

4.18 UTILITIES AND SERVICE SYSTEMS

This section describes the utility providers within whose jurisdiction the proposed Nakase Nursery/Toll Brothers Project (proposed Project) site is located and evaluates the potential impacts of the proposed Project on utilities and service systems. This section is based on multiple data sources, including written correspondence and coordination with the utility providers (Appendix K); Section 4.6, Energy; Section 4.10, Hydrology and Water Quality; utility provider websites; and adopted planning documents of utility providers and the City of Lake Forest (City) General Plan Update Existing Conditions Report (City of Lake Forest 2018c). This section addresses the following utilities (service providers are noted in parentheses):

- Electricity (Southern California Edison [SCE])
- Natural Gas (Southern California Gas Company [SoCalGas])
- Solid Waste (Frank R. Bowerman Landfill; Orange County Waste & Recycling [OCWR])
- Wastewater and Potable Domestic Water (Irvine Ranch Water District [IRWD])
- Storm Drainage (Orange County Flood Control District [OCFCD])/City of Lake Forest

4.18.1 Scoping Process

The City received 28 comment letters during the public review period of the Initial Study/Notice of Preparation (IS/NOP). For copies of the IS/NOP comment letters, refer to Appendix A of this Environmental Impact Report (EIR). Three comment letters included comments related to Utilities and Service Systems.

The letter from SCE (August 14, 2018) expressed concern about encroachment onto SCE right-of-way and potential landscaping conflicts with SCE lines, and requested a set of plans from the Applicant. SCE also requested that the Applicant enter into a Method of Service Agreement with SCE and fund an electric service study. The letter from Judy Esposito (August 6, 2018) expressed concern about sewer capacity. The letter from the IRWD (August 3, 2018) indicated that the Applicant would be required to identify the proposed Project's potential impacts to IRWD's potable and recycled water and sewer systems in a technical memorandum or an addendum to the 2010 Lake Forest Sub-Area Master Plan (SAMP).

4.18.2 Existing Environmental Setting

4.18.2.1 Wastewater

The IRWD owns and operates the City's sewer system. The IRWD provides sewer treatment to more than 390,000 residential customers per year in the cities of Irvine, Tustin, Lake Forest, Newport Beach, Orange, and Costa Mesa in addition to unincorporated areas of Orange County. Wastewater is removed via the sanitary sewer system, which consists of approximately 1,100 miles (mi) of sewer lines ranging in size from 4 inches to 60 inches in diameter, 102,000 sewer connections, and 12 mi of force mains across IRWD's 181-square-mile (sq mi) service area (IRWD 2018a).

The IRWD is a multiservice agency responsible for providing domestic water service, sewage collection and treatment, water recycling, and urban runoff natural treatment in Central Orange County, California. Collected wastewater for the Project site is pumped to one of two treatment

plants owned and operated by the IRWD: the Michelson Water Recycling Plant (MWRP) or the Los Alisos Water Recycling Plant. The IRWD operates four treatment plants and two ocean outfalls, in addition to multiple programs to meet the needs of its member agencies and the requirements of the Clean Water Act (CWA) and applicable National Pollutant Discharge Elimination System (NPDES) permits.

The MWRP is located approximately 9.4 mi southwest of the Project site and provides treatment of wastewater generated by the Project site. The MWRP Phase 2 expansion project, which was completed in March 2009, increased the capacity of the MWRP from approximately 18 million gallons per day (mgd) to 28 mgd (MWRP 2019). About 20 percent of the IRWD's current water supply is recycled water, enough to provide landscape irrigation for 80 percent of the IRWD's business and community customers including parks, school grounds, and golf courses. The MWRP Phase 2 Expansion allows the IRWD to continue providing water to meet the community's needs while decreasing the IRWD's dependence on imported potable water. Based on flow-monitoring information, approximately 20.3 mgd are currently being conveyed to the MWRP for treatment (IRWD 2018b). Therefore, the MWRP is currently operating at approximately 72.5 percent of its daily design capacity.

The existing nursery uses on the Project site generate a negligible amount of wastewater. Written correspondence dated November 19, 2018, from the IRWD indicated that the IRWD will be able to adequately serve the proposed Project, and the IRWD's SAMP addendum will analyze the need for any improvements (if necessary) to accommodate additional sewer loads from the proposed Project.

4.18.2.2 Water Supply

The Project site is also within the IRWD's domestic water service area. The IRWD's drinking water is a blend of groundwater from the Orange County Groundwater Basin and surface water imported by the Metropolitan Water District of Orange County (MWDOC). The IRWD's service area covers approximately 84,000 acres (ac) within central Orange County. The IRWD provides water service to more than 390,000 residential customers per year in the cities of Irvine, Tustin, Lake Forest, Newport Beach, Orange, and Costa Mesa in addition to unincorporated areas of Orange County. The IRWD delivers 90,403 acre-feet (af) of potable water to residential and commercial uses annually through 111,511 connections.

The IRWD is a special district, operating under State law, separately from the County of Orange (County) government. The IRWD published the 2015 Urban Water Management Plan (UWMP), which outlines how the IRWD will provide customers with a reliable supply of drinking water over the 5-year period from 2015 to 2020. The State requires the IRWD to update its UWMP every 5 years. The UWMP provides the California Department of Water Resources with information on the present and future water resources and demands and provides an assessment of the IRWD's water resource needs.

As described above, the IRWD relies on a combination of purchased or imported water, groundwater, and recycled water to meet its water needs. As described in its 2015 UWMP, the IRWD's total water supply was 95,220 acre feet per year (afy) in 2015. This consists of 18,696 afy of

imported or purchased water wholesaled by the Metropolitan Water District (MWD) through the Municipal MWDOC, 2,826 afy of surface water, 50,833 afy of groundwater, and 22,866 afy of recycled water.¹ Groundwater makes up the largest portion of the IRWD's total water supply, at approximately 53 percent.

Although the IRWD currently provides water to the nursery uses on the Project site, the primary source of water on the Project site comes from an irrigation well located near the center of the Project site, which produces 300 gallons per minute (gpm).²

4.18.2.3 Existing Water Demand

The IRWD serves the Project site with domestic and recycled water facilities. IRWD maintains a 24-inch domestic water main and a 12-inch recycled water main located within Bake Parkway, which services the Project site and surrounding uses. Domestic water from the Bake Parkway water main is conveyed across the southern boundary of the Project site via an additional, on-site, 18-inch water line. The domestic water main extends further to the east to serve an existing commercial center adjacent to Lake Forest Drive. Although the nursery's existing water demand is supplied mainly by the existing irrigation well located on site, correspondence with the property owner on December 27, 2018, indicated that the IRWD provided a backup and supplemental water supply during hot weather.³ The IRWD provided an annual total water usage to the Project site of 3,341,316 gallons (gal) of water in 2018 and 5,515,752 gal of water in 2017.⁴

The total water demand as of 2015 in the IRWD service area was 90,430 afy, consisting of 64,154 afy of potable and raw water and 26,249 afy of recycled water demand. The total water demand in the IRWD service area is projected to increase to 96,445 afy in 2020, 105,961 afy in 2025, 109,431 afy in 2030, and 111,277 afy in 2035 during normal years. Each of these total-water-demand projections is expected to increase by 7 percent during a worst-case multiple-dry-years scenario.

