

3.12 UTILITIES

This section describes existing and planned utilities serving the Fountain Valley Crossings Specific Plan (Project), and analyzes the potential impacts that could result from the adoption and implementation of the Project. Utilities analyzed in this section include water, wastewater (sewer), solid waste, energy, and communication services (Table 3.12-1). The analysis was prepared, in part, based on information obtained from utility service providers, the City of Fountain Valley (City), the City's 2015 Urban Water Management Plan, and the 2015 Orange County Water District (OCWD) Groundwater Management Plan.

This section of the Partial Recirculated Draft EIR has been revised to include analysis of additional cumulatively considered approved, pending, or recently completed projects that have been identified after release of the draft Final EIR in April 2017. Revisions provided in section of the Partial Recirculated Draft EIR include expanded analysis of cumulative Project impacts to account for an updated list of cumulative projects, as well as provide revisions and clarification in the text of section to address public comments and concerns that were raised following release of the draft Final EIR.

Table 3.12-1. Utilities Serving the City of Fountain Valley

Utility Service Providers	
Water Infrastructure	City of Fountain Valley Water Department
Water Supply	Orange County Water District (OCWD) and Municipal Water District of Orange County (MWDOC)
Wastewater (Sewer) Collection and Infrastructure	City of Fountain Valley
Wastewater (Sewer) Treatment	Orange County Sanitation District (OCSD)
Solid Waste	Rainbow Trash Disposal Service (Rainbow Disposal)
Internet	Time Warner Cable, Frontier Communications, AT&T Internet
Phone Service	Frontier Communications, AT&T Phone Company, Time Warner Cable

Source: City of Fountain Valley 2016a.

This assessment provides a planning-level review of existing infrastructure capacity serving the Project area, including conveyance systems (e.g., water and sewer lines), supporting facilities (e.g., sewage pump stations), treatment and disposal facilities (e.g., water wells and pumps, storage tanks, wastewater treatment plants, etc.), long term water supply and reliability, and a summary of existing and future water demand and wastewater generation. For specific information regarding water quality and storm drain infrastructure, please refer to Section 3.6, *Hydrology and Water Quality*, for hazardous materials management, please refer to Section 3.5, *Hazards and Hazardous Materials*, and for natural gas and energy demand, supply, and conservation, please refer to Section 3.13, *Energy Conservation*.

3.12.1 Environmental Setting

The Project area is served by a network of utility lines, including sewer lines, water mains, and storm drains that were generally constructed during the 1970s and 1980s; this infrastructure was sized and installed to accommodate development anticipated at that time. The following sections provide a description of existing water infrastructure, water supply and demand, wastewater services and infrastructure, local solid waste services, and communication services within the City.

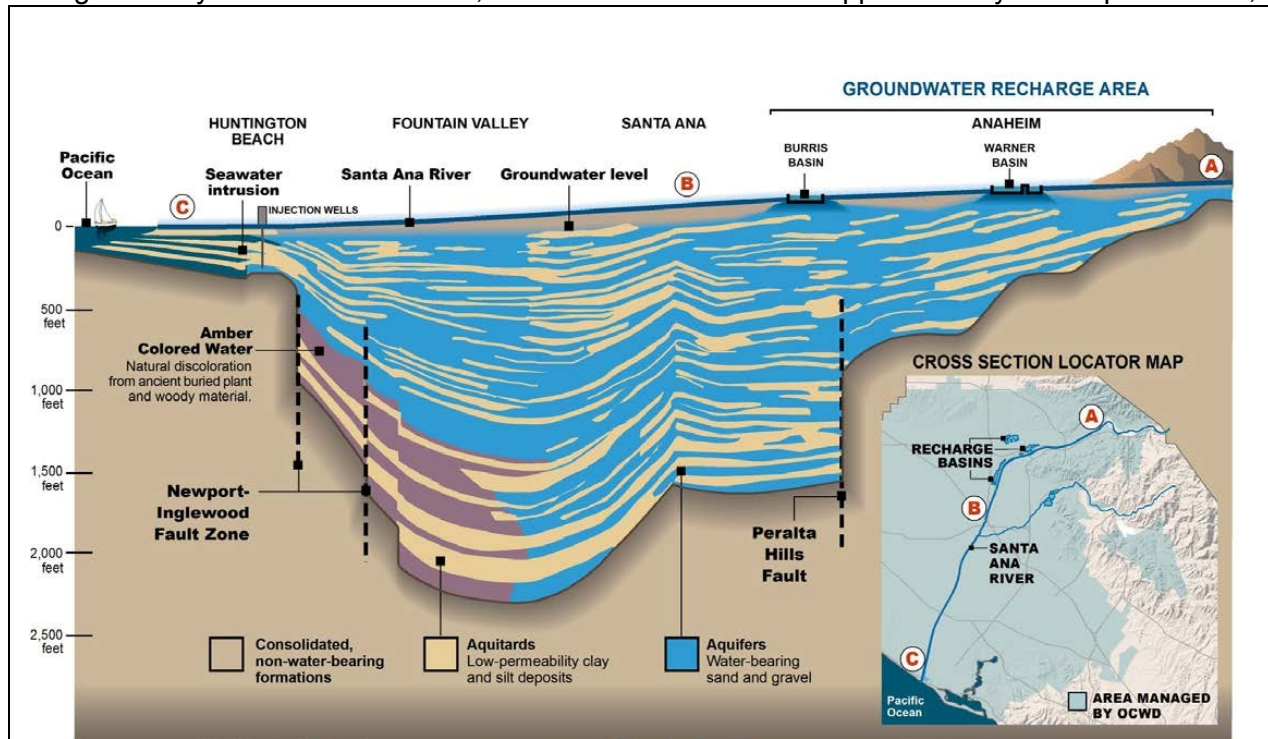
3.12.1.1 Water Infrastructure and Supply

Existing Water Supply

The City receives its water from three main sources: 1) the Lower Santa Ana River Groundwater basin (Orange County Groundwater Basin), which is managed by the Orange County Water District (OCWD); 2) imported Colorado River and State Water Project (SWP) water delivered by the Metropolitan Water District of Southern California (MWD) through the Municipal Water District of Orange County (MWDOC); and 3) recycled water from the OCWD’s Green Acres Project (GAP). MWDOC is Orange County’s wholesale supplier and is a member agency of the MWD.

