b>145,197</b>	<b>157,549</b>	<b>157,549</b>	<b>157,549</b>

Source: IRWD, 2016.

Under IRWD's supply model, adequate supplies exist to meet potable and reclaimed water demands. IRWD's supplies remain essentially constant between normal, single-dry, and multiple-dry years. This is due to the fact that groundwater and imported water account for all of IRWD's potable supply, and

reclaimed water, groundwater, and imported water comprise nearly all of IRWD’s non-potable supply (IRWD, 2017).

**Existing Water Facilities**

IRWD has existing potable distribution facilities adjacent to and within the project site in Von Karman Avenue, the on-site spine street, and between the 4910 Birch Street and 4440 Von Karman Avenue office buildings. IRWD maintains a 10-inch PVC non-potable water main immediately adjacent to the west of the project site, located in Von Karman Avenue.

**Thresholds of Significance**

The following significance criteria are from the City of Newport Beach Environmental Checklist. Would the Project:

**Threshold 4.15-2** Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

**Threshold 4.15-4** Have sufficient water supplies available to serve the Project from existing entitlements and resources, or are new or expanded entitlements needed?

**Environmental Impacts**

**Water Supply and Demand**

The Proposed Project would increase water demand on the project site. Projected water demand for the Project is shown in *Table 4.15-4*. The Project includes 260 residential dwelling units and approximately 3,000 sf of retail uses. The *SAMP Addendum* calculated the Proposed Project’s potable water demand to be 33,665 gpd (37.7 AFY).

Building	Land Use	Demand Factor	Gallons per Day (gpd)	Acre-Feet per Year (AFY)
1	High Density Residential	125 gpd/du	10,875	12.2
	Retail	175 gpd/ksf	309	0.3
2	High Density Residential	125 gpd/du	10,750	12.0
	Retail	175 gpd/ksf	216	0.3
3	High Density Residential	125 gpd/du	10,875	12.2
Parking Structure	Car Wash	20 gpv	640	0.7
<b>Total</b>			<b>33,665</b>	<b>37.7</b>

gpd = gallons per day; du = dwelling unit; ksf = thousand square feet; gpv = gallon per vehicle  
Source: DEA, 2017.

**Table 4.15-5** shows IRWD’s current and projected reclaimed water demand combined with potable and raw water demands. The majority of irrigation use within the IRWD service area uses reclaimed water (IRWD, 2016).

<b>Water Source</b>	<b>2015</b>	<b>2020</b>	<b>2025</b>	<b>2030</b>	<b>2035</b>
Potable and Raw Water	64,154	71,086	77,700	80,645	81,966
Reclaimed Water Demand	29,249	25,359	28,261	28,786	29,311
<b>Total Water Demand</b>	<b>90,403</b>	<b>96,445</b>	<b>105,961</b>	<b>109,431</b>	<b>111,277</b>

AFY = acre-feet per year  
Source: IRWD, 2016.

In comparison of IRWD’s water demand to IRWD’s water supply (Table 4.15-3), there is an anticipated water supply surplus in 2020 of 48,752 AFY. The Proposed Project’s water demand of 37.7 AFY would represent less than one percent of IRWD’s anticipated water surplus for 2020 during a normal year. *Table 4.15-6* and *Table 4.15-7* show IRWD’s estimated single dry-year and multiple dry-year supplies and demand. As with the normal conditions scenario, the increase in demand of the Project would be less than one percent of IRWD’s surplus water supply.

	<b>2020</b>	<b>2025</b>	<b>2030</b>	<b>2035</b>
Supply Totals	142,197	154,549	154,549	154,549
Demand Totals	103,195	113,378	117,091	119,066
<b>Difference</b>	<b>39,002</b>	<b>41,171</b>	<b>37,458</b>	<b>35,483</b>

AFY = acre-feet per year  
Source: IRWD, 2016.

		<b>2020</b>	<b>2025</b>	<b>2030</b>	<b>2035</b>
First Year	Supply Totals	142,197	154,549	154,549	154,549
	Demand Totals	103,195	113,378	117,091	119,066
	Difference	39,002	41,171	37,458	35,483
Second Year	Supply Totals	142,197	154,549	154,549	154,149
	Demand Totals	103,195	113,378	117,091	119,066
	Difference	39,002	41,171	37,458	35,483
Third Year	Supply Totals	142,197	154,549	154,549	154,549
	Demand Totals	103,195	113,378	117,091	119,066
	Difference	39,002	41,171	37,458	35,483

AFY = acre-feet per year  
Source: IRWD, 2016.

Additionally, as part of the Project, reclaimed water would be used for all Project landscaping, including the public park and open space areas, as well as the landscape areas adjacent to the new free-standing parking structure. While complying with the Model Water Efficient Landscape Ordinance in effect at the time of final design, the irrigation design would include the use of efficient irrigation systems. Those may include smart controllers, soil moisture and rain sensors, and source control strategies, all designed to minimize the use of water (PDF 3). Overall, water supply impacts would be less than significant.

### ***Water Delivery Systems***

The Project's proposed water system would connect to the City's existing water infrastructure in Von Karman Avenue. The Proposed Project would construct a ten-inch looped water system with connection to an existing ten-inch IRWD main located in Von Karman Avenue and a ten-inch main in Birch Street, as depicted in Figure 3-13, *Proposed Potable Water System*. A new potable water line would be constructed in the spine street from Von Karman Avenue to Birch Street. A water lateral would feed the parking structure from the loop water system that would be constructed as part of the Proposed Project (DEA, 2017).

