# 4.18 Utilities and Service Systems

This section describes the existing utilities conditions of the project site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the proposed project. In addition to the documents listed in Section 4.18.8, References, information contained in this section is based on the following:

- **Appendix K-1:** Draft Sub-Area Master Plan (SAMP) for the Gateway Village Development (Gateway Village SAMP); prepared by Stantec; dated February 6, 2025
- **Appendix K-2:** Dry Utility Due Diligence Report, Gateway Preserve, Irvine, California; prepared by Moran Utility Service Inc.; dated May 4, 2023
- **Appendix K-3:** Recycled Water System Facilities; prepared by Stantec; dated May 31, 2023
- **Appendix K-4:** Water and Sewer Will-Serve Letter; prepared by Irvine Ranch Water District; dated December 26, 2024
- **Appendix F-1:** Water Supply Assessment; prepared by Irvine Ranch Water District; dated April 14, 2025
- **Appendix F-2:** Water Supply Verification; prepared by Irvine Ranch Water District; dated April 14, 2025
- **Appendix F-3:** Preliminary Hydrology Report; Gateway Village, City of Irvine, California; prepared by Fuscoe Engineering Inc.; dated December 2024
- **Appendix B-1:** Air Quality and Greenhouse Gas Emissions Modeling; prepared by Dudek; dated March 2025

## 4.18.1 Existing Conditions

This section describes the existing conditions of the project site and identifies the resources that could be affected by the project.

### 4.18.1.1 Water

#### Existing Water Infrastructure

The City of Irvine's existing potable water system is fully encompassed within the potable and non-potable water service area of the Irvine Ranch Water District (IRWD), which is an independent special district that also services portions of the surrounding cities of Tustin, Santa Ana, Orange, Costa Mesa, Lake Forest, and Newport Beach, and unincorporated areas of the County of Orange. Altogether the service area is approximately 181 square miles, with the City of Irvine and its sphere of influence accounting for approximately 41% (approximately 74 square miles) of IRWD's service area. Distribution pipelines in the City range in diameter from 1 to 72 inches and have a total length of approximately 78 miles. Most of the water pipes throughout the City are 8-inch-diameter pipes, and most of the pipelines were constructed in the 1970s through the 2000s (City of Irvine 2024a).

The closest existing potable water supply infrastructure to the project site are 10-inch-diameter and 12-inch-diameter pipelines along Jeffrey Road, a 12-inch-diameter pipeline connecting Jeffrey Road to the adjacent (to the north) Orchard Hills Neighborhood development, and a 30-inch-diameter pipeline in Portola Parkway (Figure 4.18-1, Potable Water System Facilities). The closest recycled water supply infrastructure to the project site consists of 6-inch-diameter, 8-inch-diameter, and 12-inch-diameter pipelines along Jeffrey Road; a 16-inch-diameter pipeline in Portola Parkway; and 10-inch-diameter pipeline along Bee Canyon Access Road (Figure 4.18-2, Recycled Water System Facilities).

### Regional Water Supply and Demand

As discussed in Section 4.10, Hydrology and Water Quality, of this Draft EIR, IRWD has been identified by the City as a public water system that will supply water service (both potable and non-potable) to the project. As the public water system, IRWD is required by Section 10910 et seq. of the Water Code to provide the City with an assessment of water supply availability for defined types of projects. The project has been found by the City to be a project requiring an assessment. As a result, a Water Supply Assessment (Appendix F-1) and a Water Supply Verification (Appendix F-2, which includes the Water Supply Assessment as Exhibit C), have been completed for the project.

IRWD derives its water supplies from groundwater, water imported by the Metropolitan Water District of Southern California (Metropolitan), recycled water, and local reservoirs. With respect to groundwater, in July 2019, the California Department of Water Resources (DWR) approved an alternative to a groundwater sustainability plan (GSP) for the Orange County Groundwater Basin (Basin). Alternative plans can be submitted in lieu of GSPs and must demonstrate how water managers have already achieved or will achieve sustainable groundwater management. The California DWR designated the Coastal Plain of Orange County Groundwater Basin (Basin 8-1) as a medium-priority basin, primarily due to heavy reliance on the Basin's groundwater as a source of water supply. The agencies within Basin 8-1—the Orange County Water District, IRWD, and the City of La Habra (collectively the "Submitting Agencies")—agreed to collaborate in order to submit an alternative to a GSP, known as the Basin 8-1 Alternative (Appendix F-1, Water Supply Assessment).

Based on the Basin 8-1 Alternative, IRWD's water supplies remain essentially constant during normal, single-dry, and multiple-dry years because groundwater and Metropolitan imported water account for the majority of IRWD's potable supply. Recycled water, groundwater, and imported water comprise all of IRWD's non-potable supply. Groundwater production from the Basin typically remains constant or may increase in cycles of dry years, even if overdraft of the Basin temporarily increases, because groundwater producers reduce their demand on imported supplies to secure reliability (OCWD et al. 2022). Metropolitan's 2020 Urban Water Management Plan (UWMP) concludes that Metropolitan has supply capabilities sufficient to meet expected demands from 2025 through 2045 under a single dry-year condition and a period of drought lasting 5 consecutive years, as well as in a normal water year hydrologic condition. Recycled water production also remains constant and is considered "drought-proof" as a result of constant sewage flows, including years with low precipitation (Metropolitan 2021) (Appendix F-1; Appendix F-2, Water Supply Verification).

In April 2023, the Orange County Water District and Orange County Sanitation District completed construction of the final phase of the world's largest indirect potable reuse facility. Located in Fountain Valley, the groundwater replenishment system takes highly treated wastewater that would have been discharged into the Pacific Ocean and purifies it further through a three-step advanced treatment process. The purified water is then injected and percolated into the Basin, where it ultimately becomes part of Orange County's drinking water supply. The groundwater replenishment system has expanded twice since opening in 2008, completing its final phase in 2023 with a production capacity of 130 million gallons per day (mgd) of high-quality drinking water (OCWD 2025).

In addition, in September 2024, in response to improved water conditions following two wet winters, Governor Gavin Newsom ended the drought state of emergency in 19 counties, including Orange County (State of California 2024).

## 4.18.1.2 Wastewater

Wastewater generated within the City is treated by the IRWD, which provides drinking water, sewage collection and treatment, recycled water programs, and urban runoff treatment, and includes 1,153 miles of sewage collection pipes and two recycled water treatment plants. IRWD meets approximately one-quarter of the service area's water

demands with recycled water (IRWD 2024a). The IRWD Michelson Water Recycling Plant provides tertiary (three-stage) sewage treatment, which produces recycled water for landscape and agricultural irrigation, and for industrial and commercial needs. The residual organic solids are piped to the adjacent Biosolids and Energy Recovery Facility, where they are converted into fertilizer or fuel. The Michelson Water Recycling Plant has a water production capacity of 28 mgd (IRWD 2024b).

The City's wastewater collection system consists primarily of vitrified clay pipe and polyvinyl chloride sewer mains that range from 4 to 60 inches in diameter, in addition to 32 trunk lines that are the most critical components of the sewer collection system. The ultimate destinations of wastewater collected in IRWD's system can be the Michelson Water Recycling Plant, the Los Alisos Water Recycling Plant, or treatment plants operated by the El Toro Water District, Santa Margarita Water District, or Orange County Sanitation District (City of Irvine 2024a).

The nearest existing sewer lines to the project site are an 8-inch-diameter sewer in Portola Parkway and an 8-inch-diameter sewer crossing Portola Parkway. Based on the elevation contours of the site, the site generally flows west toward Portola Parkway (Figure 4.18-3, Sanitary Sewer System Facilities). In addition, existing downstream 8-inch-diameter sewers are in the adjacent Stonegate residential development southwest of the project site along Ovation (Appendix K-1, Gateway Village SAMP).

### 4.18.1.3 Stormwater Drainage

The local storm drain system is owned by the City and maintained by the City's Public Works and Sustainability Department. The regional flood control system is owned and maintained by the Orange County Public Works Department. These County lines typically range in size from 18 to 60 inches in diameter (with some up to 96 inches in diameter), with the local drainage system consisting of the smaller-diameter pipes, and the larger flood control facilities consisting of trapezoidal channels or riverine systems. Drainage facilities are typically either reinforced concrete pipe (RCP) pipe or box culverts that convey stormwater. Local storm drain facilities are designed to accommodate 25-year flow requirements, and the regional County of Orange facilities are designed to accommodate 100-year storm events. The City conveys stormwater to the Orange County Flood Control District regional conveyance facilities and has an ongoing monitoring and maintenance procedure to ensure that the overall system functions effectively. To prevent significant flooding during storm events, the Orange County Public Works Department and the City monitor and maintain the respective channels and storm drain systems to ensure they are conveying storm flows as designed (City of Irvine 2024a).

As discussed in Section 4.10 of this Draft EIR, the project site has been farmed for decades, and at present consists of unpaved, highly pervious open space. Topography on the upper one-third of the site generally drains by two surface ditches in a southwest direction toward Jeffrey Road, at a gradient of 3.5%. This upper third site tributary is part of the larger East Hicks Canyon watershed, which originates off site and upstream of the project site. Stormwater from the upper third of the project site is collected by existing 42-inch-, 66-inch-, and 96-inch-diameter storm drain laterals that feed into Hicks Canyon Facility F27, which is a 102-inch-diameter RCP in Jeffrey Road (Figure 4.10-1, Existing On-Site Hydrology, in Section 4.10 of this Draft EIR). Additionally, off-site run-on conditions, which is when stormwater flows onto the project site from an adjacent property, occur along the northerly project boundary in the form of surface/channel conveyance, and along the easterly project boundary in the form of surface and pipe flow conveyance, which in turn feed into the existing 96-inch-diameter storm drain lateral (Appendix F-3, Preliminary Hydrology Report).

The topography on the lower two-thirds of the project site generally drains in a southerly direction toward Portola Parkway, with a moderate gradient of 2.5% to 3%. At Portola Parkway, the lower two-thirds flow is collected by two existing storm drain pipes, one on Portola Parkway midway between Jeffrey Road and Bee Canyon Access Road and

one at the intersection of Portola Parkway and Bee Canyon Access Road (Figure 4.10-1 in Section 4.10). One of the existing storm drain facilities heads northwest in Portola Parkway and turns south at Jeffrey Road, and the second existing storm drain facility heads southeast in Portola Parkway, eventually turning southwest at Paragon. Run-on conditions from areas east of Bee Canyon Access Road are not present in the lower two-thirds of the site because existing flows are intercepted and surface-conveyed south before entering a 36-inch-diameter RCP and conveyed underground to a connection point with the southerly Portola Parkway storm drain (Appendix F-3).