Groundwater

Groundwater makes up 60 percent of the City’s water supply. Local groundwater comes from the Orange County Groundwater Basin, which covers an area of approximately 350 square miles,



Adjacent to the Santa Ana River and downriver from the groundwater recharge area, the City is positioned above one of the largest areas of groundwater storage and is a well suited location for groundwater injection wells designed to prevent saltwater intrusion into the aquifer.

Source: City of Fountain Valley 2016b

bordered by the Coyote and Chino Hills to the north, the Santa Ana Mountains to the northeast, the Pacific Ocean to the southwest, and terminates at the Orange County line to the northwest, where its aquifer systems continue into the Central Basin of Los Angeles County. With implementation of the Sustainable Ground Water Management Act (SGMA) in 2014, the OCWD was established as the sole lead agency to manage groundwater resources within the District's boundaries and requires OCWD to comply with the provisions of SGMA. The Orange County Groundwater Basin is subdivided into four sub-basins, consisting of the Main Basin, the Irvine Subbasin, the Yorba Linda Subbasin, and the La Habra Subbasin (OCWD 2015). The Orange County Groundwater Basin provides a reliable and sustainable source of water to meet demands of approximately 2.4 million residents throughout multiple municipalities located within the OCWD service area. This groundwater basin has an estimated total capacity to store 66 million acre-feet (AF) and a safe and sustainable yield of over 300,000 acre-feet per year (AFY) (City of Fountain Valley 2016b). For further discussion of groundwater basin characteristics and regional hydrology, refer to Section 3.6, *Hydrology and Water Quality*.

To meet demands within the City, groundwater is pumped from six active wells located primarily in the northeast section of the City and is managed by OCWD. In 2015, the City relied on approximately 6,802 AF of groundwater from the Orange County Groundwater Basin (see Table 3.12-3) (City of Fountain Valley 2015 and 2016b).

Due to increasing water demand and drought conditions in California, there is an increasing reliance on high-quality groundwater to supply water demands within the County. ~~In 2014, During water year 2013-14 (July 1 to June 30), total groundwater production from the Orange County Groundwater Basin equated to 33,136 AF~~ was 333,000 AF with groundwater recharge totaling ~~42,280 AF~~ 240,000 AF. Further, pursuant to the SGMA, the Orange County Groundwater Basin is designated as a medium priority basin primarily due to heavy reliance on the basin's groundwater as a source of water supply by the Department of Water Resources using the basin prioritization established under the California Statewide Groundwater Elevation Monitoring (CASGEM)¹.

Ongoing pumping of groundwater from the Orange County Groundwater Basin ~~has led to decreasing groundwater elevations and overdraft conditions~~ is managed by OCWD to maintain groundwater in storage within an established operating range of less than 500,000 AF below full condition. ~~Overdrafting is the process of extracting groundwater beyond the safe yield or equilibrium yield of the aquifer and has historically resulted in basin levels to drop as much as 40 feet below sea level (OCWD 2015). In June 2013 and 2014, groundwater overdraft of storage levels were 242,000 AF and 342,000 AF below full condition, respectively, occurred resulting in an annual decrease of 100,000 AF in stored groundwater (City of Fountain Valley 2016b). Though these recent overdraft conditions~~ In order to reduce increases in overdraft conditions and The City shares in the commitment ~~commit~~ to sustainable management of groundwater resources, the City and has openly supported the use of

¹ In response to the 2009 Comprehensive Water Package and the 2014 SGMA, the DWR developed a Strategic Plan for its Sustainable Groundwater Management Program, and expanded their responsibilities to include the identification of groundwater basins subject to critical overdraft conditions (DWR 2014). The DWR prioritizes groundwater basins identified as having a CASGEM ranking of high to medium for Sustainable Groundwater Management plans and programs due to limited availability and the critical state of these basins. See Section 3.12.2.2, *Sustainable Groundwater Management Act (SGMA)*.

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recycled water for basin recharge. Currently, recycled water from the GAP and water recycled and purified as part of the by OCWD's Groundwater Replenishment System (GWRS) is sent to recharge basins located in the City of Anaheim for groundwater recharge, as well as to Talbert Seawater Intrusion Barrier Injection Wells within the City at the to avert to manage seawater intrusion (OCWD 2015). On average, OCWD facilities GWRS provide produces approximately 230,000 103,000 AFY of recharge recycled water, 36,000 AF of which is used to operate the and Talbert Seawater Intrusion Barrier Injection Wells inject an average of 36,000 AFY of water into four aquifer zones (OCWD 2015).

Imported Water

Imported water is wholesaled to the City by MWD through MWDOC, and makes up 24 percent of the City's annual water supply and amounted to approximately 2,618 AF in 2015 (see Table 3.12-3). The MWD was formed in 1928 to supplement water supplies of its local governments (including the City, as a founding member agency) with imported water and, beginning in 1972, from the Sacramento-San Joaquin River Delta via the SWP's California Aqueduct and from the Colorado River via the Colorado River Aqueduct.

The SWP is a water storage and delivery system of reservoirs, aqueducts, power plants, and pumping plants. The SWP is owned by the State of California and operated by the California Department of Water Resources (DWR). The SWP transports water from the Feather River stored in and released from Orville Dam north of Sacramento, as well as unregulated flows diverted directly from the San Francisco Bay/Sacramento-San Joaquin River Delta south via the California Aqueduct to four delivery points near the northern and eastern boundaries of MWD's service area. The total length of the California Aqueduct is approximately 444 miles. The imported water is delivered to the City through one imported water connection with a capacity of 10 cubic feet per second (cfs) (City of Fountain Valley 2016b).