4.18.2.4 Fire Flow

The Orange County Fire Authority (OCFA) is responsible for fire suppression within the City. The OCFA relies on the area's infrastructure, including the adequacy of nearby water supplies to suppress fire. Thus, the City has adopted the 2016 California Fire Code (CFC) (Section 8.24.010 of the City of Lake Forest's Municipal Code) with amendments (Section 8.24.030 of the City of Lake Forest's Municipal Code) that lists the minimum required fire flow and flow durations. Fire flow is the flow rate of water supply (measured in gpm) available for firefighting measured at 20 pounds per square inch (psi) pressure. Available fire flow is the total water flow available at the fire hydrants, also measured in gpm.

¹ *2015 Urban Water Management Plan*. (Irvine Ranch Water District 2016). Website: https://www.irwd.com/images/pdf/doing-business/environmental-documents/UWMP/IRWD_UWMP_2015_rev_01-03-17_FINAL.pdf (accessed June 29, 2019).

² Feingold, Ilan (Toll Brothers). December 27, 2018. Email message to Marie Luna et al. re Nakase water supply questions.

³ Ibid.

⁴ Ibid.

4.18.2.5 Water Supply and Demand Projections

The supply and demand forecasts for the third-dry-year scenario (considered to be the worst-case scenario) included in the IRWD’s 2015 UWMP are shown in Table 4.18.A. As shown in Table 4.18.A, in the multiple-dry-year scenario, the IRWD’s projected water demand in 2025 would be 113,378 afy, and the IRWD’s projected water supply in 2025 would be 154,549 afy. This would result in a projected surplus of 41,171 afy of water.

**Table 4.18.A: Water Supply and Demand Projections Comparison
Third-Dry-Year Supply (2020–2035)**

Year	Water Supply (afy ¹)	Water Demand (afy)	Surplus (afy)
2020	142,197	103,195	39,002
2025	154,549	113,378	41,171
2030	154,549	117,091	37,458
2035	154,549	119,066	35,483

Source: Table 7-4, 2015 Urban Water Management Plan (IRWD 2016).

¹ An acre-foot is the amount of water necessary to cover 1 acre of surface area to a depth of 1 foot and is approximately 326,000 gallons of water.

afy = acre-feet per year

4.18.2.6 Storm Drains

The City owns and operates the storm water control systems in Lake Forest. Until recently, the OCFCD owned and operated the storm water control system within Lake Forest. The City took over control of all facilities recently and is currently in the process of tracking, mapping, and analyzing the facilities.¹ At this time, the City does not have its own mapping of the storm water facilities.

In the existing condition, 12.1 ac of the Project site is impervious area, which comprises approximately 9.9 percent of the 122 ac Project site. As discussed in Section 4.10, Hydrology and Water Quality, in the existing condition, onsite drainage is divided into two drainages. Drainage Area A consists of the western/northwestern portion of the Project site (approximately 76.6 ac). Storm water runoff within Drainage Area A drains southwesterly via sheet flow. Flow then channelizes in an onsite natural and partly paved drainage system that connects to an existing 10.5' x 10.5' reinforced concrete box (RCB) and the existing storm drain system (OCFCD Facility No. F19-P07), located along the southwest Project site boundary. This existing storm drain system discharges into Serrano Creek approximately 0.6 mi to the southwest of the Project site. Run-on to Drainage Area A consists of runoff from off-site areas to the north of the Project site (approximately 227.9 ac) that discharge into the Project site via an existing 84-inch reinforced concrete pipe (RCP) at Rancho Parkway and Corridor Center. The total tributary area (on site and off site) to the OCFCD Facility No. F19-P07 connection is 304.45 ac. The existing 100-year historic flow to the existing 10.5' x 10.5' RCB is 671 cubic feet per second (cfs).

¹ City of Lake Forest General Plan Update: Existing Conditions Report. (City of Lake Forest 2018c). Website: https://static1.squarespace.com/static/5abd4a977e3c3a6cd57d9c48/t/5be097d8c2241bf46b6623ba/1541445626140/LakeForestECR_Complete_110118_WebVersion.pdf (accessed Aug. 14, 2019).

Drainage Area B consists of the eastern/southeastern portion of the Project site (approximately 43.4 ac). Storm water runoff within Drainage Area B drains southeasterly via sheet flow. Flow then channelizes in an on-site natural and partly paved drainage prior to discharging to Serrano Creek via OCFCD Facility No. F19, which is located along the southern corner of the Project site. There is no offsite run-on to Drainage Area B. The existing 100-year historic flow to Serrano Creek is 84 cfs.

4.18.2.7 Solid Waste

The Project site is located within OCWR's service area. OCWR owns and operates three active landfills and four household hazardous-waste collection centers, and monitors 12 closed landfills. All three landfills are permitted as Class III landfills, which accept all types of nonhazardous municipal solid waste for disposal; however, no hazardous or liquid waste can be accepted.

The Frank R. Bowerman Landfill is the closest OCWR landfill to the Project site, approximately 3 mi northwest of the Project site, and would be expected to provide solid waste disposal for the construction and operation of the proposed Project. Solid waste considered unacceptable waste at the Frank R. Bowerman Landfill includes asbestos, batteries, brake linings, chemicals, fuel tanks, mufflers, paints, poisons, hazardous waste, animal parts, body parts, medical wastes, radioactive materials, auto body shredder wastes, fuels, heavy metals, explosives, pesticides, contaminated soil, liquid waste (moisture content greater than 50 percent), and nuisance dust. One of the four household waste collection centers provided by OCWR is located at 6411 Oak Canyon in Irvine, approximately 5 mi west of the Project site.¹ Waste considered unacceptable at the Frank R. Bowerman Landfill would be hauled to the household waste collection center.

The Frank R. Bowerman Landfill, which is permitted to receive a daily maximum of 11,500 tons per day (tpd), receives an average of approximately 8,500 tpd.² The Frank R. Bowerman Landfill is currently receiving approximately 73.9 percent of its permitted daily capacity. The Frank R. Bowerman Landfill is approximately 725 ac, with 534 ac permitted for refuse disposal. The landfill opened in 1990 and is scheduled to close in approximately 2053.

The Frank R. Bowerman Landfill is subject to regular inspections from the California Department of Resources Recycling and Recovery (CalRecycle) and its Local Enforcement Agency (LEA), the California Regional Water Quality Control Board (RWQCB), and the South Coast Air Quality Management District (SCAQMD) to ensure compliance with applicable regulations.

Assembly Bill (AB) 939 was enacted in 1989. This bill mandated a 25 percent reduction of waste being disposed of in the landfill system by 1995, and a 50 percent reduction by 2000. In response to AB 939, the California Integrated Waste Management Board (now known as CalRecycle) was established to monitor compliance with waste reduction requirements. According to CalRecycle, all counties within the State are required to have an approved Countywide Integrated Waste Management Plan (CIWMP), which outlines methods for waste diversion and demonstrates

¹ Household Hazardous Waste. (OC Waste & Recycling 2018b). Website: <http://www.oilandfills.com/hazardous> (accessed July 7, 2019).

² Frank R. Bowerman Landfill. (OC Waste & Recycling 2018a). Website: <http://www.oilandfills.com/civicax/filebank/blobdload.aspx?BlobID=83644> (accessed July 7, 2019).

sufficient solid-waste disposal capacity for a minimum of 15 years. In compliance with AB 939, the County prepared a CIWMP, which is kept current, demonstrating the required 15-year disposal capacity and allowing disposal of a maximum daily imported waste stream of 1,000 tpd. Imported tonnage varies depending on demand and is limited by the solid waste facility permit for each site.

Solid waste generated by the existing uses on the Project site mainly consist of compostable organic plant matter that may be reused on site.