### 4.18.1.4 Electricity, Natural Gas, and Telecommunications

The project site is within the Southern California Edison (SCE) service area. SCE, a public utility that functions on demand, supplies electricity to the project site via underground and overhead lines. SCE is regulated by the California Public Utilities Commission and Federal Energy Regulatory Commission. Electrical power is generated by a combined system of gas and coal production, oil, hydroelectricity, nuclear production, solar and wind technology, and energy purchase. Currently, underground SCE distribution systems are located adjacent to the project site in Bee Canyon Access Road, Portola Parkway, and Jeffrey Road. An SCE substation is at the northeast corner of Jeffrey Road and Portola Parkway, across from the project site. An overhead system in Jeffrey Road feeds the existing tenants on the project site, as well as the Irvine Conservancy, the Bowerman facility, and other existing facilities northeast of the project site (Appendix K-2, Dry Utility Due Diligence Report).

The project site is provided with natural gas by the Southern California Gas Company (SoCalGas). The SoCalGas service territory encompasses approximately 24,000 square miles and more than 500 communities. SoCalGas has existing gas mains in Portola Parkway and Jeffrey Road (Appendix K-2).

The project site is within the service areas of AT&T and Cox Communications (Cox). Together, these providers offer voice and data communication services. Funding for telecommunication services is collected through company billings and developer fees applied to the extension of infrastructure to new development. AT&T and Cox currently have underground systems adjacent to the project site in Portola Parkway and Jeffrey Road. AT&T has an overhead system that runs from the corner of Portola Parkway and Bee Canyon Access Road, trending north through Gateway Preserve and connecting to the existing SCE overhead system on Jeffrey Road. The lines are on the existing poles that SCE is converting to underground lines with the Jeffrey Road construction (Appendix K-2).

### 4.18.1.5 Solid Waste

Solid waste transfer and recovery facilities in the City are owned and operated by private entities and licensed and overseen by the state. The County of Orange maintains three closed landfills in the City, and there are 21 actively maintained and monitored landfills Countywide. The County operates compost facilities at three existing landfills. Residential, institutional, regional commercial, and industrial solid waste is presently collected by private firms, with residential and village commercial collections franchised by the City. OC Waste & Recycling manages three active landfills in Orange County: the Frank R. Bowerman Landfill, located in Irvine approximately 1.5 miles east of the project site; the Prima Deshecha Landfill, located in San Juan Capistrano, approximately 18 miles southeast of the project site; and the Olinda Alpha Landfill, located in Brea, approximately 18 miles northwest of the project site (City of Irvine 2024a).

The Frank R. Bowerman Landfill has a maximum permitted capacity of 266,000,000 cubic yards (CY), a remaining capacity of 205,000,000 CY, and a cease operation date of December 31, 2053 (CalRecycle 2024a). The Prima Deshecha Landfill has a maximum permitted capacity of 172,100,000 CY, a remaining capacity of 128,800,000 CY, and a cease operation date of December 31, 2102 (CalRecycle 2024b). The Olinda Alpha Landfill would accept

soil (inert waste) exported from the project site during grading (County of Orange 2024). In addition, the Olinda Alpha Landfill would accept construction and operational solid waste. This landfill has a maximum permitted capacity of 148,800,000 CY, a remaining capacity of 17,500,000 CY, and a cease operation date of December 31, 2036 (CalRecycle 2024c).

## 4.18.2 Relevant Plans, Policies, and Ordinances

### Federal

There are no applicable federal regulations related to utilities and service systems.

### State

#### Senate Bill X7-7 – Water Conservation Act

Senate Bill (SB) X7-7, effective February 3, 2010, is the water conservation component to the Delta legislative package (SB 1, Delta Governance/Delta Plan). One of its purposes was to implement water use reduction goals established in 2008 to achieve a 20% statewide reduction in urban per-capita water use by December 31, 2020. In pursuit of this goal (since past), the bill required each urban retail water supplier to develop urban water use targets to help meet the 20% goal by 2020 and an interim 10% goal by 2015. The bill establishes methods for urban retail water suppliers to determine targets to help achieve water reduction targets. The retail water supplier must select one of the four compliance options. The retail agency may choose to comply with SB X7-7 as an individual or as a region in collaboration with other water suppliers. Under the regional compliance option, the retail water supplier must report the water use target for its individual service area. The bill also included reporting requirements in the 2010, 2015, and 2020 UWMPs.

#### Urban Water Management Planning Act

In accordance with California Water Code Sections 1610–10656, California urban water providers are required by state law to develop a UWMP to ensure sufficient water supplies are available to meet the long-term needs of their customers during normal, dry, and multiple-dry years. The Urban Water Management Planning Act requires urban water suppliers that provide water for municipal purposes to more than 3,000 customers or supply more than 3,000 acre-feet of water annually to develop a UWMP every 5 years, in the years ending in 0 and 5.

In the Urban Water Management Planning Act, the California Legislature declares that waters of the state are a limited and renewable resource subject to fluctuating demands; that the conservation and efficient use of urban water supplies are of statewide concern; that successful implementation of plans is best accomplished at the local level; that conservation and efficient use of water must be actively pursued to protect the people of the state and their water resources; that conservation and efficient use of urban water supplies must be a guiding criterion in public decisions; and that urban water suppliers must be required to develop water management plans to achieve conservation and efficient use.

IRWD's 2020 UWMP was prepared in accordance with the California Urban Water Management Planning Act. The UWMP is intended to serve as a general, flexible, and open-ended document that periodically can be updated to reflect changes in regional water supply trends, conservation policies, and water use efficiency policies (IRWD 2021).

### Sustainable Groundwater Management Act

On September 16, 2014, Governor Jerry Brown signed into law a three-bill legislative package—Assembly Bill (AB) 1739 (Dickinson), SB 1168 (Pavley), and SB 1319 (Pavley)—collectively known as the Sustainable Groundwater Management Act (SGMA). SGMA requires governments and water agencies of high- and medium-priority basins to halt overdraft and bring groundwater basins into balanced levels of pumping and recharge. Under SGMA, these basins should reach sustainability within 20 years of implementing their sustainability plans. For critically over-drafted basins, sustainability should be achieved by 2040. For the remaining high- and medium-priority basins, 2042 is the deadline. Through SGMA, the California DWR provides ongoing support to local agencies through guidance, financial assistance, and technical assistance. SGMA empowers local agencies to form Groundwater Sustainability Agencies to manage basins sustainably, and requires those Groundwater Sustainability Agencies to adopt GSPs for crucial groundwater basins in California.

### Senate Bill 610 and Senate Bill 221: Water Supply Assessments and Water Supply Verifications

SB 610 and SB 221, enacted into state law effective January 1, 2002, improve the linkage between certain land use decisions made by cities and counties and water supply availability. The statutes require detailed information regarding water availability and reliability for certain developments to be included in the administrative record to serve as evidentiary basis for an approval action by the city or county on such projects. Under Water Code Section 10912(a), projects subject to the California Environmental Quality Act (CEQA) requiring a water supply assessment include residential development of more than 500 dwelling units (DU); shopping centers and business establishments employing more than 1,000 persons or having more than 500,000 square feet of floor space; commercial office buildings employing more than 1,000 persons or having more than 250,000 square feet of floor space; hotels and motels having more than 500 rooms; industrial, manufacturing, and processing plants, and industrial parks planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area; mixed-use projects that include one or more of the projects specified; and projects that would demand an amount of water equivalent to or greater than the amount required by a 500 DU project. A fundamental source document for compliance with SB 610 is the UWMP, which can be used by the water supplier to meet the standard for SB 610. SB 221 prohibits the approval of a subdivision map for 500 DU without verifying that the public water supplier has sufficient water available to serve the proposed development. Related to Water Code Section 1912(a) is California Water Code Section 10910(d)(2), which requires the identification of existing water supply entitlements, water rights, or water service contracts; federal, state, and local permits for construction of necessary infrastructure; and any regulatory approvals required to be able to deliver the water supply. See Appendix F-1 for the project-specific Water Supply Assessment.

### Executive Order B-40-17

Executive Order B-40-17 (April 2017) lifted the drought emergency in California counties except for Fresno, Kings, Tulare, and Tuolumne, where emergency drinking water projects continue to address diminished groundwater supplies. This order retains prohibition on wasteful practices and advances measures to make conservation a way of life. The order also rescinds two emergency proclamations from January 2014 and April 2014 and four drought-related executive orders issued in 2014 and 2015.

### Model Water Efficient Landscape Ordinance

The Model Water Efficient Landscape Ordinance (CCR Title 23, Division 2, Chapter 2.7, Section 490) adopts water efficiency standards for new and retrofitted landscapes and encourages the use of more efficient irrigation systems, graywater usage, and on-site stormwater capture, and limits the portion of landscapes that can be covered in turf.

It encourages local agencies to designate the necessary authority that implements and enforces the provisions of the ordinance or its local landscape ordinance.

### California Code of Regulations Title 22, Chapter 16

Based on California Code of Regulations (CCR) Title 22, Division 4, Environmental Health, Chapter 16, California Waterworks Standards, Article 2, Permit Requirements, Section 64556, Permit Amendments, an application for an amended domestic water supply permit must be submitted to the State Water Resources Control Board for the following:

- Addition of a new distribution reservoir with a capacity of 100,000 gallons or more
- Change to or alteration of the water source
- Consolidation with one or more other water systems
- Expansion of the existing service area by 20% or more of the number of service connections specified in the most recent permit or permit amendment

Based on Chapter 16, California Waterworks Standards, Article 4, Materials and Installation of Water Mains and Appurtenances, the layouts of new water pipelines must comply with the Water Main Separation requirements. These requirements primarily include minimum separation distances from other utilities, wastewater facilities, and hazardous materials storage areas.

### Sanitary Sewer General Waste Discharge Requirements

On June 5, 2023, the State Water Resources Control Board adopted a General Waste Discharge Requirement (Order No. WQ 2022-0103-DWQ) for all publicly owned sanitary sewer collection systems in California with more than 1 mile of sewer pipe. The order provides a consistent statewide approach to reducing sanitary sewer overflows by requiring public sewer system operators to take all feasible steps to control the volume of waste discharged into the system to prevent sanitary sewer waste from entering the storm sewer system, and to develop a Sewer System Management Plan. The General Waste Discharge Requirement also requires that storm sewer overflows be reported to the State Water Resources Control Board using an online reporting system.

### California Code of Regulations Title 24, Part 11

In 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code, Part 11 of Title 24, is commonly referred to as CALGreen, and establishes minimum mandatory standards and voluntary standards pertaining to the planning and design of sustainable site development, energy efficiency, water conservation, material conservation, and interior air quality. The CALGreen standards took effect in January 2011 and instituted mandatory minimum environmental performance standards for all new construction of residential and non-residential buildings. CALGreen standards are updated periodically. The latest (2022) version became effective on January 1, 2023.

Mandatory CALGreen standards pertaining to water, wastewater, and solid waste include the following (24 CCR Part 11):

- Mandatory reduction in indoor water use through compliance with specified flow rates for plumbing fixtures and fittings

- Mandatory reduction in outdoor water use through compliance with a local water efficient landscaping ordinance or the California DWR's Model Water Efficient Landscape Ordinance
- Diversion of 65% of construction and demolition waste from landfills

### California Senate Bill 1087: Sewer and Water Service Priority for Housing Affordable to Lower-Income Households

This 2006 statute requires local governments to provide a copy of the updated Housing Element to water and sewer providers immediately after adoption. Water and sewer providers must grant priority for service allocation to proposed development that includes housing units affordable to lower-income households. Additionally, UWMPs are required to include projected water use for future lower-income households.