With respect to reclaimed water, the Project would connect to an existing eight-inch reclaimed water main in Von Karman Avenue. New meters would be provided for existing Koll Center Newport common area landscaping adjacent to the project site. A new six-inch main would be constructed with lateral reclaimed water lines to the free-standing parking structure landscape areas.

Fire hydrant flow tests were performed and confirmed that adequate flows are available to serve the Proposed Project (DEA, 2017).

The Project would include sufficient water infrastructure improvements to provide water to the project site. Environmental impacts of these water facility improvements are analyzed as part of the Project in this EIR. Impacts on water delivery systems would be less than significant.

**Impact Summary:**     ***Less Than Significant.*** Water services can be provided to the Project without significantly impacting existing and planned development within the City and County.

### **Cumulative Impacts**

Given the existing available water supply, the water supply needs of the Project—together with related past, present, and reasonably foreseeable future projects—would not result in the need for new or expanded water entitlements that could result in significant environmental impacts. The cumulative utilities impact with respect to water supply would be less than significant.

As with the Proposed Project, any cumulative projects are required to conduct environmental review under CEQA and are approved by the City on a project-by-project basis. Since the Proposed Project would not have a significant impact on the water supply and would have adequate water infrastructure improvements, the project would not combine with other cumulative projects to result in significant water supply and infrastructure impacts.

## **Mitigation Program**

### ***Project Design Features***

**PDF 3**      **Incorporate Efficient Irrigation Design Strategies along with the use of Reclaimed Water.** Reclaimed water will be used for all Project landscaping including the plazas, public park, and podium outdoor spaces for each of the residential buildings. Reclaimed water would be installed to irrigate the existing Koll Center Newport landscape areas within the project site boundaries. While complying with the Model Water Efficient Landscape Ordinance in effect at the time of final design, the irrigation design will include the use of efficient irrigation systems. Those may include smart controllers, soil moisture and rain sensors, and source control strategies, all designed to minimize the use of water.

### ***Standard Conditions and Requirements***

**SC 4.15-1**      The Project would be required to comply with the City of Newport Beach Municipal Code Chapter 14.16 related to water conservation and supply level regulations in effect during the construction and operation of the Project, and Municipal Code Chapter 14.17 with respect to water efficient landscaping.

### ***Mitigation Measures***

No mitigation measures are required to reduce impacts to water supply.

### **Level of Significance After Mitigation**

Potential impacts to water supply would be less than significant.

## **4.15.3 STORM WATER FACILITIES**

### **Regulatory Setting**

#### ***Federal***

**Clean Water Act.** The Federal Water Pollution Control Act of 1972, more commonly known as the Clean Water Act, regulates the discharge of pollutants into watersheds throughout the nation. Under the Clean Water Act, the USEPA implements pollution control programs and sets wastewater treatment standards.

**National Pollutant Discharge Elimination System.** The National Pollutant Discharge Elimination System (NPDES) permit program was established by the Clean Water Act to regulate municipal and industrial discharges to surface waters of the United States. Federal NPDES permit regulations have been established for broad categories of discharges, including point-source municipal waste discharges and nonpoint-source storm water runoff. NPDES permits generally identify effluent and receiving water limits on allowable concentrations and/or mass emissions of pollutants contained in the discharge; prohibitions on discharges not specifically allowed under the permit; and provisions that describe required actions by the discharger, including industrial pretreatment, pollution prevention, self-monitoring, and other activities.

Wastewater discharge is regulated under the NPDES permit program for direct discharges into receiving waters and by the National Pretreatment Program for indirect discharges to a sewage treatment plant.

In California, the federal requirements are administered by the State Water Resources Control Board (SWRCB), and individual NPDES permits are issued by the California Regional Water Quality Control Boards (RWQCBs).

### ***State of California***

***Porter-Cologne Water Quality Control Act.*** California's Porter-Cologne Water Quality Control Act of 1970 (Porter-Cologne Act) grants the State Water Resource Control Board (SWRCB) and the RWQCBs power to protect surface water and groundwater quality and is the primary vehicle for implementing California's responsibilities under the federal Clean Water Act. The SWRCB is divided into nine regions, each overseen by a RWQCB. The SWRCB is responsible for protecting California's surface waters and groundwater supplies.

Each RWQCB must formulate and adopt a Water Quality Control Plan (Basin Plan) for its region. The Basin Plan must conform to the policies set forth in the Porter-Cologne Act and established by the SWRCB in its State Water Policy. The Basin Plan establishes beneficial uses for surface and groundwater in the region, and sets forth narrative and numeric water quality standards to protect those beneficial uses. Basin plans are updated every three years and provide the basis of determining waste discharge requirements, taking enforcement actions, and evaluating clean water grant proposals. The Porter-Cologne Act also states that an RWQCB may include water discharge prohibitions applicable to particular conditions, areas, or types of waste within its regional plan. The Porter-Cologne Act is also responsible for implementing Clean Water Act Sections 401 and 402 and 303(d) to SWRCB and RWQCBs.

### ***Water Quality Orders (SWRCB)***

The SWRCB has adopted an NPDES General Permit for construction activities, known as the Construction General Permit (Construction General Permit). The current Construction General Permit (Order No. 2009-0009-DWQ, amended by 2010-0014-DWQ and 2012-006-DWQ) became effective on July 1, 2010. The Construction General Permit requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP) in conjunction with construction activities. The SWPPP must contain a site map(s) which shows the construction site perimeter, existing and proposed buildings, lots, roadways, storm water collection and discharge points, general topography both before and after construction, and drainage patterns across the project. The SWPPP must list Best Management Practices (BMPs) that the discharger would use to protect storm water runoff and the placement of said BMPs. Additionally, the SWPPP must contain a Construction Site Monitoring Program to demonstrate that the site is in compliance with the Construction General Permit. Depending on the construction site risk level, the CSMP includes varying levels of visual monitoring and water quality sampling and analysis.