4.18.2.8 Natural Gas

Natural gas consumed in California is used for electricity generation (45 percent), residential uses (21 percent), industrial uses (25 percent), and commercial uses (9 percent). California continues to depend upon out-of-state imports for nearly 90 percent of its natural gas supply (CEC 2019d).

SoCalGas is the natural gas service provider for the Project site. SoCal Gas provides natural gas to approximately 21.8 million people in a 24,000 sq mi service area throughout Central and Southern California, from Visalia to the Mexican border.¹ SoCalGas owns and operates four natural gas storage facilities within southern California: Aliso Canyon, Honor Rancho, La Goleta, and Playa Del Rey.² According to the California Energy Commission (CEC), total natural gas consumption in the SoCalGas service area in 2018 was 5,156.1 million therms (2,147.4 million therms for the residential sector).³ Total natural gas consumption in Orange County in 2018 was 575.1 million therms (339.0 million therms for the residential sector).⁴

According to the California Emissions Estimator Model (CalEEMod) modeling results in the *Nakase Property Greenhouse Gas Analysis* (Urban Crossroads 2019b), the estimated natural gas use for the existing nursery operations on the Project site is 177,650 thousand British thermal units per year (kBTU/yr) (1,776.5 therms).

4.18.2.9 Electricity

In 2017, California's electricity was generated primarily by natural gas (33.67 percent), coal (4.13 percent), large hydroelectric (14.72 percent), nuclear (9.08 percent), and renewable sources (29 percent). Total electric generation in California in 2017 was 292,039 gigawatt-hours (GWh), up 0.5 percent from the 2016 total generation of 290,567 GWh. In 2017, California produced approximately 70.7 percent and imported 29.3 percent of the electricity it used (CEC 2019c).

The Project site is within the service territory of SCE, which provides services through a grid of transmission lines and related facilities. SCE provides electricity to more than 15 million people in a

¹ About SoCalGas (SoCalGas2019). Website: <https://www3.socalgas.com/about-us/company-profile> (accessed June 29, 2019).

² 2018 California Gas Report (California Gas and Electric Utilities 2018). Website: https://www.socalgas.com/regulatory/documents/cgr/2018_California_Gas_Report.pdf (accessed June 29, 2019).

³ Gas Consumption by Entity for 2018 (California Energy Commission 2019f). Website: <http://www.ecdms.energy.ca.gov/gasbyutil.aspx> (accessed July 7, 2019).

⁴ Ibid.

50,000 sq mi area of Central, Coastal, and Southern California.¹ According to the CEC, total electricity consumption in the SCE service area in 2018 was 83,400 GWh (28,617 GWh for the residential sector). Total electricity consumption in Orange County in 2018 was 19,858 GWh (6,814 GWh for the residential sector) (CEC 2019a).

Based on the CalEEMod modeling output in the *Greenhouse Gas Analysis*, the existing nursery operations generate an electricity usage on the Project site of 71,825 kilowatt hours per year (kWh/yr) for the existing nursery operations.

4.18.2.10 Telecommunications Facilities

Telephone, television, and internet services are offered by a variety of providers in Lake Forest, including AT&T, Cox Communications, Frontier Communications, HughesNet, Lake Forest DirectTV, and Planet Dish. Cox Communications is currently the only non-satellite TV service provider in Lake Forest. Satellite internet providers include ViaSat Satellite. These services are privately operated and offered to each location in Lake Forest for a fee defined by the provider.

4.18.3 Regulatory Setting

4.18.3.1 Federal Regulations

No federal regulations for utilities and service systems apply to the proposed Project.

4.18.3.2 State Regulations

California Integrated Waste Management Act of 1989. The California Integrated Waste Management Act of 1989 (Public Resource Code [PRC] Division 30), enacted through AB 939 and modified by subsequent legislation, required all California cities and counties to implement programs to reduce, recycle, and compost at least 50 percent of wastes by 2000 (PRC Section 41780). The State determines compliance with this mandate to “divert” 50 percent of generated waste (which includes both disposed and diverted waste) through a complex formula. This formula requires cities and counties to conduct empirical studies to establish a “base year” waste generation rate against which future diversion is measured. The actual determination of the diversion rate in subsequent years is arrived at through deduction, not direct measurement: instead of counting the amount of material recycled and composted, the city or county tracks the amount of material disposed at landfills, then subtracts the disposed amount from the base year amount. The difference is assumed to be diverted (PRC 41780.2).

Water Supply Assessment. PRC Section 21151.9 requires that any proposed “project,” as defined in Section 10912 of the Water Code, prepare a Water Supply Assessment (WSA) in compliance with Water Code Section 10910 et seq. Water Code Section 10910 et seq. outlines the necessary information and analysis that must be included in an EIR to ensure that a proposed land development has a sufficient water supply to meet existing and planned water demand over a 20-year horizon.

¹ Southern California Edison’s Service Area (SCE 2019). Website: https://newsroom.edison.com/internal_redirect/cms.ipressroom.com.s3.amazonaws.com/166/files/20193/SCE%20Service%20Area%20Fact%20Sheet_Ver2_04252019.pdf (accessed June 20, 2019).

According to WSA requirements, a “project” is defined as any of the following:

- A residential development of more than 500 dwelling units (du)
- A shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet (sf) of floor space
- A commercial office building employing more than 1,000 persons or having more than 250,000 sf of floor space
- A hotel or motel, or both, having more than 500 rooms
- An industrial, a manufacturing, or a processing plant, or an industrial park planned to house more than 1,000 persons, occupying more than 40 ac of land, or having more than 650,000 sf of floor area
- A mixed-use project that includes one or more of the projects specified above
- A project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500 du project

If a public water system has fewer than 5,000 service connections, a “project” means any proposed residential, business, commercial, hotel or motel, or industrial development that would account for an increase of 10 percent or more in the number of the public water system’s existing service connections, or a mixed-use project that would demand an amount of water equivalent to, or greater than, the amount of water required by residential development that would represent an increase of 10 percent or more in the number of the public water system’s existing service connections.

The IRWD completed a WSA in 2005 for the City of Lake Forest’s Opportunity Study, which covered a total of 5,844 du, including 450 single-family units on the Project site. Therefore, 450 of the proposed 776 units are already included in the IRWD’s baseline demands, leaving only 326 units unaccounted for. The 450 units were also accounted for in the IRWD’s most recent 2015 UWMP. Water Code Section 10910 (the “Assessment Law”) requires a WSA for project approval for projects subject to the California Environmental Quality Act (CEQA) and meeting the definition of “project.” This section defines the term “project” to include residential development of more than 500 du or other types of development projects using a comparable amount of water. Therefore, the IRWD determined that a WSA for the proposed Project is not required.

Senate Bill 1374. SB 1374 requires that the annual report submitted to CalRecycle include a summary of the progress made in diversion of construction and demolition waste materials. In addition, SB 1374 required that CalRecycle adopt a model ordinance suitable for adoption by any local agency to require 50 to 75 percent diversion of construction and demolition waste materials from landfills by March 1, 2004. Local jurisdictions are not required to adopt their own construction and demolition ordinances, nor are they required to adopt CalRecycle’s model by default. However,

adoption of such an ordinance may be considered by CalRecycle when determining whether to impose a fine on a jurisdiction that has failed to implement its Source Reduction and Recycling Element (SRRE).

Assembly Bill 75. AB 75, passed in 1999, took effect on January 1, 2000. This bill adds new provisions to the PRC, mandating that State agencies develop and implement an Integrated Waste Management Plan (IWMP); it also mandates that community service districts providing solid-waste services report disposal and diversion information to the city, county, or regional agency in which the community service district is located.