### California Assembly Bill 3232

Signed into law in September 2018, California AB 3232 calls on the California Energy Commission (working in consultation with the California Public Utilities Commission and other state agencies) to develop and articulate plans and projections to reduce greenhouse gas emissions of California's residential and commercial buildings to 40% below 1990 levels by 2030. Much of the reduction will likely occur by replacing some buildings' natural gas use applications with electric ones.

### Assembly Bill 1890 (1996)

The California Public Utilities Commission regulates investor-owned electric power and natural gas utility companies in California. AB 1890, enacted in 1996, deregulated the power generation industry, allowing customers to purchase electricity on the open market. Under deregulation, the production and distribution of power that was under the control of investor-owned utilities (e.g., SCE) were decoupled. All new construction in California is subject to the energy conservation standards set forth in Title 24, Part 6, Article 2 of the California Administrative Code. 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 (including the project) is encouraged but 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 lower consumption of conventional energy sources (i.e., electricity and natural gas). Incentives, primarily in the form of state and federal tax credits, as well as reduced energy bills, provide a favorable basis.

### California Integrated Waste Management Act – Assembly Bills 939 and 341

The California Integrated Waste Management Act of 1989 (AB 939) was enacted as a result of a national crisis in landfill capacity, as well as a broad acceptance of a desired approach to solid waste management of reducing, reusing, and recycling. AB 939 mandated local jurisdictions to meet waste diversion goals of 25% by 1995 and 50% by 2000, and established an integrated framework for program implementation, solid waste planning, and solid waste facility and landfill compliance. AB 939 requires cities and counties to prepare, adopt, and submit to the California Department of Resources Recycling and Recovery (CalRecycle) a source reduction and recycling element to demonstrate how the jurisdiction will meet the diversion goals. Other elements include encouraging resource conservation and considering the effects of waste management operations. The diversion goals and program requirements are implemented through a disposal-based reporting system by local jurisdictions under California Integrated Waste Management Board (CIWMB) regulatory oversight. Since the adoption of AB 939, landfill capacity is no longer considered a statewide crisis. AB 939 has achieved substantial progress in waste diversion; program implementation; solid waste planning; and protection of public health, safety, and the environment from landfill operations and solid waste facilities.

In 2011, AB 341 was passed, mandating that CalRecycle require local agencies to adopt strategies that would enable 75% diversion of all solid waste by 2020.

### California Solid Waste Reuse and Recycling Act

The California Solid Waste Reuse and Recycling Act of 1991 (AB 2176) was enacted to assist local jurisdictions with accomplishing the goals of AB 939. In accordance with AB 2176, any application submitted for a building permit must provide for adequate, accessible areas for the collection and loading of recyclable materials. Furthermore, the areas to be used must be demonstrated as adequate in capacity, number, and distribution to serve the building project. Moreover, the collection areas are to be situated as close as possible to existing exterior refuse collection areas.

### Assembly Bill 1327: California Solid Waste Reuse and Recycling Access Act of 1991

AB 1327, which was established in 1991, required CalRecycle to develop a model ordinance for the use of recyclable materials in development projects. Local agencies were then required to adopt the model ordinance, or an ordinance of their own, governing adequate areas for collection and loading of recyclable materials in development projects.

### Senate Bill 1374: Construction and Demolition Waste Reduction

SB 1374 requires that annual reports submitted by local jurisdictions to the CIWMB include a summary of the progress made in diversion of construction and demolition waste materials. In addition, SB 1374 required the CIWMB to adopt a model ordinance suitable for adoption by any local agency that required 50% to 75% 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 CIWMB's model by default.

### Assembly Bill 1826: Mandatory Commercial Organics Recycling

In October 2014, Governor Brown signed AB 1826 (Chapter 727, Statutes of 2014) requiring businesses to recycle their organic waste on and after April 1, 2016, depending on the amount of waste generated per week. (Organic waste is defined as food waste, green waste, landscape and pruning waste, nonhazardous wood waste, and food-soiled paper waste that is mixed in with food waste.) This law also requires local jurisdictions across the state to implement an organic waste recycling program to divert organic waste generated by businesses, including multifamily residential dwellings that consist of five or more units. This law phases in the mandatory recycling of commercial organics over time. In particular, the minimum threshold of organic waste generation by businesses decreases over time, which means an increasingly greater proportion of the commercial sector will be required to recycle organic waste.

### Senate Bill 1383: California's Short-Lived Climate Pollutant Reduction Strategy

As a follow up to AB 1826, in 2016, the State Legislature passed SB 1383, California's Short-Lived Climate Pollutant Reduction Strategy, to reduce methane and other greenhouse gas emissions statewide. The bill aims to achieve two targets by 2025: (1) 75% reduction of statewide organics waste disposal from 2014 levels and (2) 20% or greater recovery (for human consumption) of edible food currently disposed of in California. To meet these goals, SB 1383 requires all local jurisdictions to provide mandatory source-separated organic waste collection and diversion services to all businesses, schools, multifamily complexes, and single-family home residents. SB 1383 will further support California's efforts to achieve the statewide 75% recycling goal by 2020 established in AB 341. The state has not yet met this target.

### California Code of Regulations Titles 14 and 27

CCR Title 14 (Natural Resources, Division 7) and CCR Title 27 (Environmental Protection, Division 2 [Solid Waste]) govern the handling and disposal of solid waste and operation of landfills, transfer stations, and recycling facilities.

## Local

### Zero Waste Resolution

The City adopted a resolution to support zero waste principles on July 10, 2007. The City encourages many zero waste practices through residential curbside recycling, parks recycling (where City parks are equipped with recycling receptacles for public use), recycling at City facilities, and the City's purchasing policy to buy recycled products when feasible. In addition, all City environmental program public education materials include the state's adopted slogan: "Zero Waste, You Make It Happen."

### Construction and Demolition Debris Recycling Ordinance

The City adopted its Construction and Demolition Debris Recycling Ordinance (07-18) in 2007. Under this ordinance, projects are required to recycle or reuse 75% of concrete and asphalt, and at least 65% of all debris generated. Covered projects include new residential and nonresidential development and most projects involving nonresidential demolition and/or renovation in accordance with the requirements of CALGreen. Applicants for projects are required to submit a waste management plan to the City prior to obtaining permits for construction, demolition, or renovation activities covered by the ordinance.

### Sustainability Community Initiative

The City adopted the Sustainable Community Initiative (Initiative Ordinance 10-11) as Initiative Measure S in 2010. The ordinance was adopted to ratify and implement policies in support of renewable energy and environmental programs for a sustainable community. It outlines the City's direction for continuing to develop and implement programs geared toward green building, renewable energy, and sustainability. For example, the City would continue to develop and implement recycling, zero waste, and other on-site business programs to divert waste from landfills, and also continue to develop and implement the use of native, California-friendly, and drought-tolerant landscaping.

### Community Choice Energy

The passage of AB 117 in 2002 established the Community Choice Aggregation in California, allowing municipalities at the local and county levels to form independent, locally governed, and not-for-profit energy providers. Community Choice Energy programs enable local government control over energy procurement to purchase power, set competitive rates, and collect revenue. Customers have the option of choosing increased percentages of renewable energy. Community Choice Energy programs in California generally procure and resell a power mix of 50% to 100% renewable energy to their customers.

The Orange County Power Authority was established in 2021. On February 8, 2022, the Irvine City Council unanimously voted to select the 100% Renewable Energy default service level for all Orange County Power Authority customers in Irvine, unless they choose a lower tier or opt out and remain with SCE. The Orange County Power Authority began providing commercial and municipal service in April 2022, followed by residential service in October 2022. The Orange County Power Authority purchases energy from clean, renewable sources, including solar, wind, biomass, geothermal, and hydroelectric.

## City Municipal Code

The City's Municipal Code (Ordinance 21-19, Section 3 [Exh. A], 12-14-21) provides standards for the provision of solid waste (refuse) and recyclable material storage in compliance with state law (California Solid Waste Reuse and Recycling Access Act, Public Resources Code Sections 42900 through 42911). Additionally, the City's Building Code requires development projects to complete and submit a Waste Management and Recycling Plan for approval prior to issuance of building permits. The Waste Management and Recycling Plan identifies the project type and estimates the amount of materials to be recycled during construction. The following provisions in the Municipal Code apply to future development resulting from implementation of the project.

### Title 5 (Planning), Division 7 (Sustainability in Landscaping)

The purpose of this division is to provide policies, standards, procedures, and guidelines to achieve long-term levels of sustainability in landscapes. Sustainability is a concept that emphasizes the environmental benefits of landscapes. In most instances, a sustainable landscape is one that provides positive levels of carbon storage and oxygen productivity after all demands for energy, water, soil improvement, and maintenance activities have been considered. This division is intended to promote actions that conserve, recycle, and reuse resources.

### Chapter 10 (Recycling and Diversion of Construction and Demolition Waste)

The Municipal Code (Title 6, Division 7, Chapter 10) and CALGreen (Sections 4.408, 5.408, and 5.713.8) require that construction development, renovation, and demolition projects recycle or otherwise divert construction and demolition debris from landfills. These requirements promote the reuse of resources and help extend the useful life of landfills in compliance with CALGreen and state laws, including the California Integrated Waste Management Act (AB 939, Sher) and Mandatory Construction and Demolition Waste Diversion (SB 1374, Kuehl).

### Construction and Demolition Debris Recycling and Reuse Ordinance

The Construction and Demolition Ordinance requires that all residential projects of more than one unit, nonresidential developments on 5,000 square feet or larger, and nonresidential demolition/renovations with more than 10,000 square feet of building recycle or reuse a minimum of 75% of concrete and asphalt and 50% of nonhazardous debris generated.

## Requirement to Use Recycled Water

Per the Water Resources Master Plan, Sewer Master Plan, Natural Treatment System Master Plan, and addenda thereto, IRWD identifies customers as in an area capable of receiving service from the IRWD's recycled water system, and determines the feasibility of providing recycled water service to these customers. IRWD also reviews applications for new permits to determine the feasibility of providing recycled water service to these applicants. If recycled water service is determined by IRWD to be feasible, applicants for new water service are required to install on-site facilities to accommodate both potable water and recycled water service in accordance with the rules and regulations. IRWD may also require existing customers to retrofit existing on-site water service facilities to accommodate recycled water service. If IRWD does not require the use of recycled water service, the customer may obtain recycled water service upon request, but only if IRWD determines that recycled water service is feasible and authorizes such use.

## Planning Commission Resolution No. 09-2968

Planning Commission Resolution No. 09-2968 adopted standard conditions to assist staff in applying standardized wording for frequently used conditions of approval to discretionary and subdivision applications. Standard conditions are applied on a case-by-case basis depending on the specifics of the application. Companion conditions are cross-referenced and are required to be used together. The following standard conditions related to utilities apply to the project.