The Construction General Permit also includes the following requirements and evaluation criteria:

- Rainfall Erosivity Waiver: This option allows a small construction site (>1 and <5 acres) to self-certify if the rainfall erosivity value (R value) for the site's given location and time frame compute to be less than or equal to 5.
- Technology-Based Numeric Action Levels: The Construction General Permit includes NALs (numeric action levels) for pH and turbidity.

- **Risk-Based Permitting Approach:** The Construction General Permit establishes three levels of risk possible for a construction site. Risk is calculated in two parts: Project Sediment Risk, and Receiving Water Risk.
- **Effluent Monitoring and Reporting:** The Construction General Permit requires effluent monitoring and reporting for pH and turbidity in storm water discharges. The purpose of this monitoring is to determine whether NALs and effluent limits for active treatment systems are exceeded.
- **Receiving Water Monitoring and Reporting:** The Construction General Permit requires some Risk Level 3 dischargers with direct discharges to surface waters to conduct receiving water monitoring whenever their effluent exceeds specified receiving water monitoring triggers.
- **Rain Event Action Plan:** The Construction General Permit requires certain sites to develop and implement a Rain Event Action Plan (REAP) that must be designed to protect all exposed portions of the site within 48 hours prior to any likely precipitation event.
- **Annual Reporting:** The Construction General Permit requires all projects that are enrolled for more than one continuous three-month period to submit information and annually certify that their site is in compliance with these requirements. The primary purpose of this requirement is to provide information needed for overall program evaluation and public information.
- **Certification/Training Requirements for Key Project Personnel:** The Construction General Permit requires that key personnel (e.g., SWPPP preparers, inspectors, etc.) have specific training or certifications to ensure their level of knowledge and skills are adequate to ensure their ability to design and evaluate project specifications in compliance with Construction General Permit requirements.

### ***Regional and Local***

#### ***Orange County Storm Water Program 2003 Drainage Area Management Plan (DAMP)***

Section 402(p) of the Clean Water Act, as amended by the Water Quality Act of 1987, requires that municipal NPDES Permits include requirements (1) to essentially prohibit non-storm water discharges into municipal storm sewers and (2) to control the discharge of pollutants from municipal storm drains to the maximum extent practicable. In response to this requirement, the Orange County Drainage Area Management Plan (DAMP) was developed in 1993, which has been updated several times in response to requirements associated with NPDES permit renewals (County of Orange et al. 2003). The City is a permittee covered by the requirements of this permit.

The main objectives of the Orange County DAMP are to fulfill the Permittees' commitment to present a plan that satisfies NPDES permit requirements and to evaluate the impacts of urban storm water discharges on receiving waters. Orange County DAMP elements include (1) the establishment of public outreach and educational programs, management strategies, and inter-agency coordination; (2) continuing participation in the Regional Research/Monitoring program that is being conducted with the neighboring counties, the Southern California Coastal Waters Research Project (SCCWRP), and three Southern California Regional Boards; (3) the establishment of Best Management Practices (BMPs) aimed at managing project-induced hydrologic effects; and (4) the improvement of water quality throughout the region.

***General Waste Discharge Requirements for Discharges to Surface Waters Which Pose an Insignificant (de minimus) Threat to Water Quality (Dewatering Permit)***

The Santa Ana RWQCB issued Order No. R8-2003-0061 and Amendments to NPDES Permit No. CAG998001 (Dewatering Permit) to regulate the discharge of dewatering wastes from construction, subterranean seepage, and other similar types of discharges considered to have “de minimus” impacts on water quality within the jurisdictions covered by the County permit. This permit was updated in March 2009 (by Order No. R8-2009-0003, NPDES NP. CAG998001) and applies to projects in Newport Beach. To obtain coverage under this permit, an applicant must submit a Notice of Intent and data establishing the chemical characteristics of the dewatering discharge. A standard monitoring and reporting program is included as part of the permit. For dewatering activities that are not covered by the Construction General Permit, Waste Discharge Requirements, and an individual NPDES permit must be obtained from the applicable RWQCB.

***City of Newport Beach Municipal Code Section 19.28.080***

Section 19.28.080 (Storm Drains) of the City’s Municipal Code requires developers to design and construct all drainage facilities necessary for the removal of surface water from the site (e.g., open/closed channels, catch basins, manholes, junction structures), and to protect off-site properties from a project’s water runoff. The storm drain system must be designed in accordance with the standards of the Orange County Flood Division. A drainage fee is also charged to fund improvements to the City’s drainage facilities.

**Existing Conditions**

The project site is currently developed with surface parking and landscaping in the parking lot planter islands. The parking lot drainage is collected in concrete swales which are collected by storm drain lines. From the southerly side of the existing ridge line, the flows collected by the on-site storm drain system connect to the existing storm drain line in Von Karman Avenue. The drainage area northerly of the existing ridge line is tributary to an existing 60-inch storm drain line located on the east side of the 5000 Birch Street building which ultimately drains to the collection ponds within Koll Center. Receiving waters for the project site include San Diego Creek (Reach 1), Lower Newport Bay, Upper Newport Bay, and Pacific Ocean (DEA, 2016a).

Table 4.8-1, Runoff Volume Summary (Existing Conditions) in Section 4.8, *Hydrology and Water Quality* of this EIR, identifies that the existing flow rate of the project site is 1.37 AF of runoff volume that would be produced by a 2-year, 24-hour storm event. Three drainage areas, Drainage Area A, Drainage Area B, and Drainage Area C currently collect storm water.