Title 24 of the California Code of Regulations. Energy and water consumption by new buildings in California is regulated by the California Green Building Standard Standards Code, embodied in California Code of Regulations (CCR) Title 24. Title 24 provides efficiency standards for new construction and the rehabilitation of both residential and nonresidential buildings, including building energy consumption, water conservation, and operational efficiencies. Title 24 regulates building energy consumption for heating, cooling, ventilation, water heating, and lighting with regard to both electricity and natural gas, while also regulating water consumption through the installation of efficient plumbing fixtures. The efficiency standards apply to both new construction and rehabilitation of both residential and nonresidential buildings. The building efficiency standards are enforced through the local building permit process. Local government agencies may adopt and enforce energy standards for new buildings, provided these standards meet or exceed Title 24 Building Code requirements. The 2016 Standards went into effect January 1, 2017, following approval by the California Building Standards Commission.

Assembly Bill 341. AB 341, enacted in 2011 and begun in 2012, changes the due date of the State agency waste management annual report to May. The bill makes a legislative declaration that it is the policy goal of the State of California that not less than 75 percent of solid waste generated be source reduced, recycled, or composted by 2020.

Public Health and Safety Code Part 9.5, Section 115700. Public Health and Safety Code Part 9.5, Section 115700, requires the proper decommissioning of inactive wells to prevent the contamination of groundwater. The section provides specifics for the casting, securing, and marking of wells and the surrounding area. This section also provides that at minimum, permanently inactive wells shall be destroyed in accordance with standards developed by the Department of Water Resources pursuant to Section 13800 of the Water Code and adopted by the State Water Resources Control Board or local agencies in accordance with Section 13801 of the Water Code. Minimum standards recommended by the department and adopted by the state board or local agencies for the abandonment or destruction of groundwater monitoring wells or class one hazardous injection wells shall not be construed to limit, abridge, or supersede the powers or duties of the department, in accordance with Section 13801 of the Water Code.

4.18.3.3 Regional Regulations

Metropolitan Water District 2015 Regional Urban Water Management Plan. The MWD's 2015 Regional UWMP lists and describes the various uses, demand, supplies, target reductions, and compliance measures for 26 member agencies. These include 14 cities, 11 municipal water districts,

and one county water authority serving approximately 18.7 million people in Southern California. The 2015 Regional UWMP found that under the current supply demands for a multiple-dry-year scenario (i.e., drought conditions), the MWD would have sufficient supply to meet the projected growing demand for water from 2020 to 2040 while still meeting statewide reduction targets of 20 percent of 2009 levels by 2020. The MWD is currently working to develop programs to increase its water supply and create a large surplus during multiple-dry-year scenarios to ensure that water demands will still be addressed during emergency drought situations. With demands projected to be around 2.3 million af in 2040 during multiple-dry-year scenarios, the MWD would have a surplus of 2,000 af with current capabilities and 288,000 af with the implementation of the programs under development.

4.18.3.4 Local Regulations

City of Lake Forest Municipal Code. The following City of Lake Forest Municipal Code sections are relevant to utilities and service systems:

- **Section 15.04.020 Permit Required for Construction or Destruction of a Well:** This section outlines requirements for the proper construction and decommissioning of wells.
- **Section 8.02.001, Adoption of the California Building Code:** This section adopts and incorporates by reference the California Building Code (CBC) (which includes the California Green Building Standards [CALGreen] Code).

City of Lake Forest General Plan Public Facilities/Growth Management Element. The primary purpose of the Public Facilities/Growth Management Element is to ensure that growth and development correspond to the provision of adequate public facilities. The Public Facilities/Growth Management Element expresses the City's intention to ensure acceptable service levels for public facilities as development occurs. The following policies are relevant to utilities:

- **Policy 1.1:** Work closely with local water and sewer districts in determining and meeting community needs for water and sewer service.
- **Policy 2.1:** Work closely with local providers of energy and communications in determining and meeting community needs for energy and communications, and to underground overhead transmission facilities.

4.18.4 Methodology

Utility providers were sent a questionnaire requesting information regarding current service provided to the Project site and possible constraints or impacts to this service associated with Project build out, which is anticipated to occur in 2025. The impact analyses are based on the IRWD's response to the water and wastewater questionnaire, data obtained through websites, and planning documents adopted by the utility providers. Correspondence with utility providers is included in Appendix K.

4.18.5 Thresholds of Significance

The proposed Project may be deemed to have a significant impact with respect to utilities and service systems impacts if it would do the following:

- Threshold 4.18.1: 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**
- Threshold 4.18.2: Not have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years**
- Threshold 4.18.3: Not 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**
- Threshold 4.18.4: 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**
- Threshold 4.18.5: Fail to comply with federal, state, and local management and reduction statutes and regulations related to solid waste**

The Initial Study, included as Appendix A, substantiates that impacts associated with the exceedance of wastewater treatment requirements would be less than significant. However, this threshold was removed from Appendix G during the CEQA updates mentioned previously. Therefore, all thresholds listed above are analyzed in this section.

4.18.6 Project Impacts

- Threshold 4.18.1: Would the Project 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?**

Water.

Less than Significant Impact. As discussed previously, the IRWD provides domestic and recycled water service through an existing 24-inch domestic water main and an existing 12-inch recycled water main that cross the Project site near its southern boundary. These existing water and recycled water mains would be relocated. Consequently, portions of the existing water line system would need to be rerouted to be aligned with the proposed on-site street circulation system and lots. All rerouting of water facilities would be reviewed and approved by the City's Public Works Department and the IRWD. As described in Chapter 3.0, Project Description, 8-inch

domestic water lines and reclaimed water lines are proposed to be installed in each of the proposed Project's collector streets. These water lines would provide domestic water service and reclaimed water for landscaping for the proposed Project's various uses. The existing water well in the central portion of the Project site would also be sealed and decommissioned in accordance with Section 115700 of the Public Health and Safety Code and Section 13801 of the Water Code to prevent the contamination of groundwater. The proposed Project would increase demand for water, and on-site infrastructure would be required for the proposed Project to be completed. A discussion of water use during construction and operation of the proposed Project is included below.

Construction. Short-term demand for water may occur during demolition, excavation, grading, and construction activities on site. Water demand for soil watering (fugitive dust control), cleanup, masonry, painting, and other activities would be temporary and would cease at Project build out. Overall, short-term demolition and construction activities would require minimal water and are not expected to have any adverse impacts on the existing water system or available water supplies. Therefore, impacts associated with short-term demolition and construction activities would not require or result in the construction of new water treatment facilities or the expansion of existing facilities, and construction of the proposed Project would not require the need for new or expanded water entitlements. No mitigation would be required.

Operation. The proposed Project includes the installation of water distribution infrastructure as well as the relocation of IRWD lines on the southern edge of the Project site as described above. These improvements would be funded and constructed by the developer, built to IRWD standards, and offered for dedication to the IRWD.

An increase in long-term demand for water is anticipated to occur during operation of the proposed Project. The total average daily water demand for the existing uses on the Project site provided by the IRWD was approximately 3,341,316 gallons per year (gpy) in 2018 and 5,515,752 gpy in 2017. Table 4.18.B provides the estimated water demand on the Project site at Project build out. As shown in Table 4.18.B, the Project's proposed structures will result in a demand of approximately 61,029,460 gpy of potable water (landscaping water needs are calculated separately), which is 57,688,144 gpy greater than the water usage provided by the IRWD on site in 2018 and 55,513,708 gpy greater than the water usage provided by the IRWD on site in 2017.