### City Standard Condition 2.24 (Solid Waste Recycling)

Prior to the issuance of grading permits for a project that involves the demolition of an asphalt or concrete parking lot on site, the applicant shall submit a waste management plan demonstrating compliance with the requirements of Title 6, Division 7 of the Municipal Code relating to recycling and diversion of demolition waste as applicable to said project. Over the course of demolition or construction, the applicant shall ensure compliance with all code requirements related to the use of City authorized waste haulers.

### City Standard Condition 3.7 (Solid Waste Recycling)

Prior to the issuance of building permits for a project that involves new construction or that involves the demolition or renovation of existing buildings on site, the applicant shall comply with requirements of Title 6, Division 7 of the Municipal Code relating to recycling and diversion of construction and demolition waste as applicable to said project. Over the course of demolition or construction, the applicant shall ensure compliance with all code requirements related to the use of City authorized waste haulers.

Existing Plans, Programs, and Policies Compliance measures are regulations imposed uniformly by the approving agency based on the proposed action taken and are required of the proposed project to reduce its potential environmental effects. Because these features are standard requirements, they do not constitute mitigation measures. The following measures are existing plans, programs, or policies (PPP) that apply to the proposed project and will help to reduce and avoid potential impacts related to utilities:

- PPP-UTIL-1: Engineering Standard Plans
- PPP-UTIL-2: Title 24 Code Cycles: Net-Zero Buildings (Residential & Non-Residential)
- PPP-UTIL-3: Irvine Sustainability Community Initiative
- PPP-UTIL-4: California Water Code Section 10912 and California Government Code Section 66473.7
- PPP-UTIL-5: Senate Bill 221 (SB 221)
- PPP-UTIL-6: Requirement to Use Recycled Water
- PPP-UTIL-7: City of Irvine Construction and Demolition (C&D) Debris Recycling and Reuse Ordinance
- PPP-UTIL-8: Waste Reduction
- PPP-UTIL-9: City Standard Condition 2.24 (Solid Waste Recycling)
- PPP-UTIL-10: City Standard Condition 3.7 (Solid Waste Recycling)

If a proposed development is considered a project as defined by California Water Code Section 10912 and/or a subdivision as defined by California Government Code Section 66473.7, then a water supply assessment must be prepared and included in the analysis and appendices of the environmental document being prepared for the project.

### Irvine Ranch Water District Water Use Efficiency and Conservation Policies

IRWD published water conservation policies, practices, and procedures in 2018 to provide long-term water reliability for existing and future customers. IRWD water conservation policies include the following (IRWD 2018):

1. IRWD is committed to "Making Water Conservation a California Way of Life."
2. An integrated and sustainable approach to California water resource management must recognize the role that water use efficiency and supply development play in ensuring an adequate and reliable water supply for California's many diverse communities.
3. Water efficiency and conservation programs are most successful if they are locally designed, implemented and managed.
4. Water use efficiency and conservation programs should be cost effective and economically viable.
5. Local agencies should take steps to preserve fiscal stability and water affordability when implementing water use efficiency and conservation programs.
6. The benefits and consequences of statewide, regional, and local water use efficiency and conservation policies should be understood prior to being implemented. At a minimum, the benefits and consequences to water and wastewater management, systems, infrastructure, operations, and recycled water supplies should be examined.
7. Statewide and regional policies should encourage and reward previous investments in beneficial water use efficiency strategies, including water recycling, water-budget based rate structures that create a nexus between those overusing water and those bearing the costs of overuse, and investments in distribution system integrity, among others.
8. Statewide and regional water use efficiency goals must incentivize and account for local investments in drought resilient supplies, including investments in recycled water and potable reuse.
9. Conservation strategies should include promoting both the expansion and efficient use of recycled water and potable reuse.
10. State agencies should engage urban retail water suppliers during implementation and development of methodologies, and regulations related to "Making Water Conservation a California Way of Life."

### Irvine 2045 General Plan

The Irvine 2045 General Plan (General Plan) is composed of elements that address a broad range of issues. Each element of the General Plan identifies and describes goals, objectives, and implementing actions that provide specific direction for decision making and formation of public policy through 2045. The General Plan contains seven elements required by the State Planning, Zoning, and Development Laws. The Environmental Protection and Climate Action Element and the Safety Element are relevant to utility and service system issues.

#### Environmental Protection and Climate Action Element

The following goal, objective, and policies in the Irvine 2045 General Plan's Environmental Protection and Climate Action Element are related to utilities and service systems (City of Irvine 2024b):

Goal 7: Reduce waste generation, promote sustainable waste management practices, and maximize resource recovery in Irvine.

Objective EPCA-7: Achieve significant reductions in per capita waste generation and increase diversion rates through comprehensive waste reduction, reuse, recycling, and composting initiatives, while minimizing landfill disposal and associated greenhouse gas emissions.

Policy (a): Encourage businesses, manufacturers, and retailers to adopt eco-friendly practices, such as product redesign, packaging reduction, and extended producer responsibility (EPR) programs to minimize waste generation and environmental impact.

Policy (b): Collaborate with waste management providers, recyclers, and composting facilities to improve collection, sorting, and processing capabilities, enhance material recovery rates, and promote closed-loop recycling and circular economy principles.

Policy (c): Provide education, outreach, and incentives to encourage participation in waste diversion programs, increase public awareness about recycling and composting best practices, and promote behavior change among residents, businesses, and community organizations.

Policy (d): Cooperate in guiding the development and improvement of a solid waste disposal system within the County of Orange that will meet the needs of the City and protect the City from damage by unplanned disposal of refuse.

Policy (e): Control the siting of solid waste disposal facilities to minimize impact on adjacent or existing planned land uses.

### Safety Element

The following goal, objective, and policies in the Irvine 2045 General Plan's Safety Element are related to utilities and service systems (City of Irvine 2024c):

Goal 5. Protect the community from the threat of drought and extreme heat.

Objective S-5: Drought and Extreme Heat

Policy (a): Collaborate with federal, State, and local agencies and organizations to explore alternative water sources (e.g., desalination) and improve capacity in consideration of increased demand and drought.

Policy (b): Continue to support Irvine Ranch Water District's recycled water program and explore opportunities to enhance water recycling.

Policy (c): Continue to support and participate in the development of a regional and local drought contingency plan.

Policy (d): Encourage drought-tolerant native landscaping, low-flow water fixtures beyond the state minimum code, and daytime watering restrictions on properties throughout the City to reduce water consumption.

Policy (e): Explore the feasibility of recycled water distribution for residential uses on all lot sizes.

Policy (f): Protect groundwater supply against contamination, degradation, or loss due to flooding.

Policy (g): Promote a system for rapidly detecting, reporting, and repairing water leaks in public facilities and the water conveyance system.

Policy (h): Promote nature-based methods and best management practices (BMPs) (e.g., bioswales, rain gardens, natural ground cover) through the City's stormwater program to promote groundwater infiltration and reduce the impacts of drought.

Policy (i): Support regional patterns in education and outreach efforts focused on water conservation measures (e.g., water reuse, water use, and irrigation efficiency) for City residents.

## 4.18.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts to utilities and service systems are based on Appendix G of the CEQA Guidelines. According to Appendix G, a significant impact related to utilities and service systems would occur if the project would:

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.
2. Not have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years.
3. Not result in a determination by the waste water treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.
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.
5. Not comply with federal, state, and local management and reduction statutes and regulations related to solid waste.

## 4.18.4 Impacts Analysis

***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?***

Less-Than-Significant Impact. The analysis below details the impacts from construction of expanded water, wastewater, stormwater drainage, electrical power, natural gas, and telecommunications facilities.

### Water Service/Infrastructure

#### Potable Water

The City's existing potable water system is within the potable and non-potable water service area of IRWD. Distribution pipelines in the City range in diameter from 1 to 72 inches, and most pipelines are 8-inch-

diameter pipes constructed from the 1970s through the 2000s. The proposed potable water system would be supplied by IRWD.

To estimate water and sewer infrastructure design, potable water demands were estimated based on the maximum 1,360 DU allowed by existing zoning, which includes 927 DU of medium-high density and 433 DU of high-density residential. Using IRWD water factors, the average day potable water demand is approximately 235 acre-feet per year (AFY), with a maximum day demand of 0.35 mgd. Peak-hour demand is estimated to be 530 gallons per minute (gpm). Fire flow requirements are 3,000 gpm for both medium-high- and high-density residential land uses (Appendix K-1, Gateway Village SAMP).

The proposed project would receive water supply from three points of connection to the existing system: one near the intersection of Portola Parkway and "E" Street, and two on Jeffrey Road at the intersections of "A" Street and "C" Street (Figure 4.18-1). A 12-inch-diameter pipeline is proposed along Portola Parkway from Wonderview to the proposed "E" Street consisting of approximately 2,710 linear feet of proposed 12-inch-diameter pipeline. The second supply connection would be to an existing 12-inch-diameter pipeline on Jeffrey Road, which reduces to a 10-inch-diameter pipeline and continues to the southwest, where it connects to an existing 30-inch-diameter pipeline on Portola Parkway. The existing 10- and 12-inch-diameter pipeline on Jeffrey Road would need to be disconnected from the existing 30-inch-diameter pipeline and reconnected to the proposed 12-inch-diameter pipeline on Portola Parkway. Additionally, there is an existing 12-inch-diameter pipeline on Jeffrey Road, approximately 30 feet northeast of the pipeline on Jeffrey Road. The existing 12-inch-diameter pipeline connects to the existing 10-inch-diameter pipeline on Wonderview in the adjacent Orchard Hills development via an existing 12-inch-diameter pipeline from Wilderness and across the slope area to Jeffrey Road. Approximately 30 linear feet of new 12-inch-diameter pipeline is proposed to connect the two existing pipelines on Jeffrey Road (Appendix K-1).

The proposed 12-inch-diameter pipeline in Portola Parkway and pipelines in Jeffrey Road would allow a loop to be created on site from Jeffrey Road to Portola Parkway, with a proposed 12-inch-diameter pipeline along the proposed "A" Street, "C" Street, "D" Street, and "E" Street. To meet pressures on site, two pressure-reducing stations would be installed on Jeffrey Road: one at the intersection of "A" Street and a second at the intersection of "C" Street (Figure 4.18-1). Pipelines are proposed as looping between the two pressure-reducing stations, consisting of a proposed 12-inch-diameter pipeline along "A" Street and "C" Street, and a proposed 10-inch-diameter pipeline along "D" Street and "E" Street (Appendix K-1).

Velocity, pressure, and fire flow were analyzed for the potable water system to meet IRWD criteria. All proposed pipelines were found to be within the IRWD velocity and minimum pressure criteria. The fire flow requirements were also met (Appendix K-1). As discussed in Section 4.18.2, Relevant Plans, Policies, and Ordinances, based on CCR Title 22, Chapter 16, California Waterworks Standards, Article 4, Materials and Installation of Water Mains and Appurtenances, the new water pipelines would be required to comply with the Water Main Separation requirements, which include minimum separation distances from other utilities, wastewater facilities, and hazardous materials storage areas.