**Thresholds of Significance**

The following significance criteria are from the City of Newport Beach Environmental Checklist. Would the Project:

**Threshold 4.15-3**      Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

### **Environmental Impacts**

As discussed in Section 4.8, *Hydrology and Water Quality*, Table 4.8-4 provides a summary of runoff volumes pre- and post-development of the project site. Approximately 1.30 AF of runoff volume would be produced by 2-year, 24-hour storm event with the Proposed Project. The same frequency and duration storm produces approximately 1.38 AF in the existing condition. This represents an approximately six percent decrease in runoff volume with the Project. As a result, there would be less storm water volumes and peak flow rate than under existing conditions. Therefore, downstream street and storm drain capacity is not expected to be exceeded and on-site detention would help capture flows.

The proposed storm drain system would largely maintain the same existing drainage patterns and connectivity. The construction of the Project would not increase the overall drainage areas from existing to the proposed condition for the three drainage areas (Table 4.8-4). However, these individual drainage areas would be slightly altered for the Project. The intent is to remodel the storm drain system which currently exists on site and modify the system to pick up drainage from the Project. The connections to the existing public storm drain systems would remain intact.

Overall, the Proposed Project would result in the conveyance of less water to the storm drain system, since the new development would reduce the impervious area at the project site. Consequently, hydromodification measures would not be required, but BMPs would be required to treat the drainage associated with the proposed impervious areas of the Project. Implementation of the Project would not create the need for new or increased storm drainage capacity. Impacts would be less than significant.

**Impact Summary:**     ***Less Than Significant Impact.*** Storm water drainage can be provided for the Project without significantly impacting existing and planned development within the City and County.

### **Cumulative Impacts**

As discussed above, implementation of the Proposed Project would decrease runoff volume at the project site. Thus, implementation of the Project would decrease the cumulative impact to the storm drainage system.

### **Mitigation Program**

#### ***Project Design Features***

No project design features have been identified by the Applicant.

#### ***Standard Conditions and Requirements***

**SC 4.15-2**     The Project would be required to comply with Section 19.28.080 (Storm Drains) of the City's Municipal Code which requires developers to design and construct all drainage facilities necessary for the removal of surface water from the site (e.g., open/closed channels, catch basins, manholes, junction structures), and to protect off-site properties from a project's water runoff. The storm drain system must be designed in accordance with the standards of the Orange County Flood Division. A drainage fee is also charged to fund improvements to the City's drainage facilities.

***Mitigation Measures***

No mitigation measures are required to reduce impacts to storm drainage capacity.

**Level of Significance After Mitigation**

Potential impacts to storm drainage capacity would be less than significant.

**4.15.4 SOLID WASTE****Regulatory Setting*****Federal***

**Resource Conservation and Recovery Act of 1976.** The Resource Conservation and Recovery Act of 1976 (RCRA) (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 of California***

**Assembly Bill 939 and Senate Bill 1016 – California Integrated Waste Management Act and Per Capital Disposal Measurement System.** In 1989, the legislature adopted the California Integrated Waste Management Act of 1989. The act requires every city and county in the State to prepare a source reduction and recycling element in addition to a solid waste management plan to identify how the jurisdiction would meet mandatory goals of 50 percent solid waste diversion by the year 2000 and 75 percent solid waste diversion by 2010. The Act also established the framework for State inspection and enforcement of solid waste facilities and regulates safe transportation and disposal of solid waste. Projects that would have an adverse effect on waste diversion goals are required to include waste diversion mitigation measures to assist in reducing these impacts to less-than-significant levels. With the passage of Senate Bill 1016 (the Per Capita Disposal Measurement System) in 2006, only per capita disposal rates are measured to determine if a jurisdiction's efforts are meeting the intent of Assembly Bill 939.

**Existing Conditions**

The City contracts with CR&R Environmental Services for residential refuse collection. Non-residential refuse is collected by 37 authorized commercial refuse haulers. The materials are then transported to a Materials Recovery Facility where it is sorted for recyclables. CR&R Environmental Services operates five Material Recovery, Transfer and Disposal Locations in California. The nearest centers are in the cities of Stanton and San Juan Capistrano.

The County of Orange owns and operates three landfills: Olinda Alpha Landfill in Brea, Frank R. Bowerman in Irvine, and Prime Deshecha in San Juan Capistrano (OC Waste & Recycling, 2016a). Currently only the Frank R. Bowerman Sanitary Landfill, located at 11002 Bee Canyon Access Road in Irvine, serves Newport Beach. *Table 4.15-8* includes capacity information about the County's landfills

**Table 4.15-8. Orange County Landfills and Capacity**

Landfill	Location	Constructed	Size	Maximum TPD	Maximum TPD Annual Average	Scheduled Closure
Olinda Alpha Landfill	Brea	1960	565 ac; 453 ac for waste disposal	7,000	8,000	2030
Frank R. Bowerman	Irvine	1990	725 ac; 534 ac for waste disposal	11,500	8,500	2053
Prime Deshecha	San Juan Capistrano	1976	1530 ac; 697 ac for waste disposal	4,000	1,400	2067

ac = acre; tpd = tons per day  
Source: OC Waste & Recycling, 2016a.

**Thresholds of Significance**

The following significance criteria are from the City of Newport Beach Environmental Checklist. Would the Project:

**Threshold 4.15-6** Be served by a landfill with sufficient permitted capacity to accommodate the Project’s solid waste disposal needs?