As a wholesale agency, MWD pipelines and facilities treat and transport water from the SWP and the Colorado River Aqueduct to contracted water purveyors. Today, the MWD serves more than 94 unincorporated communities and 145 cities, including Fountain Valley. The City's imported water supplies are influenced by annual Sierra snowpack levels, and weather conditions in Northern California and along the Colorado River. Both regions have recently been suffering from multi-year drought conditions and record low rainfalls which directly impact demands and supplies to southern California. Extended drought conditions and increasing temperatures have led to a decrease in Orange County imported water allocations from approximately 3,000 AF in 2010 to 2,618 AF in 2015.

Recycled Water

Recycled water (non-potable water) makes up the remaining 14 percent of the City's water supply, amounting to approximately 1,355 AF in 2015 (see Table 3.12-3). The City participates in a reclaimed/recycled water program and uses the water supplies available to irrigate City managed greenbelts, parkways, golf courses, and other landscape areas that may otherwise use valuable potable water for irrigation. This reclaimed/recycled water is wholesaled by OCWD through its GAP, and is used for outdoor irrigation at the Sports Park, Mile Square Park and the golf courses, as well as other outdoor areas and businesses throughout the City (City of Fountain Valley 2011

and 2015). The GAP consists of a treatment plant with a designed capacity to treat 7.5 million gallons per day (MGD), two pump stations, two reservoirs with a combined storage of 7.5 million gallons, and approximately 37 miles of OCWD owned distribution pipelines. The GAP system provides up to 8,400 AFY of recycled water, and in the 2014-2015 fiscal year (FY), demand for GAP water was approximately 4,320 AF (City of Fountain Valley 2016b).

Desalinated Water

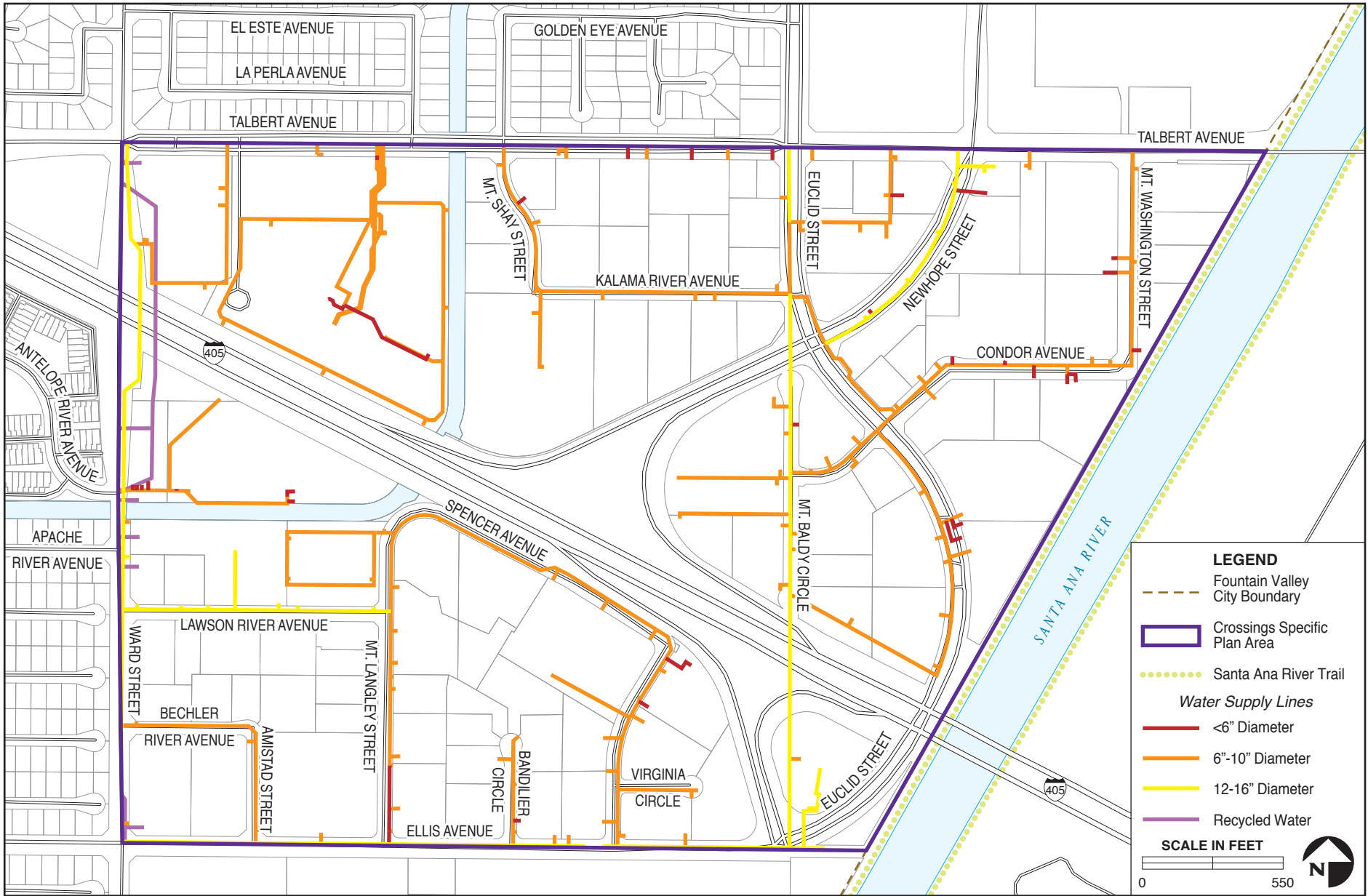
Currently, OCWD is engaged in negotiations with Poseidon Water, a water project development company proposing the development of the Huntington Beach Desalination Facility (Project Poseidon), for the acquisition of desalinated water as an addition to the County water supply. As proposed, Project Poseidon would provide an estimated 50 MGD of potable water to augment the County's water supply. The desalination plant would be located in the City of Huntington Beach, approximately 4 miles south of the Project area, and is scheduled to be operational by 2019 (Poseidon Water 2016).