Installation of new potable water mains on site and off site, and installation of on-site water laterals would consist of either trenching to the depth of pipe placement or using a variety of trenchless technologies, which cause substantially less ground disturbance than trenching. Trenching results in a temporary stockpiling of soil along the length of the trench, pending backfilling, which could result in potential short-term soil erosion. Similarly, construction of the off-site infrastructure improvements within the IRWD service area would result in temporary ground disturbance and potential erosion and would

require use of construction equipment. As discussed in Section 4.10 of this Draft EIR, in accordance with the Construction General Permit, a stormwater pollution prevention plan (SWPPP), which describes best management practices (BMPs) the discharger would use to protect stormwater runoff from sediment and erosion, would be implemented. Additionally, the project would be required to comply with South Coast Air Quality Management District (SCAQMD) Rule 403 for watering during construction, which would reduce associated fugitive dust and potential soil erosion during construction activities. As a result of complying with current regulations, impacts associated with the construction of new water infrastructure would be less than significant.

### Non-Potable Water

Non-potable water demands were estimated based on 1,360 DU covering 65.6 acres, 7.9 acres of park area, and 9.5 acres of landscaping, with a total irrigation area estimated to be approximately 83 acres. Using IRWD irrigation use factors, the average day demand is estimated to be 105 gpm, with a maximum day demand of 285 gpm. Peak-hour demand is estimated to be 580 gpm. The proposed non-potable water system would be supplied by two points of connection with the existing pipeline on Jeffrey Road (Figure 4.18-2). One point of connection would be at "C" Street**,** with a proposed 6-inch-diameter pipeline. The second point of connection would be at "A" Street, with a proposed 6-inch-diameter pipeline. The two points of connection would be looped by a proposed 4-inch-diameter pipeline along "D" Street. The proposed 4-inch-diameter pipeline on "D" Street would continue to the southwest and would terminate at the intersection of "E" Street. A non-potable water system hydraulic analysis indicated that all proposed pipelines were within the IRWD minimum pressure criteria (Appendix K-3, Recycled Water System Facilities). As discussed in Section 4.18.2, based on CCR Title 22, Chapter 16, California Waterworks Standards, Article 4, Materials and Installation of Water Mains and Appurtenances, the layouts of new water pipelines would be required to comply with the Water Main Separation requirements, which include minimum separation distances from other utilities, wastewater facilities, and hazardous materials storage areas.

As discussed for potable water lines, non-potable-water line installation would result in temporary ground disturbance and potential erosion and use of construction equipment. As discussed in Section 4.10 of this Draft EIR, in accordance with the Construction General Permit, a SWPPP, which describes BMPs the discharger would use to protect stormwater runoff from sediment and erosion, would be implemented. Additionally, the project would be required to comply with SCAQMD Rule 403 for watering during construction, which would reduce associated fugitive dust and potential soil erosion during construction activities. As a result of complying with current regulations, impacts associated with the construction of new recycled water infrastructure would be less than significant.

## Wastewater Service/Infrastructure

### Wastewater Conveyance

The City's wastewater collection system consists primarily of vitrified clay pipe and polyvinyl chloride sewer mains that range from 4 to 60 inches in diameter, in addition to 32 trunk lines that are the most critical components of the sewer collection system. The nearest existing sewer lines to the project site are a 15-inch-diameter sewer in Jeffrey Road and an 8-inch-diameter sewer in Portola Parkway. Developments containing more than 400 DU are required to provide IRWD with a SAMP. The SAMP must include an analysis of the proposed sewer system using a computerized hydraulic model, a complete description of the facilities to be constructed, maps, and computations providing the design criteria meeting the requirements of the Sewer System Guidelines (IRWD 2018).

Based on the project-specific SAMP (Appendix K-1), the project site is proposed to be split into two drainage areas with two points of connection to the existing sanitary sewer system. Drainage Area A would capture sewer flow from parcels along "D" Street and "C" Street (Figure 4.18-3). Flows from this drainage area would be conveyed off site, with a connection to the existing sewer crossing Portola Parkway to Woodhill, in Stonegate. Drainage Area B, the second and smaller drainage area, would capture flow from the southern portion of the project site. The flows from these parcels would be collected and conveyed off site via a new 8-inch-diameter gravity main, routed southerly along the northerly boundary of Portola Parkway, and across Portola Parkway to the existing 8-inch-diameter sewer at the cul-de-sac on Ovation, south of Portola Parkway. Construction of this sewer is assumed to require trenchless construction methods, such as the jack-and-bore method. The jacking pit would be on the project site, northeast of Portola Parkway. The receiving pit would be in the cul-de-sac of Ovation (Appendix K-1).

Based on a sanitary sewer system hydraulic analysis, which considered land use, flows generated, and a peaking factor, no sewer upsizing would be required for the existing sewers in the adjacent Stonegate development located northeast of Encore because of the wastewater flow split between the two existing 8-inch-diameter sewers. However, the existing 8-inch-diameter sewer on Ovation south of Encore does not meet the depth-to-diameter ratio criteria, which is a key criterion used to evaluate the capacity and performance of sewer pipes. Therefore, approximately 1,460 linear feet of existing 8-inch-diameter sewer lines in Ovation would require upsizing to 12-inch-diameter lines from south of Encore to the intersection of Spring Meadow (Figure 4.18-3). The design analysis also included the sewer flows from a future off-site property northeast of the project site, routed to "C" Street and through the project site. With the inclusion of the off-site property, the analysis results do not change the proposed sizing or impacts to the existing system as described (Appendix K-1).

The hydraulic model analysis also included the existing 33-inch-diameter Jeffrey Road trunk sewer, from Irvine Boulevard to Barranca Parkway. Based on the hydraulic model analysis, after including the proposed project flows, the depth to diameter ratio in the 33-inch-diameter trunk sewer increased from 0.64 to 0.76, which is only marginally above the IRWD criterion of 0.75. Therefore, the proposed project would not significantly impact the existing 33-inch-diameter Jeffrey Road trunk sewer, and no mitigation improvements are proposed (Appendix K-1).

As discussed for proposed water facilities, installation of new sewer lines would consist of either trenching to the depth of pipe placement or using a variety of trenchless technology, such as jack and bore, which causes substantially less ground disturbance than trenching. Trenching and jack and bore result in temporary stockpiling of soil, pending backfilling, which could result in potential short-term soil erosion. In accordance with the Construction General Permit and SWPPP, the discharger would implement BMPs to protect stormwater runoff from sediment and erosion. Additionally, the project would be required to comply with SCAQMD Rule 403 for watering during construction, which would reduce associated fugitive dust and potential soil erosion during construction activities. As a result of complying with current regulations, adverse impacts associated with the construction of new wastewater infrastructure would be less than significant.

### Wastewater Treatment

Wastewater generated within the City is treated by IRWD. The ultimate destinations of wastewater collected in IRWD's system include the Michelson Water Recycling Plant; the Los Alisos Water Recycling Plant; and treatment plants operated by the El Toro Water District, the Santa Margarita Water District, and the Orange County Sanitation District. The IRWD Michelson Water Recycling Plant uses tertiary (three-stage) sewage

treatment, which produces recycled water for landscape and agricultural irrigation, and for industrial and commercial needs. The residual organic solids are piped to the adjacent Biosolids and Energy Recovery Facility, where they are converted into fertilizer or fuel. The Michelson Water Recycling Plant has a water production capacity of 28 mgd (IRWD 2024b). All wastewater treatment facilities have been expanded as part of IRWD's long-range planning. Based on a will-serve letter, dated December 26, 2024, IRWD would provide sewer services for the proposed project (Appendix K-4, Water and Sewer Will-Serve Letter). As a result, the construction, expansion, or relocation of new wastewater treatment facilities would not be required in association with build-out of the project. Impacts would be less than significant.

### Stormwater Infrastructure

Following project construction, the impervious areas of the project site would increase, resulting in a potential for stormwater runoff volumes and/or stormwater runoff rates to increase. As discussed in Section 4.10 of this Draft EIR, the topography on the upper one-third of the site generally drains by two surface ditches in a southwest direction toward Jeffrey Road, at a gradient of 3.5%. This upper third site tributary is part of the larger East Hicks Canyon watershed, which originates off site and upstream of the project site. Stormwater from the upper one-third of the project site is collected by existing 42-inch-, 66-inch-, and 96-inch-diameter storm drain laterals that feed into Hicks Canyon Facility F27, which is a 102-inch-diameter RCP in Jeffrey Road (Figure 4.10-1 in Section 4.10). Additionally, off-site run-on conditions occur along the northerly project boundary in the form of surface/channel conveyance, and along the easterly project boundary in the form of surface and pipe flow conveyance, which in turn feeds into the existing 96-inch-diameter storm drain lateral.

Topography on the lower two-thirds of the site generally drains in a southerly direction toward Portola Parkway, with a moderate gradient of 2.5% to 3%. At Portola Parkway, the lower two-thirds flow is collected by two existing storm drain pipes, one on Portola Parkway midway between Jeffrey Road and Bee Canyon Access Road and one at the intersection of Portola Parkway and Bee Canyon Access Road (Figure 4.10-1 in Section 4.10). One of the existing storm drain facilities heads northwest in Portola Parkway and turns south at Jeffrey Road, and the second existing storm drain facility heads southeast in Portola Parkway, eventually turning southwest in Paragon. Run-on conditions from areas east of Bee Canyon Access Road are not present in the lower two-thirds of the project site because existing flows are intercepted and surface-conveyed south before entering a 36-inch-diameter RCP and conveyed underground to a connection point with the southerly Portola Parkway storm drain.

Based on the project-specific Preliminary Hydrology Report (Appendix F-3), the project site was divided into drainage management areas A-1 through A-7, B-1, and C-1 (Figure 4.10-4 in Section 4.10). Hydrologic calculations were prepared for existing conditions throughout the project site to establish baseline storm flow rates at project watershed exit points. These baseline storm flow rates were compared to proposed-condition design peak-flow rates to determine peak-flow-rate mitigation requirements. Per the Orange County Hydrology Manual (Orange County Environmental Management Agency 1986, 1996) and per the City of Irvine Standards (City of Irvine 2013), a 25-year-frequency storm event was selected for design peak-flow-rate evaluation because sump conditions are present on site. Stormwater runoff would be conveyed on site by a series of proposed storm drains, and a stormwater detention basin would be constructed in the southeastern corner of the project site to accommodate a 25-year storm event and 190,575 cubic feet of storage. The project would not result in expansion of any existing off-site stormwater drainage facilities or in the construction or relocation of new off-site stormwater drainage facilities.

As discussed for proposed water and wastewater facilities, construction of the on-site stormwater infrastructure would be completed in accordance with the Construction General Permit, which is described in detail in Section 4.10 of this Draft EIR. A SWPPP, which describes BMPs the discharger would use to protect stormwater runoff from sediment and erosion, would be implemented as part of the Construction General Permit. Additionally, as described in detail in Section 4.3, Air Quality, of this Draft EIR, the project would be required to comply with SCAQMD Rule 403 for watering during construction, which would reduce associated fugitive dust and potential soil erosion during construction activities. As a result of complying with current regulations, impacts associated with the construction of new stormwater infrastructure would be less than significant.