**Threshold 4.15-7** Comply with federal, state, and local statutes and regulations related to solid waste?

**Environmental Impacts**

The Bowerman Landfill has a daily maximum intake load of 11,500 tons per day with an 8,500 tons per day annual average. The remaining disposal capacity of 205 million cubic yards, as of February 29, 2008, which is the most current published data (CalRecycle, 2017).

As identified in *Table 4.15-9*, the Proposed Project would generate approximately 1,682 pounds of solid waste per day (0.84 tons per day or 307 tons/year) or 2.1 cubic yards of solid waste per day (767 cubic yards per year). The estimate refuse generation of the project is less than 0.01 percent of the Bowerman Landfill’s annual tons per day average. The development level proposed by the Project is consistent with the City’s development assumptions, which are used by the County of Orange in their long-term planning for landfill capacity. The County’s landfill system has capacity in excess of the required 15-year threshold established by the California Department of Resources Recycling and Recovery (CalRecycle). Based on the remaining capacity of the Bowerman Landfill and the County’s long-term planning programs required to meet CalRecycle requirements, there would be adequate waste disposal capacity within the permitted County’s landfill system to meet the needs of the Proposed Project. No significant impacts are anticipated.

Units/square feet (sf)	Solid Waste Generation Rate	Solid Waste Generation
260 units: multi-family residential	6.41 lbs/unit/day	1,666.7 lbs/day
3,000 sf retail	5 lbs/1,000 sf/day	15 lbs/day
<b>Total</b>		<b>1,682 lbs/day (307 tons/yr)</b>

Source: City of Newport Beach, 2006.

**Impact Summary:** *Less Than Significant Impact.* Solid waste services can be provided to the Project without significantly impacting existing and planned development within the City and County.

**Cumulative Impacts**

Future projects in the area would increase solid waste generation and decrease available capacity of the County’s landfills. However, as with the Proposed Project, these projects have been, or would be, required to conduct environmental review. Furthermore, the Frank R. Bowerman landfill is projected to have sufficient capacity to serve current and future needs until its scheduled closure in December 2053. The Project would not combine with other cumulative projects to result in significant impacts to solid waste.

**Mitigation Program**

***Project Design Features***

No project design features have been identified by the Applicant.

***Standard Conditions and Requirements***

**SC 4.15-3** The Applicant shall prepare and obtain approval of a Construction and Demolition Waste Management Plan (CDWMD) for each phase of the Project. The CWMP shall list the types and weights or volumes of solid waste materials expected to be generated from construction. The CDWMP shall include options to divert from landfill disposal, nonhazardous materials for reuse or recycling by a minimum of 65 percent of total weight or volume.

***Mitigation Measures***

No mitigation measures are required to reduce impacts to solid waste services.

**Level of Significance After Mitigation**

Potential impacts to solid waste services would be less than significant.

**4.15.5 ENERGY CONSUMPTION**

***Introduction***

Public Resources Code Section 21100(b)(3) and the State CEQA Guidelines Section 15126.4 require EIRs to describe, where relevant, the wasteful, inefficient, and unnecessary consumption of energy caused by a project. In 1975, largely in response to the oil crisis of the 1970s, the California State Legislature adopted

Assembly Bill 1575 (AB 1575), which created the California Energy Commission (CEC). The CEC's statutory mission is to forecast future energy needs, license thermal power plants of 50 megawatts or larger, develop energy technologies and renewable energy resources, plan for and direct State responses to energy emergencies, and—perhaps most importantly—promote energy efficiency through the adoption and enforcement of appliance and building energy efficiency standards. AB 1575 also amended Public Resources Code Section 21100(b)(3) to require EIRs to consider the wasteful, inefficient, and unnecessary consumption of energy caused by a project. In addition, CEQA Guidelines Section 15126.4 was adopted in 1998 which requires that an EIR describe feasible mitigation measures which would minimize the inefficient and unnecessary consumption of energy. Thereafter, the State Resources Agency created CEQA Guidelines Appendix F.

State CEQA Guidelines Appendix F is an advisory document that assists EIR preparers in determining whether a project will result in the inefficient, wasteful, and unnecessary consumption of energy. The discussion below analyzes the Proposed Project's effect on energy consumption impacts on energy resources.

### **Regulatory Setting**

#### ***Federal***

**Federal Energy Regulatory Commission.** The Federal Energy Regulatory Commission duties include the regulation of the transmission and sale of electricity and natural gas in interstate commerce, licensing of hydroelectric projects, and oversight of related environmental matters.

**Energy Policy Act of 2005.** On August 8, 2005, President George W. Bush signed the National Energy Policy Act of 2005 (EPAAct) (Public Law 109-58) into law. This comprehensive energy legislation contains several electricity-related provisions that aim to:

- Help ensure that consumers receive electricity over a dependable, modern infrastructure;
- Remove outdated obstacles to investment in electricity transmission lines;
- Make electric reliability standards mandatory instead of optional; and
- Give federal officials the authority to site new power lines in Department of Energy-designated national corridors in certain limited circumstances.

The Renewable Fuel Standard (RFS) program was created under the EPAAct, and established the first renewable fuel volume mandate in the United States. The program regulations were developed in collaboration with refiners, renewable fuel producers, and many other stakeholders. As required under EPAAct, the original RFS program (RFS1) required 7.5 billion gallons of renewable fuel to be blended into gasoline by 2012.