As required of all new development in California, the proposed Project would comply with State law regarding water conservation measures, including pertinent provisions of Title 24 of the CCR regarding the use of water-efficient appliances, which are adopted in the City of Lake Forest's Municipal Code Section 8.02.001 by reference (Regulatory Compliance Measure AQ-4). Specific measures are listed below:

Table 4.18.B: Water Demand at Project Build Out

Land Use	Project Feature	Water Use Factors	Project Water Usage (gpd)	Project Water Usage (gpy)
Single-Family Residential Units	675 du	200 gpd/du	135,000	49,275,000
Senior Affordable-Housing Units	101 du	215 gpd/du	21,715	7,925,975
School	375 tsf	28 gal/tsf/day	10,489	3,828,485
Subtotal (potable water demand only)			167,204	61,029,460
Landscaping	N/A		103,274	37,695,010
Total (includes potable and recycled water demands)			270,478	98,724,470

Source: Land Use and Water Use Factors (IRWD 2018c). Provided by the IRWD in written correspondence dated November 28, 2018.

du = dwelling unit(s)
gal = gallon(s)
gpd = gallons per day
gpy = gallons per year
tsf = thousand square feet

- 1.28 gal per flush water closets (CALGreen)
- 2.0 gal per minute showerheads (CALGreen)
- 1.8 gal per minute kitchen faucets (CALGreen)

Additionally, residential units will also incorporate the following water efficiency and water conservation measures:

- Water-efficient plumbing fixtures that contribute to a 20 percent reduction in domestic and irrigation water demand.
- Provision of drought-tolerant plants for exterior landscape design.
- Installation of water-efficient irrigation systems that employ “smart” sensors that can tell if it has rained or if the landscape needs irrigation using moisture sensors.
- Use of recycled water for common area landscape irrigation.

Incorporation of these water conservation measures would reduce the water demands of the proposed Project. The 37,695,010 gpy of water needed for landscaping purposes will be provided by reclaimed water lines installed in each of the proposed Project’s collector streets.

According to the IRWD’s 2015 UWMP (IRWD 2016), the City’s projected water surplus in 2025 is expected to be 41,171 afy for a third-dry-year scenario as shown in Table 4.18.A. The increase in potable water demand as a result of the proposed Project (61,029,460 gpy or 187.29 afy) would represent a very small portion (0.45 percent¹) of the City’s projected

¹ 187.29 afy/41,171 afy

surplus water supply in 2025 under the worst-case scenario. Therefore, because the potable water demand associated with the proposed Project would only represent 0.45 percent of the surplus water supply in the IRWD's service area in 2025 under the worst-case scenario, the proposed Project would not necessitate new or expanded water facilities, and the IRWD would be able to accommodate the increased demand for potable water. Therefore, sufficient water supplies from existing entitlements are available to serve the proposed Project.

Additionally, an addendum to the 2010 Lake Forest SAMP, a water and sewer facility planning study prepared by the IRWD for a specific planning area or development proposal, would be required prior to final approval of the development plans. Section 1.2 of the IRWD Procedures Guidelines states, "Larger projects may require the preparation of a service feasibility study or a Sub-Area Master Plan (SAMP) to determine whether the existing IRWD facilities are adequate to serve the needs of the proposed development at build out or if new IRWD facilities are required to be constructed to handle the additional demands."¹

Therefore, given that the proposed Project would comply with the IRWD's standard requirements for facility planning and that adequate water distribution facilities would exist to serve the proposed Project, the proposed Project would not require the relocation or construction of new or expanded facilities beyond the on-site improvements detailed above. No mitigation would be required.

Wastewater.

Less than Significant Impact. Wastewater collection for the proposed Project would be provided by the IRWD, and treatment of wastewater generated by the proposed Project would be provided by the MWRP. As discussed above, the MWRP has a total design capacity of 28 mgd and currently treats an average wastewater flow of 20.3 mgd. Therefore, the MWRP is currently operating at approximately 72.5 percent of its daily design capacity. To serve the proposed Project, sewer lines would be extended onto the Project site. A gravity sewer system would be installed and connected to the existing 21-inch sewer line in Bake Parkway.

Construction. No significant increase in wastewater flows is anticipated as a result of construction activities on the Project site. Sanitary services during construction would be provided by portable toilet facilities, which transport waste off site for treatment and disposal. Therefore, during construction, potential impacts to wastewater treatment and wastewater conveyance infrastructure would be less than significant, and no mitigation would be required.

Operation. Project development would include the construction of new residential and school uses and is anticipated to result in an increase in wastewater generation during operation. The total daily average wastewater generated by the existing uses on the Project

¹ Procedural Guidelines and General Design Requirements (IRWD 2011). Website: <https://www.irwd.com/assets/files/Development%20Services/Procedural%20Guidelines%20and%20General%20Design%20Requirements%20%20Nov%202011.pdf> (accessed July 1, 2019).

site is negligible. As shown in Table 4.18.C, the proposed Project is estimated to generate 119,852 gpd of wastewater. The estimated increase in wastewater associated with the proposed Project would represent 1.6¹ percent of the MWRP’s remaining daily capacity. The increase of wastewater generated by the proposed Project is anticipated to be accommodated within the existing design capacity of the MWRP, which currently accepts 72.5 percent of its capacity.

Table 4.18.C: Wastewater Generation at Project Build Out

Land Use	Project Feature	Wastewater Flow Generation Factor Factors ¹	Project Wastewater Generation (gpd)	Project Wastewater Generation (gpy)
Single-Family Residential Units	675 du	150 gpd/du	101,250	36,956,250
Senior Affordable Housing Units	101 du	110 gpd/du	11,110	4,055,150
School	375 tsf	20 gal/tsf/day	7,492	2,734,580
Total			119,852	43,745,980

Source: Land Use and Water Factors. (IRWD 2018c). Provided by the IRWD in written correspondence dated November 28, 2018.

du = dwelling unit(s)
gal = gallon(s)
gpd = gallons per day
gpy = gallons per year
tsf = thousand square feet

As discussed above, the proposed Project would include the installation of a new gravity sewer system that would connect to the existing 21-inch sewer line in Bake Parkway. The installation of sewer facilities sufficient to serve a proposed Project is a standard condition for development projects. In addition, as discussed above, a SAMP addendum, a water and sewer facility planning study prepared by the IRWD for a specific planning area or development proposal, is required prior to final approval of the development plans.

Therefore, the proposed Project would not require, nor would it result in, the construction of new wastewater treatment or collection facilities or the expansion of existing facilities other than those facilities to be constructed on site. Therefore, impacts related to the construction of wastewater treatment or collection facilities and the capacity of the wastewater treatment provider would be less than significant, and no mitigation would be required.

Storm Water Drainage.

Less than Significant Impact. The capacity of the downstream storm drain network depends on peak discharge rates entering the system. In the existing condition, storm water runoff from the Project site drains into two existing drainages. Storm water runoff from the western/northwestern portion of the Project site drains southwesterly, and flow then channelizes in an on-site natural and partly paved drainage system located along the southwest Project site boundary. Storm water runoff from the eastern/southeastern portion of the Project

¹ 119,852 gpd/7.7 mgd

site drains southeasterly in an on-site natural and partly paved drainage prior to discharging to Serrano Creek.