Drought Conditions

In April 2015, California Governor Brown ordered a statewide 25 percent reduction in urban water use, the first ever statewide mandatory water reduction. In response, the MWD announced a 15 percent cutback in water allowances to its member agencies beginning on July 1, 2015 to help meet the Governor's statewide restriction. As of May 2015, the State of California has received approximately 12 percent of its normal-to-date precipitation average (DWR 2016). As a result of these extended dry conditions, MWDOC Board of Directors chose to implement a Stage 3 MWDOC's Water Supply Allocation Plan in July of 2015, requiring a reduction of approximately 15 percent in imported water use throughout Orange County through June 2016. The Water Supply Allocation Plan is a response measure designed to calculate member agency supply allocations and balance the impacts to water shortages to preserve dry-year storage and curtail water demand (MWDOC 2015). Due to successful water demand reductions and surplus unused water allocations, the MWDOC chose to rescind the Stage 3 Water Supply Allocation on May 10, 2016, and decided not to implement the Water Supply Allocation Plan for the 2016/2017 water year (MWDOC 2016).

Existing Water Demand

Existing water demand in the City in 2015 was approximately 10,775 acre-feet annually consisting of approximately 2,618 acre-feet of imported water, 6,802 acre-feet of local groundwater, and 1,355 acre-feet of recycled water (Table 3.12-2; City of Fountain Valley 2016b). The City has approximately 17,131 residential, commercial, industrial and institutional customer connections to its distribution system. All connections in the City's service area are metered. The Fountain Valley Water Utility service area is predominantly residential with approximately 66 percent of the City's existing water demand originating from single-family and multi-family residences, while the remaining demand accounts for commercial, industrial, and landscape land uses. The City's 10 to 15 year baseline water use is based on 122 gallons per capita per day (gpcd) with an interim target of 157 gpcd (City of Fountain Valley 2016b).



Water Supply System

FIGURE 3.12-1

Table 3.12-2. 2015 Fountain Valley Water Demand

Water Source	2015 Water Demand	Percent of Total Water Mix
Imported Water	2,618	24%
Local Groundwater	6,802	63%
Recycled Water	1,355	13%
Total	10,775	100%

Source: City of Fountain Valley 2016b.

Future Water Supply

By 2040, the City projects that its water supply mix will consist of 70 percent groundwater, 17 percent imported water, and 13 percent recycled water, with increased reliance on local groundwater sources. Total water supply for the City is projected to increase by approximately 9.5 percent from 10,775 AFY to 11,800 AFY (Table 3.12-3) (City of Fountain Valley 2016b). The reliability of water supplies can be subject to several factors such as environmental issues, legal matters, water quality, and climactic conditions. Despite these potentially limiting factors, the MWD District and City anticipate that they will be able to meet full service demands, including committed imported water supplies due to effective management of imported and groundwater supplies, as well as increasing production and reliance on recycled water (City of Fountain Valley 2016b). With the eventual replacement of older wells with new more efficient wells, increasing capacity of existing booster stations, and continued efforts in reducing water waste, the City is expected to meet projected demands with existing facilities and distribution systems. Any new water supply sources will be developed primarily to better manage the Orange County Groundwater Basin and to replace or upgrade inefficient wells, rather than to support population growth and new development (City of Fountain Valley 2016b).

Table 3.12-3. Current and Projected Water Supply

Supply Source	Project Supply by Year (AF)					
	2015	2020	2025	2030	2035	2040
Orange County Groundwater Basin	6,802	7,545	8,219	8,260	8,260	8,260
Purchased or Imported Water	2,618	1,733	2,022	2,040	2,040	2,040
Recycled Water	1,355	1,500	1,500	1,500	1,500	1,500
Total	10,775	10,778	11,741	11,800	11,800	11,800

Source: City of Fountain Valley 2016b.

Future Water Demand

The City projects a 10 percent increase in total water demand through 2030, increasing from 10,775 acre-feet per year (AFY) to 11,800 AFY, with a flattening demand trend after 2030 despite a projected 4 percent population growth over the next 25 years. Projected water demand resembles projected water supply as the City ~~assumes water supply is designed to perfectly meet projected water demand~~ concludes that available water supplies are projected to meet full-service demands, due to diversified supplies, water conservation measures, and MWD's ability to meet the full-service demands of its member agencies, which includes MWDOC, the City's local water

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supply wholesaler, during both normal, dry, and multiple dry years. If demand grows, additional water supply would be purchased from the MWD. As such, the City projects water demand would remain relatively constant over the next 25 years due to minimal growth combined with water use efficiency measures, the increased use of recycled water, and passive water savings as a result of codes, standards, ordinances, and public outreach governing local water conservation (City of Fountain Valley 2016b; MWD 2016).

Due to extended drought conditions and decreasing reliability of imported water during years of drought, agencies within the County predict an increase in reliance on groundwater resources. However, due to increasing sustainable groundwater management practices, local and state water conservation measures, and increasing water use efficiency regulations, the OCWD anticipates that it will continue to operate with the safe operating range for the basin, and Orange County groundwater resources will meet projected water demands (OCWD 2015).

Water Distribution System

Water distribution service within the Project area is provided by the Fountain Valley Water Utility, which operates as a division of the City Public Works Department. The Fountain Valley Water Utility manages two 5 million gallon storage and distribution reservoirs at two separate City sites. Reservoir No. 1 is located at Euclid Street and Ellis Avenue in the southwest portion of the City. Reservoir No. 2 is located in Cordata Park off Tanager Avenue in the southwest portion of the City. In addition, the water distribution system includes 202 miles of distribution piping, approximately 17,131 service connections, and 2,050 fire hydrants (City of Fountain Valley 2016b). To protect the longevity of equipment while providing adequate flow to service fire protection needs in the event of an emergency, capacities of both reservoirs is held at 75 percent (7.5 million gallons); flow rates from these reservoirs are approximately 7,600 gallons per minute (gpm) for Reservoir No. 1 and 7,500 gpm for Reservoir No. 2 (City of Fountain Valley 2016b).