**Energy Independence and Security Act of 2007.** The Energy Independence and Security Act (EISA; Public Law 110-140) was signed into law by President George W. Bush on December 19, 2007. The EISA's goal is to achieve energy security in the United States by increasing renewable fuel production, improving energy efficiency and performance, protecting consumers, improving vehicle fuel economy, and promoting research on greenhouse gas (GHG) capture and storage. Under the EISA, the RFS2 program was expanded in several key ways:

- EISA expanded the RFS program to include diesel, in addition to gasoline;
- EISA increased the volume of renewable fuel required to be blended into transportation fuel from 9 billion gallons in 2008 to 36 billion gallons by 2022;
- EISA established new categories of renewable fuel, and set separate volume requirements for each one; and
- EISA required the USEPA to apply lifecycle GHG performance threshold standards to ensure that each category of renewable fuel emits fewer GHG than the petroleum fuel it replaces.

RFS2 lays the foundation for achieving significant reductions of GHG from the use of renewable fuels, for reducing imported petroleum, and encouraging the development and expansion of the nation's renewable fuels sector. The EISA also includes a variety of new standards for lighting and for residential and commercial appliance equipment. The equipment includes residential refrigerators, freezers, refrigerator-freezers, metal halide lamps, and commercial walk-in coolers and freezers. Additional provisions of the EISA address energy savings in government and public institutions, promoting research for alternative energy, additional research in carbon capture, international energy programs, and the creation of “green jobs”.

### ***State of California***

**California Public Utilities Commission.** Established in 1911, the California Public Utilities Commission (CPUC) regulates privately owned electric, natural gas, telecommunications, water, railroad, rail transit, and passenger transportation companies. The commission is organized into several advisory units, an enforcement division, and a strategic planning group. Both SCE and SCGC are regulated by the CPUC.

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

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

**Title 24, California Code of Regulations.** Title 24, California Building Standards, contains the energy efficiency standards related to residential and nonresidential buildings. Title 24 standards are based, in part, on a State mandate to reduce California’s energy demand. These are prescriptive standards that establish maximum energy consumption levels for the heating and cooling of new buildings. The use of alternative energy applications in development projects, while encouraged, is not required as a development condition. Such applications may include installation of photovoltaic solar panels, active solar water heating systems, or integrated pool deck water heating systems, all of which serve to displace consumption of conventional energy sources. Incentives are primarily state and federal tax credits, as well

as reduced energy bills. The Subdivision Map Act requires subdivisions of five or more lots, other than condominium conversions, to provide for, to the extent feasible, future passive or natural heating or cooling opportunities in the subdivision. The City is responsible for implementing this requirement. A new development project is required to incorporate the most recent Title 24 standards in effect at the time a building permit application is submitted.<sup>1</sup> The 2016 standards went into effect on January 1, 2017. California's energy efficiency standards are updated on an approximate three-year cycle.

**California Green Building Standards.** The California Green Building Standards Code (California Code of Regulations, Title 24, Part 11), commonly referred to as the CALGreen Code, is a statewide mandatory construction code that was developed and adopted by the California Building Standards Commission and the California Department of Housing and Community Development. CALGreen standards require new residential and commercial buildings to comply with mandatory measures under five topical areas: planning and design; energy efficiency; water efficiency and conservation; material conservation and resource efficiency; and environmental quality. CALGreen also provides voluntary tiers and measures that local governments may adopt which encourage or require additional measures in the five green building topics. The 2016 CALGreen Code became effective on January 1, 2017, and the City has not adopted any of the voluntary tiers.

**Appendix F to the State CEQA Guidelines.** Pursuant to Public Resources Code Section 21100(b)(3), an EIR must include a "discussion of the potential energy impacts of proposed projects." Because "lead agencies have not consistently included such analysis in their EIRs, the California Natural Resources Agency amended Appendix F to the CEQA Guidelines in 2009 "to ensure that lead agencies comply with the substantive directive in section 21100(b)(3)," *Clean Energy Committee v. City of Woodland* (2014) 225 Cal. App. 4th 173, 209 (citing Cal. Natural Resources Agency, Final Statement of Reason for Regulatory Action: Amendments to the State CEQA Guidelines Addressing Analysis and Mitigation of Greenhouse Gas Emissions Pursuant to SB97 (Dec. 2009) p. 71). *CEQA Guidelines Appendix F* lists environmental impacts and mitigation measures that an EIR may include. What is required is a "discussion of the potential energy impacts of proposed projects, with particular emphasis on avoiding or reducing inefficient, wasteful and unnecessary consumption of energy (see Public Resources Code section 21100(b)(3))." Potential impacts that may be discussed include:

- A project's energy requirements and its energy use efficiencies by amount and fuel type for each stage of the project including construction, operation, maintenance, and/or removal. If appropriate, the energy intensiveness of materials may be discussed.
- The effects of a project on local and regional energy supplies and on requirements for additional capacity.
- The effects of a project on peak and base period demands for electricity and other forms of energy.
- The degree to which a project complies with existing energy standards.
- The effects of a project on energy resources.

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<sup>1</sup> Please also refer to Section 4.6, Greenhouse Gas Emissions.

- A project's forecasted transportation energy use requirements and its overall use of efficient transportation alternatives.

### **Existing Conditions**

#### ***Electricity***

Southern California Edison Company (SCE) is the distribution provider for electricity in Newport Beach. Electrical structures and power lines are owned and operated by SCE. New electrical service within SCE's service area is provided on an as-needed basis. SCE is regulated by the CPUC, which protects customers from overcharge and promotes energy efficiency, system reliability, and financial integrity of utilities. SCE delivers power to 15 million people in 50,000 square-miles across central, coastal and Southern California, excluding the City of Los Angeles and some other cities (SCE, 2017).