### Electric Power

The project site is within the SCE service area. Currently, underground SCE distribution systems are located adjacent to the project site in Bee Canyon Access Road, Portola Parkway, and Jeffrey Road. An SCE substation is at the northeast corner of Jeffrey Road and Portola Parkway, across from the project site. The substation includes an underground mainline consisting of six 5-inch-diameter conduits and vaults. A proposed underground system with two, and possibly three circuits is planned to accommodate the proposed project. It is anticipated that SCE would serve the project from Jeffrey Road. The existing overhead system along Jeffrey Road that feeds existing tenants would be removed as part of the project. The IRWD site on Bee Canyon Access Road that would remain in place is served from an underground and overhead feed from Bee Canyon Access Road. In addition to converting the overhead system on Jeffrey Road, service would be relocated out of the project parcel onto County of Orange property and the IRWD easement area (Appendix K-2, Dry Utility Due Diligence Report).

Subsurface infrastructure installation would require soil excavations, temporary stockpiling of soil, and recompaction. The electric line connections would likely be completed by either trenchless technology or open trenching to the depth of the underground electrical lines. Construction of the power lines would be temporary and would be subject to all applicable regulatory requirements. Similar to that described above for construction of water, wastewater, and storm drain infrastructure, installation of the on-site electrical infrastructure would be completed in accordance with the Construction General Permit, which is described in detail in Section 4.10 of this Draft EIR. A SWPPP, which describes BMPs the discharger would use to protect stormwater runoff from sediment and erosion, would be implemented as part of the Construction General Permit. Additionally, as described in detail in Section 4.3 of this Draft EIR, the project would be required to comply with SCAQMD Rule 403 for watering during construction, which would reduce fugitive dust and potential soil erosion during construction activities. As a result of complying with current regulations, impacts associated with construction of new and expanded electrical infrastructure would be less than significant.

### Natural Gas

The project site is provided with natural gas by SoCalGas, which has existing gas mains in Portola Parkway and Jeffrey Road. As part of the widening and realignment of Jeffrey Road, the existing 8-inch-diameter high-pressure main was relocated into the new Jeffrey Road alignment. This 8-inch-diameter main is not capable of serving the proposed project because it is high pressure. Because the City is moving away from using natural gas in new projects, it is currently assumed that gas would not be extended onto the project site for the proposed residences. However, the proposed homeowner's association swimming pool would require natural gas for heating. Therefore, SoCalGas would extend a new distribution main from Portola Parkway and up Jeffrey Road to provide natural gas for the pool.

As discussed for proposed water and wastewater facilities, construction of the new distribution main and the lateral to the swimming pool area would be completed in accordance with the Construction General Permit, which is described in detail in Section 4.10 of this Draft EIR. A SWPPP, which describes BMPs the discharger would use to protect stormwater runoff from sediment and erosion, would be implemented as part of the Construction General Permit. Additionally, as described in detail in Section 4.3 of this Draft EIR, the project would be required to comply with SCAQMD Rule 403 for watering during construction, which would reduce fugitive dust and potential soil erosion during construction activities. As a result of compliance with current regulations, impacts associated with construction of new natural gas infrastructure would be less than significant.

### Telecommunications

The project site is within the service areas of AT&T and Cox. AT&T has an overhead system that runs from the corner of Portola Parkway and Bee Canyon Access Road, trending north through the Gateway Preserve and connecting to the existing overhead system that SCE has on Jeffrey Road. The AT&T lines are on the existing poles that SCE is converting to underground with the Jeffrey Road construction. These overhead lines would be removed as part of that project. Cox currently maintains underground systems in Portola Parkway and Jeffrey Road, which would be available to serve the proposed project. Cox would install an underground system in the joint trench with the SCE and AT&T overhead conversions on Jeffrey Road. It is assumed that this new underground system, consisting of four 2-inch-diameter conduits and vaults, would be the Cox feed for the project (Appendix K-2).

As described above for electric power, telecommunication upgrades would be completed by either trenchless technology or open trenching to the depth of the underground telecommunication lines. Installation of the telecommunication infrastructure would be completed in accordance with the Construction General Permit, which is described in detail in Section 4.10 of this Draft EIR. A SWPPP, which describes BMPs the discharger would use to protect stormwater runoff from sediment and erosion, would be implemented as part of the Construction General Permit. Additionally, as described in detail in Section 4.3 of this Draft EIR, the project would be required to comply with SCAQMD Rule 403 for watering requirements, which would reduce associated fugitive dust and potential soil erosion during construction activities. As a result of complying with current regulations, impacts associated with construction of expanded telecommunication infrastructure would be less than significant.

***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. IRWD has been identified by the City as a public water system that will supply water service (both potable and non-potable) to the project. As the public water system, IRWD is required by Section 10910 et seq. of the Water Code to provide the City with an assessment of water supply availability for defined types of projects. The project has been found by the City to be a project requiring an assessment. As a result, a Water Supply Assessment (Appendix F-1) and Water Supply Verification (Appendix F-2) were completed for the project. As described in these documents, IRWD does not allocate particular supplies to any project, but identifies total supplies for its service area. However, upon approval of an assessment containing a determination of a sufficient supply, IRWD attributes the demands identified in that assessment to IRWD's existing and committed demand. Thereafter, each verification approved by IRWD for a subdivision covered by that assessment is based on the assessment and reflects IRWD's confirmation that the water demands of the subdivision, together with any other subdivisions or

developments that have previously received verifications, will-serves, or other approval by IRWD under the same assessment, are within the demand identified by that assessment. In accordance with that procedure, the project Water Supply Verification (Appendix F-2) is based on the Water Supply Assessment (Appendix F-1).

IRWD prepares two planning documents to guide water supply decision making. IRWD's principal planning document is the Water Resources Master Plan. This document is a comprehensive report compiling data and analyses that IRWD considers necessary for its planning needs. IRWD also prepares an UWMP, which is based on the Water Resources Master Plan, but contains elements as listed in the statute (Water Code Section 10631, et seq.), and as a result, is more limited than the Water Resources Master Plan in the treatment of supply and demand issues. IRWD's most recent UWMP was adopted in June 2021 (IRWD 2021), and the next update for 2025 is anticipated in July 2026. In addition, the project's Water Supply Verification (Appendix F-2) includes the most recent Metropolitan UWMP (May 2021), which details an evaluation by Metropolitan, the wholesaler of IRWD's imported water supplies, of the reliability of Metropolitan's supplies.

As described above for water infrastructure, water and sewer service infrastructure design for potable water demand was estimated based on the maximum 1,360 DU allowed by existing zoning, which includes 927 DU of medium-high density and 433 DU of high-density residential. Using IRWD water factors, the average-day potable water demand is approximately 235 AFY (Appendix K-1, SAMP). The Water Supply Assessment assumes a slightly higher project water demand of 237 AFY in 2030 and 238 AFY in 2045.

As discussed in Section 4.18.1, Existing Conditions, IRWD derives its water supplies from groundwater, Metropolitan imported water, recycled water, and local reservoirs. With respect to groundwater, in July 2019, the California DWR approved an alternative to a GSP for the Basin, known as the Basin 8-1 Alternative. In accordance with Water Code Section 10733.6(b)(3), the Basin 8-1 Alternative presents an analysis of Basin conditions that demonstrates that the Basin has operated within its sustainable yield over a period of at least 10 years. In addition, the Basin 8-1 Alternative establishes objectives and criteria for management that would be addressed in a GSP and is designed to be "functionally equivalent" to a GSP. Basin 8-1 has been operating within its sustainable yield for more than 10 years without experiencing significant or unreasonable lowering of groundwater levels, reduction in storage, degradation of water quality, intrusion of seawater, inelastic land subsidence, or depletions of interconnected surface water that have significant or unreasonable adverse impacts on beneficial uses of the surface water. Pursuant to the Basin 8-1 Alternative, the Submitting Agencies will ensure that the entire Basin 8-1 continues to be sustainably managed and that data is reported as required by SGMA (OCWD et al. 2022).

Metropolitan's 2020 UWMP concludes that Metropolitan has supply capabilities sufficient to meet expected demands from 2025 through 2045 under a single dry-year condition and a period of drought lasting 5 consecutive years, as well as in a normal water year hydrologic condition. Recycled water production also remains constant and is considered "drought-proof" as a result of constant sewage flows, including years with low precipitation. This diversity of water supplies results in relatively constant groundwater production levels and minimizes adverse impacts to groundwater supplies (Metropolitan 2021). Based on the project's Water Supply Assessment (Appendix F-1) and Water Supply Verification (Appendix F-2), adequate water supplies are available to meet the project's water demands (including peak-flow demands) under the normal year, single-dry year, and multiple-dry year conditions through 2045. In addition, based on a will-serve letter, dated December 26, 2024, IRWD would provide water services for the proposed project (Appendix K-4). As a result, there would be sufficient water supplies to serve the proposed project and reasonably foreseeable future development during normal, dry, and multiple dry years. Impacts would be less than significant.

*3. Would the project result in a determination by the waste water treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?*

Less-Than-Significant Impact. As previously discussed, water and sewer service infrastructure design was estimated for potable water demands based on the maximum 1,360 DU allowed by existing zoning, which includes 927 DU of medium-high density and 433 DU of high-density residential. Using IRWD water factors, the average-day potable water demand would be approximately 235 AFY to 238 AFY, with a maximum day demand of 0.35 mgd. Peak-hour demand is estimated to be 530 gpm.

Wastewater generated within the City is treated by IRWD. The ultimate destinations of wastewater collected in IRWD's system include the Michelson Water Recycling Plant; the Los Alisos Water Recycling Plant; or treatment plants operated by the El Toro Water District, the Santa Margarita Water District, or the Orange County Sanitation District. The IRWD Michelson Water Recycling Plant includes tertiary (three-stage) sewage treatment, which produces recycled water for landscape and agricultural irrigation, and for industrial and commercial needs. The residual organic solids are piped to the adjacent Biosolids and Energy Recovery Facility, where they are converted into fertilizer or fuel (IRWD 2024b). Based on a will-serve letter, dated December 26, 2024, IRWD would provide sewer services for the proposed project (Appendix K-4). As a result, the project would have adequate capacity to serve the project's projected demand, in addition to the provider's existing commitments. Impacts would be less than significant.

*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. Once operational, the project would produce solid waste in association with operation and maintenance activities. Based on a project-specific air quality analysis (Appendix B-1, Air Quality and Greenhouse Gas Emissions Modeling), anticipated solid waste generation attributable to the proposed project is approximately 971 tons per year (see Table 4.18-1, Anticipated Solid Waste Generation).

## Table 4.18-1. Anticipated Solid Waste Generation

| Land Use[a] | Solid Waste Generation (Tons per Year) |
|---|---|
| Detached Housing | 286.77 |
| Attached Housing | 402.49 |
| Market Rate Multifamily Housing | 223.58 |
| City Park | 1.39 |
| Health Club | 38.07 |
| Recreational Swimming Pool | 18.33 |
| **Total** | **970.63** |

**Source**: Appendix B-1, Section 8.2, Waste by Land Use (Unmitigated).
**Note:**
[a] The land uses represent surrogate uses for CalEEMod.