The City's water distribution system operates at an average of 72 pounds per square inch (psi). Water flow is precisely controlled by several variable speed (pressure) wells, booster pumps, and automatic control valves. To help protect the water quality of the service area distribution system, the City has installed over 2,000 backflow prevention devices within the service area. The Fountain Valley Water Utility system employs a Supervisory Control Data Acquisition System (SCADA), and advanced computer-based controls system that enables 24-hour, remote monitoring and control of the various water system facilities; the SCADA central station is located at the City's Field Services Operations Yard (City of Fountain Valley 2016b). The City's distribution system is managed to ensure that water pressure is within acceptable ranges for both domestic use and fire flow demands (City of Fountain Valley 2016b).

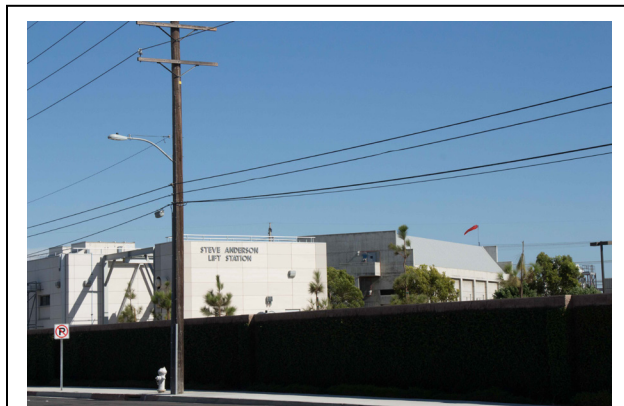
Within the Project area, water supply conveyance systems consist of lines ranging from 2 to 16 inches in diameter and extend approximately 32,679 linear feet, or nearly 6.1 miles. Water supply distribution lines run within the public rights-of-way of all streets within the Project area and connect to adjacent parcels or create closed loop systems within larger development parcels. In addition to water supply lines, recycled water is distributed to parcels along the western boundary of the Project area, paralleling Ward Street and extending approximately 3,251 feet, or 0.62 mile. The water distribution system servicing the Project area was largely constructed in a period

between the late 1960's and early 1980's to meet the demands of existing development and proposed City buildout. Today, much of this system remains in place and continues to adequately service the Project area with no known existing system deficiencies (Personal Communication with City Engineers, Temo Galvez and Alex Salazar 2016). Refer to Figure 3.12-1 for the extent of the water distribution system within the Project area.

3.12.1.2 Wastewater

Wastewater Management System

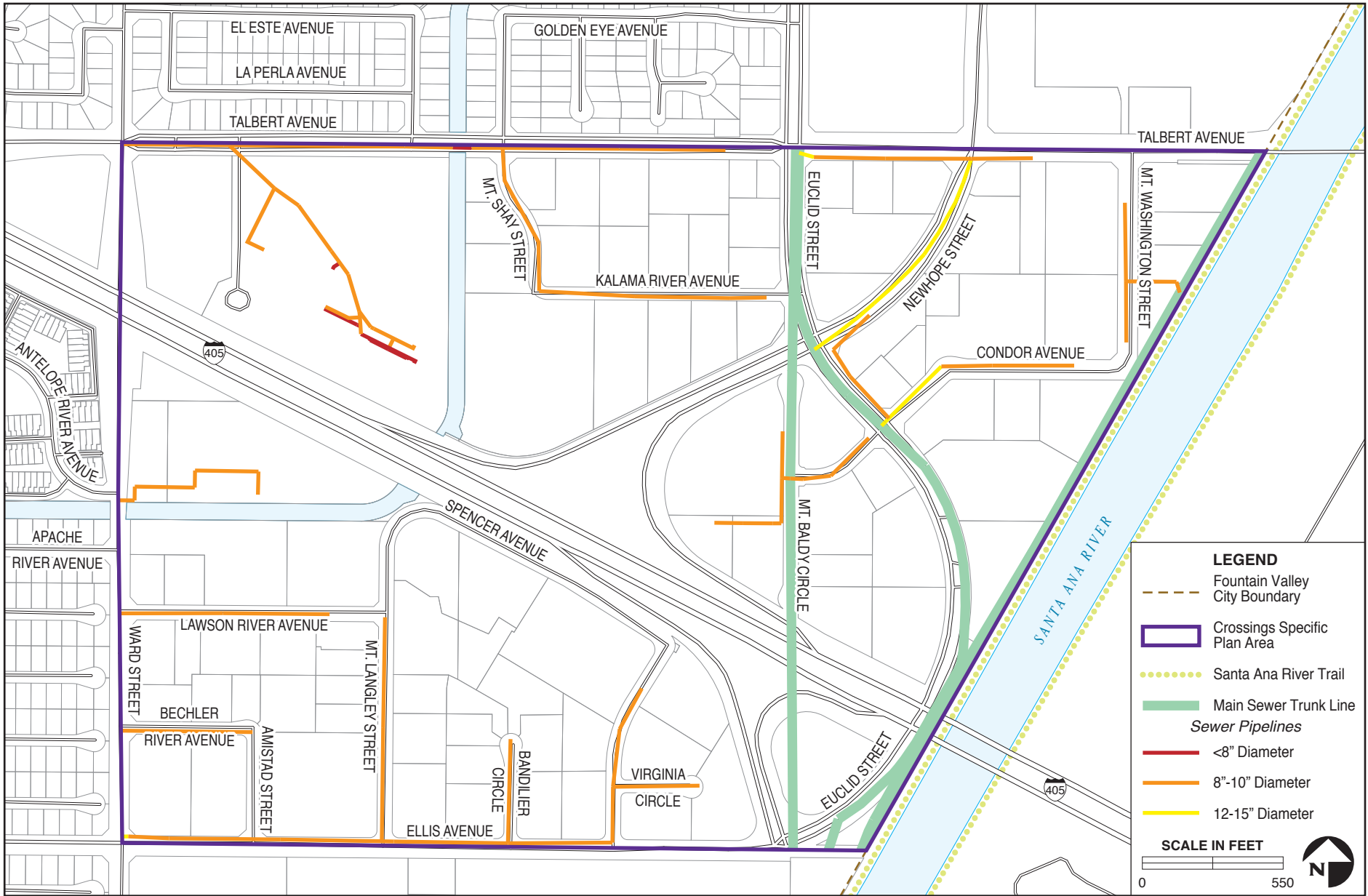
Wastewater collection and treatment service in the Project area is provided by the OCSD. Located adjacent to the southern end of the Project area at 10844 Ellis Avenue, OCSD collects, treats, and disposes of wastewater for its 479 square-mile service area, with a population of approximately 2.5 million people. OCSD currently operates two wastewater treatment facilities that accommodate wastewater from residential, commercial, and industrial sources (OCSD 2016a). The City owns, operates, and maintains the sewer collection system within city limits and its sphere of influence. The sewer system was comprises approximately 133 miles of collection and transmission pipe that sends City effluent to the OCSD for treatment and disposal (OCSD 2016a). Wastewater generated within the Project area is conveyed to Reclamation Plant No. 1, located directly south of the Project area. This treatment plant has a treatment capacity of 320 million gallons per day (MGD) (City of Fountain Valley 2016b), and treated an average of 115 MGD in 2015 (OCSD 2016b). As a proactive measure to ensure continuous service and prevent any future capacity concerns, wastewater may be transmitted from OCSD Reclamation Plant No. 1 to OCSD Reclamation Plant No. 2, which has a primary treatment capacity of 312 MGD and is located in the City of Huntington Beach (OCSD 2016b).²