Electricity is quantified using kilowatts (kW) and kilowatt-hour (kWh). A kW is a measure of 1,000 watts of electrical power and a kWh is a measure of electrical energy equivalent to a power consumption of 1,000 watts for 1 hour. The kWh is commonly used as a billing unit for energy delivered to consumers by electric utilities. According to the California Energy Commission's April 21, 2016 "Tracking Progress" regarding Statewide Energy Demand, total electric energy usage in California was 281,916 gigawatt hours in 2014. A gigawatt is a unit of electric power equal to one billion ( $10^9$ ) watts or 1,000 megawatts (1,000 kW).

The project site is currently connected to the SCE power grid. However, the existing land uses on the site currently use little electricity besides what is used for parking lot lighting and the irrigation system; the site consists of surface parking areas with common landscape areas. The existing office buildings located within the boundaries of the project site or immediately contiguous to the site are not part of the proposed development

#### ***Natural Gas***

Southern California Gas Company (SoCalGas) provides natural gas to the City. The project site does not currently use natural gas. The adjacent office buildings would be connected to SoCalGas' service system.

### **Thresholds of Significance**

To address the directives of State CEQA Guidelines Appendix F, project-related energy impacts area examined through analysis of the following questions:

- Would this Project increase demand for energy that requires expanded supplies or the construction of new infrastructure or expansion of existing facilities, the construction of which could cause significant environmental effects?
- Would this Project result in an inefficient, wasteful and unnecessary consumption of energy?

The following impact analysis focuses on the three sources of energy that are relevant to the Proposed Project: electricity; natural gas; and transportation fuel for vehicle trips associated with new development as well as the fuel necessary for Project construction.

**Environmental Impacts**

**Electricity**

Development of the Proposed Project would increase demand for electricity and natural gas services provided by SCE and SoCalGas. *Table 4.15-10* identifies the Project’s total estimated electricity and natural gas generation.

<b>Table 4.15-10. Estimated Project Electricity and Natural Gas Generation</b>		
<b>Units/Square Feet</b>	<b>Generation Rate</b>	<b>Total Generation</b>
<b>Electricity</b>		
260 units MFR (approx. 580 residents)	2,379 kWh/capita/year	1,379,820 kWh/year
3,000 sf retail	14.06 kWh/sf/year	42,180 kWh/year
<b>Total</b>		<b>1,422,000 kWh/year</b>
<b>Natural Gas</b>		
260 units MFR (approx. 580 residents)	13,700 kBTU/capita/year	7,946,000 kBTU/year
3,000 sf retail	4.63 kBTU/sf/year	13,890 kBTU/year
<b>Total</b>		<b>7,959,890 kBTU/year</b>
MFR = multi-family residential; sf = square feet; BTU: British Thermal Unit Sources: CEC 2006; CEC 2011.		

Based on the California Energy Commission (CEC), multi-family residences use approximately 2,379 kWh of electricity per capita per year and retail land uses use approximately 14.06 kWh of electricity per square foot per year (CEC, 2006; CEC, 2011). Therefore, as shown in the table, the Project would use approximately 1,422,000 kWh per year. In comparison, the existing site uses very little electricity as the site is currently used for parking and landscape areas. The Proposed Project would represent an increase in electricity usage over existing uses.

The increased demand is expected to be adequately served by the existing SCE electrical facilities on the project site currently serving Koll Center Newport. SCE forecasts that it would have adequate electricity to meet the expected growth in its service area through 2026. Using SCE’s anticipated consumption in 2026 in a high-demand consumption scenario, electricity demand is expected to be 123,828 gigawatt hours (CEC, 2016). The increase in electricity demand from the Project would be 0.0008 percent of overall demand in SCE’s service area. Therefore, projected electrical demand would not significantly impact SCE’s level of service.

Prior to issuance of a building permit, the City of Newport Beach Public Utilities Department would review and verify that the project plans demonstrate compliance with the current version of the Building and Energy Efficiency Standards. The Project would also be required adhere to the provisions of CALGreen, which establishes planning and design standards for sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and internal air contaminants.

Some design features include high efficiency wall assemblies and windows to reduce heating and cooling loads; Energy Star appliances; high efficiency heating and cooling systems; high efficiency domestic hot water systems; and high efficiency light-emitting diode (LED) lighting in residential units, common areas, and landscape design. The Applicant would pursue a Leadership in Energy and Environmental Design (LEED) Silver Certification for the Project. Impacts to electrical service would be less than significant.

### ***Natural Gas***

Based on CEC assumptions, residential land uses generate the need for approximately 13,700 kBtu of natural gas per capita per year and retail land uses use approximately 4.63 kBtu of natural gas per square foot per year (CEC, 2006). Therefore, as shown in Table 4.15-10, the Project would use approximately 7,959,890 kWh per year. The Proposed Project would represent an increase in natural gas usage over existing uses.

The increased demand is expected to be adequately served by the existing SoCalGas facilities. Total supplies of natural gas available to SoCalGas are expected to remain stable at 3.875 billion cubic feet of natural gas per day (bcfd), that is, 1,414,375 billion BTU per year, between 2015 and 2035 (CGEU, 2016). Total natural gas consumption in SoCalGas' service area is forecast to be 2.647 bcfd (966,155 billion BTU per year) in 2035. Therefore, the natural gas demand from the Proposed Project would represent a nominal percentage of overall demand in SoCalGas' service area.

Additionally, the 2016 California Gas Report (CGEU, 2016) noted that over the forecast period through 2035, the demand per meter is expected to decline at an average annual rate of 0.7 percent for multi-family and single-family residences. The reduction is associated with conservation and the energy savings from more restrictive building and appliance standards and energy efficiency programs and from demand reductions resulting from deployment of the Advanced Meter Infrastructure project in the Southern California area. Gas use per commercial customer is also forecasted to decline slightly over the forecast horizon due to continuing energy efficiency efforts as well as warmer temperatures.