As discussed in Section 4.18.1, OC Waste & Recycling manages three active landfills in Orange County: the Frank R. Bowerman Landfill, located in Irvine approximately 1.5 miles east of the project site; the Prima Deshecha Landfill, located in San Juan Capistrano, approximately 18 miles southeast of the

project site; and the Olinda Alpha Landfill, located in Brea, approximately 18 miles northwest of the project site. The Frank R. Bowerman Landfill has a maximum permitted capacity of 266,000,000 CY, a remaining capacity of 205,000,000 CY, and a cease operation date of December 31, 2053. The Prima Deshecha Landfill has a maximum permitted capacity of 172,100,000 CY, a remaining capacity of 128,800,000 CY, and a cease operation date of December 31, 2102. The Olinda Alpha Landfill would accept soil (inert waste) exported from the project site during grading. In addition, the Olinda Alpha Landfill would accept construction and operational solid waste. This landfill has a maximum permitted capacity of 148,800,000 CY, a remaining capacity of 17,500,000 CY, and a cease operation date of December 31, 2036 (CalRecycle 2024a, 2024b, 2024c).

The net solid waste that is anticipated to be produced by the project would equate to approximately 0.0003% of the combined available capacity of these three landfills per year through the estimated closure dates. As such, the project's solid waste generation would be minimal to negligible relative to available landfill capacity and relative to existing and future solid waste generation in the region. As such, the landfills that would serve the project are anticipated to have adequate capacity to accommodate the waste disposal needs of the project. In addition, the project would be required to comply with applicable state and local regulations related to solid waste, waste diversion, and recycling at the time of development. Additionally, the project would participate in the City's recycling programs, which would further reduce solid waste sent to regional landfills. Impacts would be less than significant.

5. ***Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?***

Less-Than-Significant Impact. As described in Section 4.18.1, OC Waste & Recycling manages three active landfills in Orange County: the Frank R. Bowerman Landfill, Prima Deshecha Landfill, and Olinda Alpha Landfill. These facilities are regulated under federal, state, and local laws. Additionally, the City is required to comply with the solid waste reduction and diversion requirements set forth in ABs 117, 341, 939, 1327, 1374, 1826, and 2176 (see Section 4.18.2, Relevant Plans, Policies, and Ordinances). Project solid waste disposal would also be completed in compliance with the 2022 Green Building Standards Code; the City Zero Waste Resolution; City Ordinances 07-18, 10-11, and 21-19 (related to solid waste); the City Construction and Demolition Recycling and Reuse Ordinance; and City Planning Community Resolution No 09-2968. With compliance with state and local management and reduction statutes and regulations related to solid waste, project impacts would be less than significant.

## Impact Summary

In accordance with the Construction General Permit, a SWPPP, which describes BMPs the discharger would use to protect stormwater runoff from sediment and erosion, would be implemented. Additionally, the project would be required to comply with SCAQMD Rule 403 for watering during construction, which would reduce associated fugitive dust and potential soil erosion during construction activities. As a result of complying with current regulations, impacts associated with the construction of new water, recycled water, wastewater, stormwater, electrical, natural gas, and telecommunication infrastructure would be less than significant.

IRWD would provide sewer services for the proposed project (refer to Appendix K-4, Water and Sewer Will-Serve Letter). As a result, the project would have adequate capacity to serve the project's projected wastewater conveyance and treatment demand, in addition to the provider's existing commitments. Impacts would be less than significant.

Based on the project's Water Supply Assessment (Appendix F-1) and Water Supply Verification (Appendix F-2), adequate water supplies are available to meet the project's water demands (including peak-flow demands) through 2045. In addition, IRWD would provide water services for the proposed project (Appendix K-4). As a result, there would be sufficient water supplies to serve the proposed project and reasonably foreseeable future development during normal, dry, and multiple dry years. Impacts would be less than significant.

The landfills that would serve the project are anticipated to have adequate capacity to accommodate the waste disposal needs of the project. With compliance with state and local management and reduction statutes and regulations related to solid waste, project impacts would be less than significant.

## 4.18.5 Mitigation Measures

No significant utilities and service systems impacts were identified in the analysis in this section; therefore, no mitigation measures are required.

## 4.18.6 Level of Significance After Mitigation

No mitigation is required; utilities and service systems impacts would remain less than significant.

## 4.18.7 Cumulative Impacts

### 4.18.7.1 Water

#### Existing Water Infrastructure

Cumulative water infrastructure impacts are considered on a system-wide basis and are associated with the capacity of existing and planned infrastructure. The geographic scope for cumulative impacts related to water infrastructure consists of the jurisdiction of IRWD, which is an independent special district that services the City of Irvine and portions of the surrounding cities of Tustin, Santa Ana, Orange, Costa Mesa, Lake Forest, and Newport Beach. All of the cumulative projects analyzed in this draft EIR are within the City of Irvine (see Table 3-1, Cumulative Projects, in Chapter 3, Project Description, of this Draft EIR). Area-wide population projections are based on land use dwelling-unit projections using buildout estimates and persons per household estimates.

Completion of projects within the IRWD service area would involve construction of water distribution infrastructure (e.g., pipes, valves, meters) on project sites. The cumulative project facilities would be connected to off-site water lines in the adjacent rights-of-way. All water infrastructure construction work within the public rights-of-way and on private property would be subject to applicable City and/or County code requirements. For example, for cumulative projects with new water distribution reservoirs/storage tanks with a capacity in excess of 100,000 gallons, an amended domestic water supply permit would be submitted to and approved by the State Water Resources Control Board prior to construction, pursuant to 22 CCR Section 64556. In addition, based on Title 22, Chapter 16, California Waterworks Standards, Article 4, Materials and Installation of Water Mains and Appurtenances, the layouts of new water pipelines would be required to comply with the Water Main Separation requirements, which include minimum separation distances from other utilities, wastewater facilities, and hazardous materials storage areas.

In addition, for cumulative projects involving ground disturbance in excess of 1 acre, cumulative project construction would be required to occur in accordance with the requirements of the Construction General Permit, which includes implementation of a SWPPP and related BMPs the discharger would use to protect stormwater runoff, including erosion-induced siltation of downstream drainages and incidental spills of petroleum products from construction equipment. As a result, indirect cumulative impacts associated with upgrades of water conveyance infrastructure for cumulative project sites would not be cumulatively considerable. Cumulative impacts would be less than significant, and no mitigation is required.

### Regional Water Supply and Demand

IRWD derives its water supplies from groundwater, Metropolitan-imported water, recycled water, and local reservoirs. With respect to groundwater, the Basin 8-1 Alternative presents an analysis of conditions that demonstrates that the Basin has operated within its sustainable yield over at least 10 years. Basin 8-1 has been operated within its sustainable yield for more than 10 years without experiencing significant or unreasonable lowering of groundwater levels, reduction in storage, degradation of water quality, intrusion of seawater, inelastic land subsidence, or depletions of interconnected surface water that have significant and unreasonable adverse impacts on beneficial uses of the surface water. Pursuant to the Basin 8-1 Alternative, the Submitting Agencies will ensure that the entire Basin 8-1 continues to be sustainably managed and data reported as required by SGMA (OCWD et al. 2022).

Metropolitan's 2020 UWMP concludes that Metropolitan has supply capabilities sufficient to meet expected demands from 2025 through 2045 under a single dry-year condition and a period of drought lasting 5 consecutive years, as well as in a normal water year hydrologic condition (Metropolitan 2021). Recycled water production also remains constant and is considered "drought-proof" as a result of constant sewage flows, including years with low precipitation. This diversity of water supplies results in relatively constant groundwater production levels and minimizes adverse impacts to groundwater supplies.

Based on the Water Supply Assessment (Appendix F-1) and Water Supply Verification (Appendix F-2), adequate water supplies are available to meet the water demands associated with full Water Resources Master Plan build-out, which includes all presently undeveloped areas in the IRWD service area, based on current General Plan information and more specific information available to IRWD, under the normal year, single-dry year, and multiple-dry year conditions, through 2045. As a result, there would be sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years. Water supply impacts would not be cumulatively considerable.

## 4.18.7.2 Wastewater

The geographic scope for cumulative wastewater conveyance and treatment would include the jurisdiction of the IRWD, which includes the Michelson Water Recycling Plant; the Los Alisos Water Recycling Plant; and treatment plants operated by the El Toro Water District, the Santa Margarita Water District, or the Orange County Sanitation District. All of the cumulative projects included in this Draft EIR are within this geographic scope. Wastewater treatment facilities are planned based on regional growth projections, such as those produced by the Southern California Association of Governments. As detailed in Section 4.13, Population and Housing, of this Draft EIR, the project is within population and employment growth projections that have been identified by the Southern California Association of Governments. As long as projects fall within these projections, existing wastewater treatment facilities have been planned to accommodate increases in wastewater generation across the region. Because the wastewater treatment plants that would serve the project and many of the cumulative projects are subject to

existing permits, because the project and cumulative projects would be required to pay development fees that fund updates to wastewater facilities, and because the project falls within regional growth projections, the project would not result in cumulatively considerable impacts with respect to potential relocation, construction, or expansion of wastewater treatment facilities.

In addition, as described for water facilities, cumulative project construction would be required to comply with applicable regulations. As a result, indirect impacts associated with upgrades of sewer connections to cumulative project sites would not be cumulatively considerable. Cumulative impacts would be less than significant, and no mitigation is required.

### 4.18.7.3 Stormwater Drainage

The geographic scope of cumulative impacts related to stormwater drainage infrastructure is the watershed of San Diego Creek, which leads to Upper Newport Bay. Each cumulative project would be required to demonstrate through the CEQA process, as well as in compliance with City and/or County regulations, that adequate stormwater conveyance capacity would be sufficient to accommodate each of the cumulative projects within the watershed of San Diego Creek and Upper Newport Bay.

Most cumulative projects, including the proposed project, would be subject to the most recent Orange County municipal separate storm sewer systems permit, which includes a requirement to minimize the percentage of impervious surfaces on land developments by minimizing soil compaction during construction, designing projects to minimize the impervious area footprint, and employing low-impact-development design principles to mimic predevelopment water balance hydrology through infiltration, evapotranspiration, and rainfall harvest and reuse (see Section 4.10 of this Draft EIR). Compliance with this permit generally results in a reduction in stormwater runoff from redevelopment and infill sites compared with existing conditions. Per the Orange County Hydrology Manual (Orange County Environmental Management Agency 1986, 1996) and City of Irvine Standards (City of Irvine 2013), peak-flow mitigation would be designed for the 25-year frequency storm event. As such, the project would not contribute to a cumulatively considerable impact. For most of the cumulative projects, stormwater runoff mitigation would similarly be designed for the 25-year-frequency storm event. Therefore, it is unlikely that downstream flood control improvements would be required as a condition of cumulative project completion.

In addition, as described for water facilities, cumulative project construction would be required to comply with applicable regulations. As a result, indirect impacts associated with new storm drain construction on cumulative project sites would not be cumulatively considerable. Impacts would be less than significant, and no mitigation is required.