The OCSD operates the Steve Anderson Lift Station, adjacent to the Project area, and was awarded the 2010 Engineering Excellence Merit Award in Water and Wastewater by the American Council of Engineering Companies (ACEC).

Existing sewer mains within the Project area range in diameter from less than 8 inches to 15 inches and extends approximately 13,689 feet, or nearly 2.6 miles. Lateral sewer lines are generally located within the public road right-of-way within the Project area, and branch lines connect the area north of Interstate 405, south of Talbert Avenue, and east of Ward Street (refer to Figure 3.12-2). Several trunk lines that collect waste effluent conveyed by lateral lines occur within the Project area and are located along Mt. Baldy Circle, Euclid Street, and parallel to the

² Primary treatment refers to the process of removing waste substances such as oils, grease, and solids from wastewater before moving on to the secondary treatment process. Secondary treatment typically involves the physical, biological, and chemical treatment of wastewater to achieve an acceptable degree of effluent quality.



Sewer System

FIGURE 3.12-2

Santa Ana River. These trunk lines extend approximately 8,442 feet, or 1.6 miles. Existing wastewater facilities servicing the Project area were constructed in the late 1960's and early 1970's. No known deficiencies exist with the system, and the existing wastewater collection system adequately services the Project area (Personal Communication with City Engineers, Temo Galvez and Alex Salazar 2016).

3.12.1.3 Solid Waste

Solid Waste Management System

The City of Fountain Valley contracts Rainbow Environmental Services to collect solid waste generated throughout the City. Rainbow Environmental Services provides waste collection, recycling, and disposal services for residential customers with trash can service (City of Fountain Valley 2016c). The collection vehicles run on compressed natural gas (CNG). Rainbow Environmental Services provides commercial bins, compactor pick-up service, and Rent-A-Bins for commercial, construction, and residential needs. Rainbow Disposal provides a Materials Recovery Facility (MRF) to ensure compliance with California state laws regarding waste stream diversion and ensuring that a minimum of 75 percent of solid waste is diverted from landfills into reuse and recycling under AB 341 (see Section 3.1.2.2, *Regulatory Setting*).

Solid waste generated from the City is transported to a MRF within the City of Huntington Beach approximately 3 miles northwest of the Project area, where solid waste is manually and mechanically separated into recyclable and non-recyclable materials (Rainbow Environmental Services 2016). Non-recyclable materials and solid waste are then transported to Frank R. Bowerman Landfill, a 725-acre, non-hazardous, municipal solid waste landfill located within the City of Irvine, approximately 13.5 miles east of Project area. The Frank R. Bowerman Landfill is permitted to receive 11,500 tons per day (tpd) and receives a daily average of approximately 6,800 tpd (Julie Chay, Public Information Officer, Orange County Waste & Recycling 2016), and is scheduled to close in the year 2053 (County of Orange Waste & Recycling 2015). The landfill is subject to regular inspection by state regulatory agencies such as the California Department of Resource Recycling and Recovery (CalRecycle), the California Regional Water Quality Control Board (RWQCB), and the South Coast Air Quality Management District (SCAQMD) to ensure compliance with applicable plans, policies, and regulations. Currently, Rainbow Environmental Services is in the process of upgrading the Huntington Beach MRF, which receives approximately 3,000 tpd of municipal solid waste and is permitted to receive 4,000 tpd of municipal waste (Rainbow Environmental Services 2015). Expansion of the facility would allow Rainbow Environmental Services to meet state mandated solid waste diversions of 75 percent (Rainbow Environmental Services 2015).

Waste Reduction Programs

Rainbow Disposal provides four free large item collections per year, which allows residents to put out up to 10 large items per collection. This complimentary special collection service helps City residents to dispose of large or bulky items, and enables the City to comply with state waste diversion goals requiring a 50 percent reduction in waste disposed at local landfills (City of Fountain Valley 2016c).

In October 2014, the Governor of California signed Assembly Bill (AB) 1826, which requires all business begin recycling their organic material wastes, effective April 1, 2016. The state's objective is to reduce the amount of solid waste disposal and increase recycling opportunities of organic waste. Pursuant to this bill, the City requires businesses to recycle their organic wastes, and encourages hotels and restaurants to donate edible food to food rescue and food banks to reduce organic waste and hunger (City of Fountain Valley 2016d).

3.12.1.4 Communication Services

Communication services (e.g., phone and internet) within the City are provided by various network service carriers. Telephone services are provided to residents by AT&T Phone Company, Frontier Communications, and Time Warner Cable (City of Fountain Valley 2016a). In addition, residents may choose to establish cellular phone services with independent service providers which provide high quality cellular service coverage throughout the Project area (AT&T 2016; Sprint 2016; T-Mobile 2016; Verizon Wireless 2016). Broadband internet and cable television services are provided by Frontier Communications and Time Warner Cable (City of Fountain Valley 2016a). Fiber optic lines used to transmit data through the Project area are located along Talbert Avenue and portions of Euclid Street (City of Fountain Valley 2014).