The CPUC grants operating permits (Certificates of Public Convenience and Necessity) to natural gas storage providers pursuant to Public Utilities Code Section 1001. One of the CPUC's primary jurisdictional responsibilities with respect to gas storage fields is to ensure there is enough storage in California to meet demand. SoCalGas and PG&E are rate regulated utilities, so the CPUC has authority over the recovery of costs of the utilities for operating the gas storage facilities that they own.

SoCalGas facilities that currently provide natural gas to Koll Center Newport can also serve the Proposed Project. SoCalGas can provide additional connections if necessary once utility plans are finalized for the Project, and are required to do so by the CPUC to meet additional demand. Impacts to natural gas service would be less than significant.

### ***Vehicle Fuel: Construction***

Transportation energy use depends on the type and number of trips, vehicle miles traveled, fuel efficiency of vehicles, and travel mode. Transportation energy use during construction would come from the transport and use of construction equipment, delivery vehicles and haul trucks, and construction employee vehicles that would use diesel fuel and/or gasoline. The use of energy resources by these vehicles would fluctuate according to the phase of construction and would be temporary. Most

construction equipment during demolition and grading would be gas powered or diesel powered, and the later construction phases would require electricity-powered equipment. Impacts related to transportation energy use during construction would be temporary and would not require expanded energy supplies or the construction of new infrastructure; impacts would not be significant. Table 4.15-11 identifies the estimated fuel consumption of construction equipment.

<b>Construction Fuel Consumption</b>	<b>Gallons</b>
Phase A Equipment	277
Phase 1 Equipment	651
Phase 2 Equipment	1,102
Phase 3 Equipment	241
Worker Trips	1,133
Hauling and Deliveries	18,641
<b>Total</b>	<b>22,045</b>

Source: Michael Baker International, 2017a.

**Vehicle Fuel: Operations**

The Proposed Project would consume transportation energy during operations from the use of motor vehicles. Estimates of transportation energy use are based on the overall vehicle miles traveled (VMT) and related transportation energy use.

Project-related VMT would come from resident, visitor, and employee vehicle trips; delivery and supply trucks, and trips by maintenance and repair crews. As identified in Table 4.15-12, at buildout, the Project would consume approximately 198,197 gallons per year of gasoline and diesel fuel without implementation of mitigation measures and project design features identified in this EIR. With the implementation of mitigation measures and project design features, the Proposed Project is anticipated to use 169,887 gallons per year of gasoline.

Although the Project would increase annual fuel consumption, the average corporate fuel economy is anticipated to increase to 35 miles per gallons by 2020<sup>2</sup>. This improvement is a result of State and federal laws, as well as vehicle turnover, which improves the overall fuel economy of California’s vehicle fleets.

<b>Operations</b>	<b>Unmitigated</b>	<b>Mitigated</b>
Vehicle Fuel Consumption (gallons/year)	198,197	169,887

Source: Michael Baker International, 2017a.

The City and surrounding areas are highly urbanized with numerous gasoline fuel facilities and infrastructure. Consequently, the Proposed Project would not result in a substantial demand for energy that would require expanded supplies or the construction of other infrastructure or expansion of existing

<sup>2</sup> [https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/my2012-2016\\_cafe\\_pria.pdf](https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/my2012-2016_cafe_pria.pdf).

facilities. Additionally, fuel consumption associated with vehicle trips generated by the Proposed Project would not be considered inefficient, wasteful, or unnecessary.

**Impact Summary:** *Less Than Significant Impact.* There are existing electrical and natural gas facilities within and adjacent to the project site to serve the Proposed Project. Utility providers can serve the Project without adversely affecting their ability to continue serving the area. The increase in electricity, natural gas, and automotive fuel consumption over existing conditions is minimal (less than one percent). There would be less than significant impacts to additional demand for electric and natural gas services and infrastructure with implementation of the Project. Physical impacts related to installation and/or relocation of necessary infrastructure are addressed as part of the Project analyzed throughout this EIR.

### **Mitigation Program**

#### ***Project Design Features***

**PDF 1** **Building Design.** The Applicant will pursue a Leadership in Energy and Environmental Design (LEED) Silver Certification for the Project. Project features may include the following.

- Bicycle storage and maintenance facility
- Electric vehicle charging stations
- Indoor water use reduction
- Optimized energy performance
- Low emitting materials
- Day lighting
- Enhanced indoor air quality features
- Earth day functions for residents

#### ***Standard Conditions and Requirements***

No standard conditions and requirements apply to the Proposed Project.

#### ***Mitigation Measures***

No mitigation measures are required to reduce impacts to energy usage.

#### **Level of Significance After Mitigation**

No significant impacts are anticipated.

#### 4.15.6 CUMULATIVE IMPACTS

The areas considered for cumulative impacts are the SCE and SoCalGas service areas for electricity and natural gas, respectively. The energy demands of past, present, and reasonably foreseeable future projects are accounted for in SCE's and SoCalGas' projections. Therefore, the Proposed Project—together with related past, present, and reasonably foreseeable projects—is not expected to result in a significant cumulative energy impact. SCE and SoCalGas both forecast adequate electricity and gas supplies through 2026 and 2035, respectively, to meet demands within their service areas (CEC, 2016; CGEU, 2016). Considering ongoing compliance with all federal, State, and local regulations and performance standards which are intended to limit or reduce energy consumption, along with efforts at the State and local levels relating to energy supply and reduction in consumption, the cumulative utilities impact with respect to energy would be less than significant.

#### 4.15.7 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Potential impacts to utilities and service systems, specifically, water, wastewater, storm drain, solid waste, electricity and natural gas, would be less than significant.