### 4.18.7.4 Electricity, Natural Gas, and Telecommunications

The geographic scope for cumulative impacts related to electric power, natural gas, and telecommunication facilities is the City of Irvine, which includes all cumulative projects included in Table 3-1, Cumulative Projects, of Chapter 3 of this Draft EIR. Completion of the proposed project would require installation of new electric power, natural gas, and telecommunication infrastructure in roadways and rights-of-way associated with the development.

Cumulative project development would occur incrementally on a project-by-project basis. Trenching and excavations completed for the new connections to existing electric and telecommunication infrastructure could result in potential short-term soil erosion because excavated and temporarily stockpiled soils would be susceptible to rainfall. However, standard BMPs and pollutant control measures would be employed during construction to minimize pollutants, including erosion-induced siltation of downstream drainages and incidental spills of petroleum

products from construction equipment. Individual projects would be required to comply with applicable regulations to address construction impacts for specific project needs. Impacts from the proposed project associated with upgrades of electric and telecommunication facilities would not be cumulatively considerable. Cumulative impacts would be less than significant, and no mitigation is required.

### 4.18.1.5 Solid Waste

The geographic scope for cumulative solid waste impacts is the greater Orange County area. As discussed in Section 4.18.1, OC Waste & Recycling manages three active landfills in Orange County: the Frank R. Bowerman Landfill, which has a remaining capacity of 205,000,000 CY and a cease operation date of December 31, 2053; the Prima Deshecha Landfill, which has a remaining capacity of 128,800,000 CY and a cease operation date of December 31, 2102; and the Olinda Alpha Landfill, which has a remaining capacity of 17,500,000 CY and a cease operation date of December 31, 2036 (CalRecycle 2024a, 2024b, 2024c). The net solid waste that is anticipated to be produced by the proposed project would equate to approximately 0.0003% of the combined available capacity of these landfills through the estimated closure dates.

Development of cumulative projects could increase land use intensities in the area, resulting in increased solid waste generation in the service area for Orange County landfills. However, as described above, the regional landfills have a combined remaining capacity of approximately 351,300,000 CY and are anticipated to remain open until between 2036 and 2102. The proposed project and cumulative projects would be required to comply with all applicable waste reduction and recycling requirements, including the City's recycling programs, which would further reduce solid waste sent to regional landfills. Additionally, the City is required to comply with the solid waste reduction and diversion requirements set forth in ABs 939, 341, 1327, 2176, 1374, and 1826 (see Section 4.18.2, Relevant Plans, Policies, and Ordinances). Project solid waste disposal would also be completed in compliance with the 2022 CALGreen; the City's Municipal Code Ordinance 21-19, which provides standards for the provision of solid waste (refuse) and recyclable material storage areas; and the City's Building Code, which requires development projects to complete and submit a Waste Management and Recycling Plan for approval prior to issuance of building permits. Therefore, implementation of the proposed project, in addition to the cumulative projects identified in Table 3-1, would not result in cumulatively considerable impacts related to solid waste. Cumulative impacts would be less than significant.

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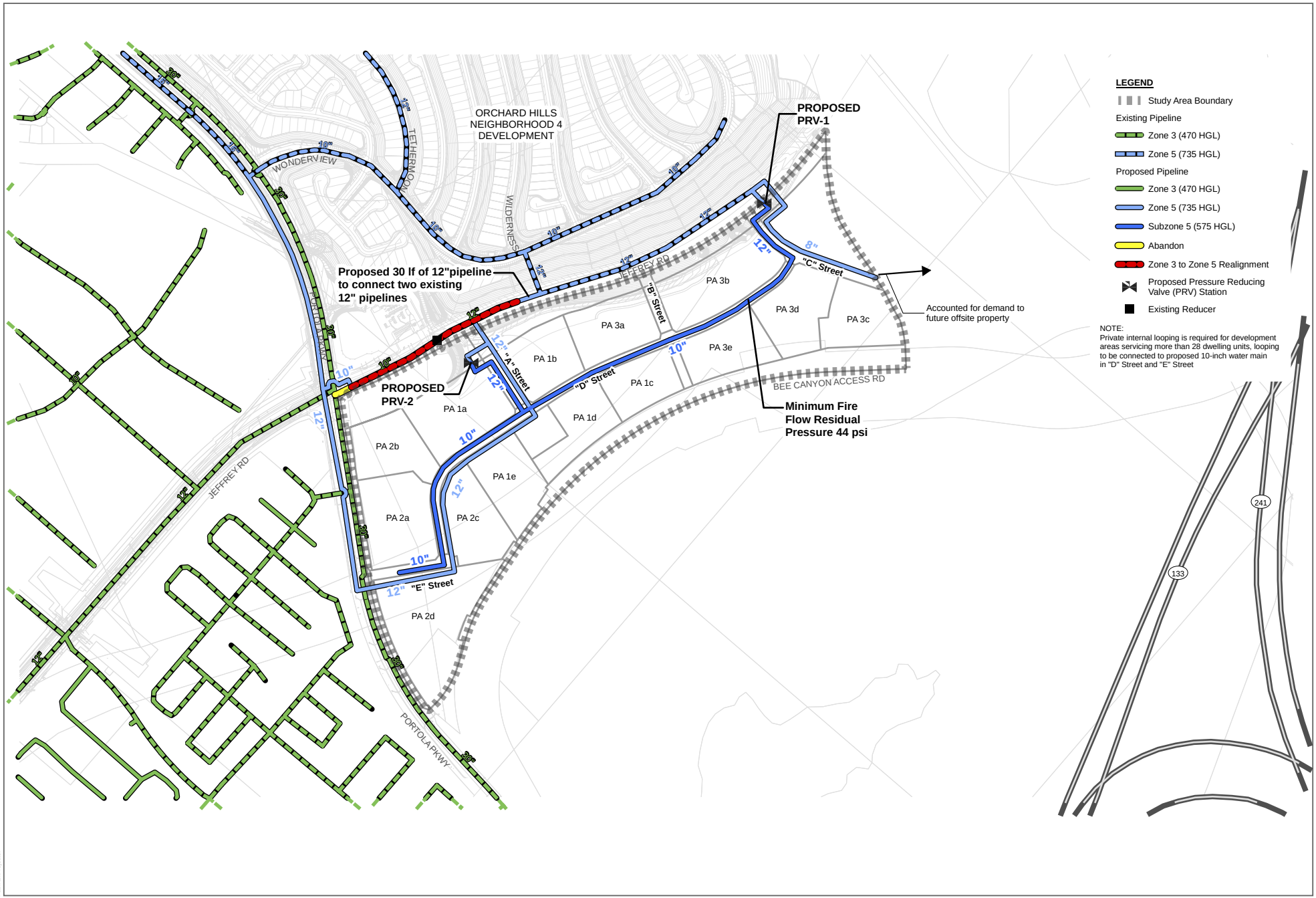


SOURCE: Stantec 2024

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FIGURE 4.18-1

Potable Water System Facilities

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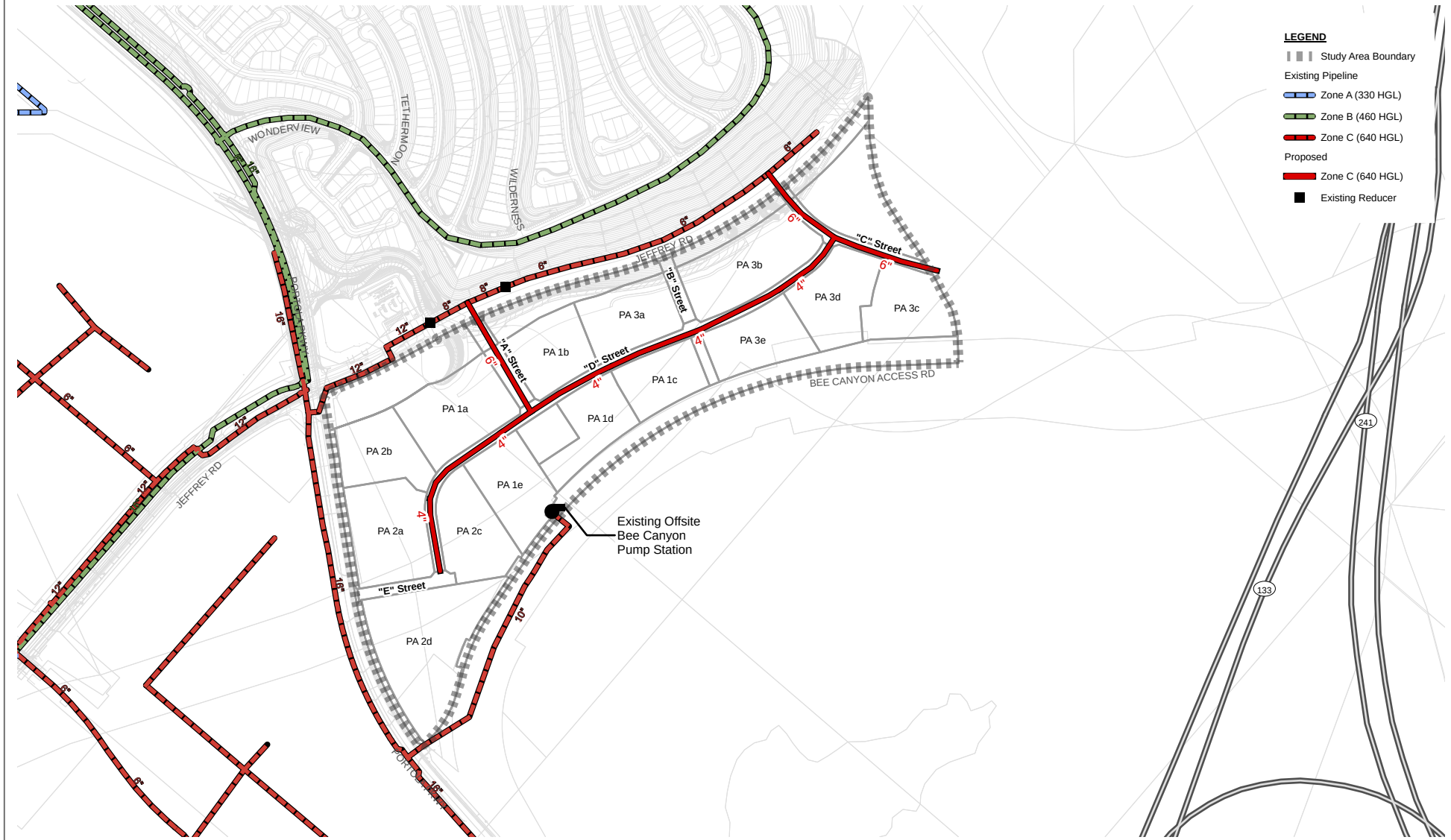


SOURCE: Stantec 2024

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FIGURE 4.18-2

Recycled Water System Facilities

Irvine Gateway Village Project EIR

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SOURCE: Stantec 2024

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FIGURE 4.18-3

Sanitary Sewer System Facilities

Irvine Gateway Village Project EIR

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