3.12.2 Regulatory Setting

3.12.2.1 Federal Regulations

Clean Water Act

The federal Water Pollution Control Act, also known as the Clean Water Act, is the primary statute governing water quality. The Clean Water Act establishes the basic structure for regulating discharges of pollutants into the waters of the United States and gives the Environmental Protection Agency (USEPA) the authority to implement pollution control programs, such as setting wastewater standards for industries. The statute's goal is to regulate all discharges into the nation's waters and to restore, maintain, and preserve the integrity of those waters. The Clean Water Act sets water quality standards for all contaminants in surface waters and makes it unlawful for any person to discharge any pollutant from a point source into navigable waters unless a permit is obtained under its provisions. The Clean Water Act mandates permits for wastewater and stormwater discharges, requires states to establish site-specific water quality standards for navigable bodies of water, and regulates other activities that affect water quality, such as dredging and the filling of wetlands. The Clean Water Act also funds the construction of sewage treatment plants and recognizes the need for planning to address nonpoint sources of pollution.

3.12.2.2 State Policies and Regulations

California Governor's Drought Declarations

California Governor Brown on January 17, 2014 proclaimed a State of Emergency and directed state officials to take all necessary actions to make water immediately available. On April 25, 2014, the Governor issued an executive order to speed up actions necessary to reduce harmful

effects of the drought, and he called on all Californians to redouble their efforts to conserve water. On December 22, 2014 Governor Brown issued Executive Order B-28-14 extending directives to the Department of Water Resources and the Water Board to take actions necessary to make water immediately available through May 31, 2016 and to extend California Environmental Quality Act (CEQA) suspensions for certain water supply projects. On April 1, 2015, the governor issued Executive Order B-29-15. Key provisions include ordering the State Water Resources Control Board (SWRCB) to impose restrictions to achieve a 25 percent reduction in potable urban water usage through February 28, 2016. On May 9, 2016, the governor issued Executive Order B-37-16, establishing longer-term water conservation measures through the end of January 2017, which include monthly water use reporting, strengthened urban drought contingency plans, elimination of wasteful water use practices, and mandated adjustments to emergency water conservation regulations and restrictions during extended drought conditions. These extended water conservation measures recognize differing water supply conditions for many communities, and require that communities develop water efficiency measures and conservations plans specific to the conditions of their respective water supply. The Governor's drought declaration also calls upon local urban water suppliers and municipalities to implement their local water shortage contingency plans immediately in order to avoid or forestall outright restrictions that could become necessary later in the drought season.

Sustainable Groundwater Management Act (2014)

California enacted landmark legislation in 2014 known as the Sustainable Groundwater Management Act (SGMA). The legislation provides a framework for sustainable management of groundwater supplies by local authorities, with a limited role for state intervention only if necessary to protect the resource. The Act requires the formation of local groundwater sustainability agencies that must assess conditions in their local water basins and adopt locally-based management plans. The act provides substantial time (i.e., 20 years) for groundwater sustainability agencies to implement plans and achieve long-term groundwater sustainability. It protects existing surface water and groundwater rights and does not impact current drought response measures. Furthermore, it is the overall intent of SGMA to:

- Provide for the sustainable management of groundwater basins;
- Enhance local management of groundwater consistent with rights to use or store groundwater and Section 2 of Article X of the California Constitution. It is the intent of the Legislature to preserve the security of water rights in the state to the greatest extent possible consistent with the sustainable management of groundwater;
- Establish minimum standards for sustainable groundwater management;
- Provide local groundwater agencies with the authority and the technical and financial assistance necessary to sustainably manage groundwater;
- Avoid or minimize subsidence;
- Improve data collection and understanding about groundwater;
- Increase groundwater storage and remove impediments to recharge;

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- Manage groundwater basins through the actions of local governmental agencies to the greatest extent feasible, while minimizing state intervention to only when necessary to ensure that local agencies manage groundwater in a sustainable manner; and
- Provide a more efficient and cost-effective groundwater adjudication process that protects water rights, ensures due process, prevents unnecessary delay, and furthers the objectives of this part.

California Water Plan: Update 2013

The California Water Plan: Update 2013 provides a framework for water managers, legislators, and the public to consider options and make decisions regarding California's water future. The plan outlines actions that together bring reliability, restoration, and resilience to California water resources, reinforcing the value of integrated water management, and examining policies that allow water managers to combine flood management, environmental stewardship, and surface water and groundwater supply.

Urban Water Management Planning Act

The Urban Water Management Planning Act (California Water Code Division 6, Part 2.6, Sections 10610 et seq.) was developed due to concerns over potential water supply shortages throughout California. It requires information on water supply reliability and water use efficiency measures. Urban water suppliers are required, as part of the Act, to develop and implement Urban Water Management Plans (UWMPs) to describe water supply, service area demand, population trends and efforts to promote efficient use and management of water resources. An UWMP is intended to serve as a water supply and demand planning document that is updated every 5 years to reflect changes in the water supplier's service area including water supply trends, and conservation and water use efficiency policies. Specifically, municipal water suppliers that serve more than 3,000 customers or provide more than 3,000 AFY must adopt an UWMP.

CALGreen Building Code

California Code of Regulations Title 24, Part 11 of the California Code of Regulations, establishes the California Green Building Code or CALGreen. The CALGreen Code was recently updated in 2013 and went into effect January 1, 2014. CALGreen sets forth water efficiency standards (i.e., maximum flow rates) for all new federally-regulated plumbing fittings and fixtures. The 2013 mandatory standards for water use are shown in Table 3.12-4.