In the proposed condition, 80.3 ac (65.8 percent) of the Project site would be impervious surface area. The remaining 41.7 ac (41.7 percent) of the site would consist of pervious area, which would contain landscaping that would minimize on-site erosion and siltation by stabilizing the soil. The proposed Project would result in a permanent increase in impervious area of 68.2 ac (an increase of 9.9 percent to 65.8 percent of the Project site). An increase in impervious area would increase the volume of runoff during a storm. However, the Project provides an integrated site design for storm water measures that incorporate water runoff, storm water management, bio swales, bio retention basins, and infiltration where feasible to reduce impacts on storm water infrastructure and down-stream impacts. As discussed in Section 4.10, Hydrology and Water Quality, the proposed Project would include a subsurface detention vault below Central Park, underground detention vaults in combination with proprietary biotreatment Best Management Practices (BMPs) at each of the five neighborhood parks, a bioretention facility along Serrano Creek, and a linear bioretention facility along A Street. These features would reduce flows during storm events so that they would not exceed predevelopment runoff rates or time of concentration by more than 5 percent. Therefore, peak discharge would not adversely affect the capacity of downstream networks, and construction or expansion of storm water drainage facilities would not be required. Therefore, impacts to storm water drainage facilities would be less than significant, and no mitigation would be required.

Electric Power.

Less than Significant Impact. The proposed Project includes a new on-site electrical system that would connect to the existing SCE lines surrounding the Project site. The Project proposes to underground the existing overhead 66-kilovolt (kV) power lines that are currently located on the east side of Bake Parkway within an existing 20 ft wide SCE utility easement. Impacts related to the undergrounding of the 66 kV power lines are discussed in other sections of this EIR. As discussed in Section 4.1, Aesthetics, the undergrounding of SCE lines would improve view quality for visitors to and around the Project site. As discussed in Section 4.9, Hazards and Hazardous Materials, the 66 kV lines would not present a significant electromagnetic-frequency hazard to staff members or students at the proposed school site. A discussion of electricity use during construction and operation of the proposed Project is included below.

Construction. Short-term construction activities would be limited to providing power to the staging area and portable construction equipment and would not substantially increase demand for electricity. Heavy equipment used for construction is primarily powered by diesel fuel. Temporary electric power would be provided via existing utility poles located on the east side of Bake Parkway. Given the limited nature of potential demand for electricity during construction and the availability of existing power lines adjacent to the Project site, there would not be a need to construct new or alter existing electric transmission facilities. Impacts to regional electricity supplies would be less than significant.

Operation. Operation of the proposed Project would increase on-site electricity demand compared to existing conditions. Current electricity usage on the Project site based on the

CalEEMod model output in the *Greenhouse Gas Analysis* is assumed to be 71,825 kWh/yr for the existing nursery operations.

As discussed in Section 4.6, Energy, the proposed Project is estimated to consume a total of 6,212,608 kWh/yr (6.2 gigawatts per year [GWh/yr]) of electricity with the implementation of energy efficiency measures and sustainability features as required by the Title 24 of the CBC (RCM AQ-4), which is 6,140,783 kWh/yr (6.14 GWh/yr) more than operation of the existing nursery. Specifically, the proposed Project would reduce electricity consumption by incorporating the following energy efficiency measures in the design of residential units in addition to complying with Title 24 requirements:

- Increasing insulation values in walls and attic spaces
- Limiting air leakage through the building envelope
- Controlling energy losses in the heating, ventilation, and air conditioning (HVAC) system (specifying high Seasonal Energy Efficiency Ratio (SEER) rated equipment and reducing duct leakage)
- Incorporating high-efficiency windows and doors
- Providing and installing ENERGY STAR® appliances
- Installing highly efficient lighting and lighting control systems
- Installation of EV charging stations at Central Park and the elementary school¹
- Installation of solar panels or solar ready construction of residential structures to the extent required by CALGreen

Total electricity consumption in Orange County in 2017 was 20,030.5 GWh. Therefore, the increased electricity demand associated with the proposed Project would be less than 0.03 percent of Orange County's total electricity demand. Service providers utilize projected demand forecasts in order to provide an adequate supply or plan for surplus in the service area. As discussed in Section 4.6, Energy, there are sufficient planned electricity supplies in the SCE service area for estimated net increases in energy demands through 2030.

Because the proposed Project would only represent a small fraction of electricity demand in Orange County, the Project would exceed Title 24 requirements, and there would be sufficient electricity supplies available, energy demand for the proposed Project would be less than significant. No mitigation would be required.

The supply and distribution network within the area surrounding the Project site would remain essentially the same as exists today, with the exception of on-site improvements to underground the existing overhead 66 kV power lines that are currently located on the east side of Bake Parkway within an existing 20 ft wide SCE utility easement, and levels of service

¹ EV charging stations at the proposed elementary school would be subject to SVUSD construction standards.

(LOS) to off-site users would not be adversely affected. The relocated and undergrounded distribution facilities on Bake Parkway would provide electrical service to the residential, school, and recreational uses. The proposed Project would not increase electrical demand beyond existing projections from the local electricity provider, and the Project site is within a developed service area with existing demand. Therefore, the proposed Project would not require the construction of any physical improvements related to the provision of electricity service that would result in significant environmental impacts, and the Project's potential impacts would be less than significant. No mitigation would be required.

Natural Gas.

Less than Significant Impact. Gas distribution services will be extended through all on-site streets from private streets to which the Project will connect. The developer will be responsible for construction connections to these distribution facilities and the backbone distribution systems for the Project.

Construction. Short-term construction activities would not result in demand for natural gas since construction activities/equipment would not require accessing existing adjacent natural gas facilities. Therefore, construction activities would not impact natural gas services, and the proposed Project would not require new or physically altered gas transmission facilities.

Operation. Operation of the proposed Project would result in increased demand for natural gas due to natural gas use on the Project site. Based on the CalEEMod output in the *Greenhouse Gas Analysis*, the natural gas usage on the Project site is assumed to be 177,650 kBTU/yr (1,776.5 therms/yr) for the existing nursery usage. The estimated natural gas demands of the proposed Project as provided in Section 4.6, Energy, is 11,797,707 kBTU/yr (117,977.7 therms/year). Therefore, the proposed Project would require an increase of approximately 11,620,057 kBTU/yr (116,020.6 therms/yr) of electricity compared to existing conditions.

Total natural gas consumption in Orange County in 2018 was 575.1 million therms. Therefore, natural gas demand associated with the proposed Project would be less than 0.02 percent of Orange County's total natural gas demand. The estimated increase in natural gas demand associated with the proposed Project would represent a very small fraction of the natural gas demand in Orange County with the incorporation of Title 24 requirements and green features (Regulatory Compliance Measure AQ-4).

As noted above, service providers utilize projected demand forecasts in order to provide an adequate supply or plan for surplus in the service area. As discussed in Section 4.6, Energy, it is anticipated that SoCalGas would be able to meet the natural gas demand in its service area through 2035. Because the proposed Project would only represent a small fraction of natural gas demand in Orange County, the Project would exceed Title 24 requirements, and there would be sufficient natural gas supplies available, natural gas demand for the proposed Project would be less than significant. No mitigation would be required.

The supply and distribution network within the area surrounding the Project site would remain essentially the same as exists today except for standard on-site improvements, and LOS to off-site users would not be adversely affected. Existing gas transmission and distribution services maintained by SoCalGas would provide natural gas service to the proposed Project. The proposed Project would not increase natural gas demand beyond existing projections from the local natural gas provider, and the Project site is within a developed service area with existing demand. Therefore, the proposed Project would not require the construction of any physical improvements related to the provision of natural gas service that would result in significant environmental impacts, and the Project's potential impacts would be less than significant.

Telecommunications Facilities.

Less than Significant Impact. Telephone, cable, and internet services existing along Rancho Parkway will be extended into the Project site at the Project's three entrances. Internal to the Project, the Project Developer will be responsible for constructing adequate telecommunication facility extensions to the various neighborhoods in the Project. Additionally, cable box locations will be carefully planned and coordinated with the utility company, the landscape architect, and the Developer to be unobtrusive and screened from public view where possible. The construction and expansion of these facilities would occur on site during the site preparation and earthwork phase and are not expected to impact any telephone, cable, or internet services offsite that serve the surrounding areas. Additionally, telecommunication facilities are generally installed concurrently with utility expansions, and impacts associated with the expansion of telecommunications facilities are already considered in the air quality, noise, and construction traffic analysis. Therefore, the proposed impacts associated with the relocation or construction of new or expanded telecommunication facilities and impacts would be less than significant. No mitigation would be required.

Threshold 4.18.2: Would the Project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?

Less than Significant Impact. As discussed under Threshold 4.18.1, the relatively small increase in water use would be accounted for in the anticipated growth rates for the City through the SAMP. The proposed Project would not necessitate new or expanded water entitlements, and the IRWD would be able to accommodate the increased demand for potable water under a worst-case scenario as forecasted in the 2015 IRWD UWMP. Additionally, in written correspondence dated November 19, 2018, the IRWD indicated that it would be able to adequately serve the proposed Project. Therefore, the IRWD would have sufficient water supplies available to serve the Project from existing entitlements and resources and would not require new or expanded entitlements. Therefore, impacts related to water supplies available to serve the Project during normal, dry, and multiple dry years would be less than significant, and no mitigation would be required.

Threshold 4.18.3: Would the Project 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?

Less than Significant Impact. As discussed under Threshold 4.18.1, although the Project would increase water demand on site, the increased wastewater flows from the proposed Project can be accommodated within the existing design capacity of the MWRP, which will serve the Project site. Additionally, the relatively small increase in wastewater generation would be accounted for in the anticipated growth rates for Lake Forest through the SAMP. Additionally, in written correspondence dated November 19, 2018, the IRWD indicated that it would be able to adequately serve the proposed Project. Therefore, the wastewater treatment provider that would serve the proposed Project would have adequate capacity to serve the Project's projected demand in addition to its existing commitments. Therefore, impacts related to wastewater generation would be less than significant, and no mitigation would be required.

Threshold 4.18.4: Would the Project 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?

Less than Significant Impact. The Project site is located within OCWR's service area. OCWR owns and operates three landfills in Orange County that accept municipal solid waste. These include the Frank R. Bowerman Landfill in Irvine, which accepts commercial waste only; the Olinda Alpha Landfill in Brea, which accepts both public and commercial waste; and the Prima Deshecha Landfill in San Juan Capistrano, which also accepts both public and commercial waste. All three landfills are Class III and only accept nonhazardous municipal solid waste.

Regular trash pickup is provided by the City of Lake Forest through a contract with CR&R, Inc. CR&R provides and manages hazardous waste collection facilities at several locations throughout Orange County and collects solid waste, green waste (i.e., grass, tree, and shrub clippings), and items for recycling. The company provides three different carts for automated collection of waste, recyclables, and green waste. The closest household waste collection center location to the Project site is in Irvine, approximately 5 mi west of the Project site. Any waste considered unacceptable at the Frank R. Bowerman Landfill would be hauled to the household waste collection center.

The Frank R. Bowerman Landfill is the closest OCWR landfill to the proposed Project site, approximately 3 mi west of the Project site, and would be expected to provide solid waste disposal for the construction and operation of the proposed Project. The Frank R. Bowerman Landfill, which is permitted to receive a daily maximum of 11,500 tpd, receives an average of approximately 8,500 tpd. The landfill opened in 1990 and is scheduled to close in approximately 2053.

Solid waste generated by the existing uses on the Project site mainly consist of compostable organic plant matter that may be reused on site. As such, the estimated 8,760 pounds of solid waste generated by the proposed Project as illustrated in Table 4.18.D would be an increase relative to current conditions on site.

Table 4.18.D: Projected Solid Waste Generation

Land Use	Proposed Project	Generation Rate	Total Solid Waste Generated per Day (lbs)
Single-Family Residential	776 units	10 lbs/du/day	7,760
School	1,000 students	1 lb/student/day	1,000
Total			8,760

Source: CalRecycle. Estimated Solid Waste Generation Rates. Website: <https://www2.calrecycle.ca.gov/WasteCharacterization/General/Rates> (accessed 14 August 2019).

du = dwelling unit(s)
lb/lbs = pound/pounds

The increase in solid waste generated by the proposed Project would constitute approximately 0.15 percent of the remaining average daily capacity (3,000 tons per day) at the Frank R. Bowerman Landfill. The proposed Project would be served by a landfill with sufficient permitted capacity to accommodate its solid waste disposal needs. Therefore, the proposed Project would result in less than significant impacts related to solid waste and landfill facilities, and no mitigation would be required.

Threshold 4.18.5: Would the Project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

Less than Significant Impact. Solid waste practices in California are governed by multiple federal, State, and local agencies that enforce legislation and regulations ensuring that landfill operations minimize impacts to public health and safety and the environment. The Project site is located within OCWR’s service area. An important part of OCWR’s mission is to apply sound environmental practices to ensure compliance with these regulations. Additionally, OCWR has an adopted a CIWMP that requires countywide facilities to meet the 15-year capacity requirements. OCWR is also obligated to obtain a Solid Waste Facilities Permit, a Storm Water Discharge Permit, and permits to construct and operate gas management systems and meet Waste Discharge Requirements. The LEA, the SCAQMD, and the RWQCB enforce landfill regulations related to health, air quality, and water quality, respectively. The proposed Project would not inhibit OCWR’s compliance with the requirements of each of the governing bodies.

AB 939 changed the focus of solid waste management from landfill to diversion strategies such as source reduction, recycling, and composting. The purpose of the diversion strategies is to reduce dependence on landfills for solid waste disposal. AB 939 established mandatory diversion goals of 25 percent by 1995 and 50 percent by 2000. CalRecycle tracks and monitors solid waste generation rates on a per capita basis. Per capita solid waste generation rates and total annual solid waste disposal volumes for the City of Lake Forest between 2011 and 2016 are shown in Table 4.18.E below. It should be noted that more recent data has not yet been made available.

Table 4.18.E: Solid Waste Generation Rates in Lake Forest

Year	Waste Generation Rates (pounds/person/day)		Total Disposal Tonnage (tons/year)
	Per Resident	Per Employee	
2011	4.6	10.3	65,028
2012	4.5	9.9	64,184
2013	4.4	9.6	64,771
2014	4.5	9.3	65,081
2015	4.4	9.1	64,856
2016	4.2	8.9	63,663

Source: Table 7-3, City of Lake Forest Existing Conditions Report (City of Lake Forest 2018).

The City has complied with State requirements to reduce the volume of solid waste through recycling and reuse of solid waste. As shown in Table 4.18.E, both the per capita waste generation rates and the total annual disposal tonnage in Lake Forest were at their lowest levels in 2016. The City’s per capita disposal rates in 2016 were 4.2 and 8.9 pounds per person per day for residents and employees, respectively. The City’s per capita disposal rate satisfies the target rate established by CalRecycle (of 10.6 pounds/person/day for residents and 24.2 pounds/person/day for employees).¹ Household waste recycling services are also provided through the City to comply with State-mandated solid waste reduction goals. Therefore, the proposed Project would comply with federal, State, and local statutes and regulations related to solid waste, and no mitigation would be required.

4.18.7 Cumulative Impacts

As defined in the *State CEQA Guidelines*, cumulative impacts are the incremental effects of an individual project when viewed in connection with the effects of past, current, and probable future projects within the cumulative impact area for public services and utilities. The Project site is a nursery site in Lake Forest currently served by utility providers. The cumulative area for utilities is listed below for each individual utility provider.

4.18.7.1 Wastewater

The geographic area for the cumulative analysis for wastewater treatment is defined as the IRWD service area. Within its service area, the IRWD uses United States Census Bureau population information with population projections as well as existing land use and build out or zoned land use to project current and future wastewater flows. The proposed Project would not generate wastewater above the current capacity of the MWRP; furthermore, it is anticipated that the IRWD’s existing and planned wastewater treatment capacity would be sufficient to accommodate the growth forecasted within its service area, and development that is generally consistent with this forecast can be adequately served by the existing IRWD facilities. The proposed Project would not induce significant population, employment, or housing growth, either directly or indirectly.

¹ *Lake Forest General Plan Update: Existing Conditions Report*. (City of Lake Forest 2018c). Website: https://static1.squarespace.com/static/5abd4a977e3c3a6cd57d9c48/t/5be097d8c2241bf46b6623ba/1541445626140/LakeForestECR_Complete_110118_WebVersion.pdf (accessed August 14, 2019).

According to correspondence with the IRWD dated November 19, 2018, the IRWD will be able to adequately serve the proposed Project, and the SAMP addendum will analyze the need for any improvements, if necessary, to accommodate the additional wastewater demand. If the IRWD determines that new facilities or improvements to wastewater infrastructure are necessary to support the proposed Project, additional environmental analysis pursuant to CEQA may be required. In addition, the proposed Project would not contribute wastewater that would exceed the service capacity of the MWRP. Therefore, the proposed Project's contribution to wastewater generation in the IRWD service area would not be cumulatively considerable, and no mitigation would be required.

4.18.7.2 Potable Water

The geographic area for the cumulative analysis of water infrastructure includes the Project site and the IRWD's service area. According to correspondence with the IRWD dated November 19, 2018, the IRWD will be able to adequately serve the proposed Project, and the SAMP addendum will analyze the need for any improvements, if necessary, to accommodate the additional sewer loads. If the IRWD determines that new facilities or improvements to water infrastructure are necessary to support the proposed Project, additional environmental analysis pursuant to CEQA may be required. Therefore, the proposed Project's contribution to water demand in the City would not be cumulatively considerable, and no mitigation would be required.

4.18.7.3 Solid Waste

The geographic area for the cumulative analysis of solid waste infrastructure is OCWR's service territory. Development associated with the proposed Project would contribute to an increased demand for landfill capacity for solid waste. As stated previously, the landfill serving the Project site would be the Frank R. Bowerman Landfill, which is not scheduled to close until 2053. As discussed under Threshold 4.18.5 above, the proposed Project would only constitute approximately 0.15 percent of the remaining average daily capacity at the Frank R. Bowerman Landfill. Additionally the Frank R. Bowerman Landfill is currently only receiving 73.9 percent of the 11,500 tons it is permitted to receive. Therefore, the Frank R. Bowerman Landfill has sufficient permitted capacity to provide adequate capacity for Orange County's solid waste needs, and with compliance with federal, State, and local statutes and regulations related to solid waste, which require reductions in solid waste generation, the proposed Project's contribution to solid waste impacts would not be cumulatively considerable, and no mitigation would be required.

4.18.7.4 Electricity

The geographic area for the cumulative analysis of impacts to the provision of electricity is the service territory of SCE. SCE's service area covers approximately 50,000 sq mi spanning Central, Coastal, and Southern California, with a total population of 15 million people. The projections of statewide electricity supply capacity demand rates are cumulative in nature. They are based on population and economic growth in addition to such physical variables as average temperature and water supplies (important to hydroelectric generation) in a given year. The total annual electricity consumption in the SCE service area in 2017 was 84,291.6 GWh. By 2030, consumption is anticipated to increase by approximately 12,000 GWh for the low-demand scenario and by 22,000 GWh for the high-demand scenario (CEC 2018c). While this forecast represents a large increase in

electricity consumption, the proposed Project's percentage of cumulative consumption would be less than 0.008 percent. Therefore, any increase in electrical demand resulting from the proposed Project would be incremental compared to the increase in regional electrical demand.

Title 24 of the CCR regulates energy and water consumption in new construction and regulates building energy consumption for heating, cooling, ventilation, water heating, and lighting. Therefore, in relation to the cumulative study area, the proposed Project would not generate a significant cumulative increase in demand for electricity or a significant disruption in service or service level. Therefore, the proposed Project's contribution to electricity impacts would not be cumulatively considerable, and no mitigation would be required.

4.18.7.5 Natural Gas

The geographic area for the cumulative analysis of impacts to the provision of natural gas is the service territory for SoCalGas. The SoCalGas service area covers approximately 24,000 sq mi, throughout Central and Southern California, from Visalia to the Mexican border. Total natural gas consumption in the SoCalGas service area in 2018 was 5,156.1 million therms. Between 2018 and 2035, total natural gas consumption in the SoCalGas service area is forecast to remain steady for the low- and mid-demand scenarios and to increase by approximately 650 million therms in the high-demand scenario due to intense energy efficiency efforts (CEC 2018c). The proposed Project's percentage of cumulative consumption of natural gas in the SoCalGas service area would be less than 0.003 percent. Sufficient gas supplies and infrastructure capacity are available, or have already been planned, to serve past, present, and reasonably foreseeable projects. Furthermore, like the proposed Project, all future projects would be subject to Title 24 requirements and would be evaluated on a case-by-case basis to determine the need for specific distribution improvements. Because the natural gas provider has identified adequate capacity and additional development within the SoCalGas service area and because the proposed project would comply with Title 24, the proposed Project's contribution to natural gas impacts would not be cumulatively considerable, and no mitigation would be required.

4.18.7.6 Telecommunications Facilities

The geographic area for the cumulative analysis of impacts to the provision of natural gas is Lake Forest. Telephone, cable, and internet services are provided to residents through private providers of these services. The construction and expansion of telecommunication facilities for the proposed Project would occur on site and are not expected to impact any telephone, cable, or internet services offsite that serve the surrounding areas. Likewise, construction and expansion of telecommunication facilities would generally occur on site to extend through proposed related developments. Therefore, cumulative impacts associated with the relocation or construction of new or expanded telecommunication facilities would be less than significant. No mitigation would be required.

4.18.8 Level of Significance Prior to Mitigation

The proposed Project would have no significant and impacts related to utilities and service systems prior to the implementation of Mitigation Measures.

4.18.9 Regulatory Compliance Measures and Mitigation Measures

4.18.9.1 Regulatory Compliance Measures

The proposed Project would comply with the following regulatory standards, the implementation of which are intended to reduce impacts related to utilities.

RCM AQ-4 Title 24 California Code of Regulations (CCR). Prior to issuance of building permits, the City of Lake Forest Director of Community Development, or designee, shall ensure that the project design complies with the 2019 Building Energy Efficiency Standards (Title 24 CCR) energy conservation and green building standards.

RCM GHG-14 Title 20 California Code of Regulations (Appliance Energy Efficiency Standards). Appliances installed in project buildings will comply with the energy efficiency requirements in Title 20 CCR, Appliance Energy Efficiency Standards. All appliances shall be Energy Star appliances.

4.18.9.2 Mitigation Measures

The proposed Project would not result in significant impacts. Therefore, no mitigation would be required.

4.18.10 Level of Significance after Mitigation

The proposed Project would have no significant and impacts related to utilities and service systems.

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