Table 3.12-4. CALGreen Mandatory Maximum Flow Rates

	Residential	Commercial
Showerheads	2.0 gpm at 80 psi	2.0 gpm at 80 psi
Residential Lavatory Faucet	1.5 gpm at 60 psi	N/A
Lavatory Faucet in Common Areas	0.5 gpm at 60 psi	0.5 gpm at 60 psi
Kitchen Faucet	1.8 gpm at 60 psi	1.8 gpm at 60 psi
Water Closets	1.28 gallons per flush	1.28 gallons per flush
Urinals	0.5 gallons per flush	0.5 gallons per flush
Metering Faucets	0.25 gallons per cycle	0.25 gallons per cycle
Wash Fountains	N/A	20 gpm at 60 psi

Notes: gpm = gallons per minute, psi = pounds per square inch
Source: CalGreen 2013.

California Water Code Sections 10910 et seq.

Senate Bill (SB) 610 was adopted in 2001 and amended the statutes of the Urban Water Management Planning Act, as well as the California Water Code (CWC) Sections 10910 et seq. SB 610 reflects the growing awareness of the need to incorporate water supply and demand analysis at the earliest possible stage in the land use planning process.

CWC Section 10910 requires that for specified projects subject to CEQA, the urban water supplier must prepare a Water Supply Assessment (WSA) that determines whether the projected water demand associated with a proposed project is included as part of the most recently adopted UWMP. Specifically, the WSA identifies adequate available water supplies necessary to meet the demand, as well as the cumulative demand for the general region over the next 20 years, under average, single dry, and multiple dry year water conditions. Under CWC Section 10910, a WSA need only be prepared if a project exceeds the following specific thresholds of development:

- a) A proposed residential development of more than 500 dwelling units.
- b) A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet (sf) of floor space.
- c) A commercial building employing more than 1,000 persons or having more than 250,000 sf of floor space.
- d) A hotel or motel with more than 500 rooms.
- e) A proposed industrial, manufacturing, or processing plant, or industrial park, planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 sf of floor area.
- f) A mixed-use project that includes one or more of these elements.
- g) A project creating the equivalent water demand of 500 residential units.

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The water supply assessment must be approved by the public water system at a regular or special meeting and must be incorporated into the CEQA document. The lead agency must then make certain findings related to water supply based on the water supply assessment. In addition, under SB 610, an urban water supplier responsible for the preparation and periodic updating of an UWMP must describe the water supply projects and programs that may be undertaken to meet the total projected water use of the service area.

2009 Water Conservation Act (SBx7-7)

SBx7-7 was enacted in November 2009, requiring all water suppliers to increase water use efficiency. The legislation sets an overall goal of reducing per capita urban water use by December 31, 2020 through water use targets for urban water suppliers, water management plans, and best management practices. Urban retailers can achieve the SBx7-7 goal using one of four specified methods:

- a) Option 1: 80 percent of baseline use (reduction of 20 percent).
- b) Option 2: Sum of specified performance standards.
- c) Option 3: 95 percent of California Department of Water Resources Hydrologic Region target from draft 20x2020 plan.
- d) Option 4: A flexible alternative designed to adjust to local circumstances.

Urban retail water suppliers must monitor and report compliance on an individual or regional basis. Individual urban retail water suppliers are not required to achieve a reduction in urban per capita water use greater than 20 percent. Compliance with the water reduction target is required for continued state water grants and loan eligibility. After 2021, failure of urban retail water suppliers to meet their targets establishes a violation of law for administrative or judicial proceedings.

California Integrated Waste Management Act (AB 939) (1989)

The California Integrated Waste Management Act (IWMA) of 1989 established an integrated waste management hierarchy to guide the California Integrated Waste Management Board and local agencies in implementation, in order of priority: (1) source reduction; (2) recycling and composting; and (3) environmentally safe transformation and land disposal. The Act required each county to establish a task force to coordinate the development of city Source Reduction and Recycling Elements (SRREs) and a countywide siting element. The Act also required each county to prepare, adopt, and submit to the Board an IWMP.

Additionally, waste diversion mandates were set in AB 939. The law required each city or county plan to include an implementation schedule which shows: diversion of 25 percent of all solid waste from landfill or transformation facilities by January 1, 1995 through source reduction, recycling, and composting activities; and, diversion of 50 percent of all solid waste by January 1, 2000 through source reduction, recycling, and composting activities. A city or county may be deemed exempt from these goals or to reduce the requirements if the city or county demonstrates that

attainment of the goals is not feasible due to the small geographic size of the jurisdiction and the small quantity of waste generated. After January 1, 1995, the Act authorized the Board to establish an alternative goal to the 50 percent requirement, if the Board finds that the local agency is effectively implementing all source reduction, recycling, and composting measures to the maximum extent feasible.

Senate (SB) 1016

SB 1016 builds on AB 939 compliance requirements by implementing a simplified measure of jurisdictions' performance. SB 1016 accomplishes this by changing the measurement of waste reduction from a diversion rate to a disposal-based indicator – the per capita disposal rate. The purpose of the per capita disposal measurement system is to make the process of goal measurement as established by AB 939 simpler, timelier, and more accurate. Beginning with reporting year 2007 jurisdiction annual reports, diversion rates will no longer be measured. With the passage of SB 1016, only per capita disposal rates are measured. For 2007 and subsequent years, CalRecycle compares reported disposal tons to population to calculate per capita disposal expressed in pounds/person/day.

Assembly Bill (AB) 341 (2011)

AB 341 established a state policy goal that no less than 75 percent of solid waste generated be source reduced, recycled, or composted by 2020, and requiring CalRecycle to provide a report to the Legislature that recommends strategies to achieve the policy goal by January 1, 2014. AB 341 mandates local jurisdictions to implement commercial recycling by July 1, 2012. AB 341 requires any business (including schools and government facilities) that generates 4 cubic yards or more of waste per week, and multifamily buildings with five or more units to arrange for recycling services.

California Code of Regulations Title 24

Title 24 of the California Code of Regulations is known as the California Building Code. The current 2013 California Building Code was updated in 2013 and an update is currently planned for early 2017. The 2013 California Building Code includes the following:

- *California Code of Regulations Title 24, Part 11* comprises the California's Green Building Standard Code (CALGreen), which establishes mandatory green building code requirements as well as voluntary measures (Tier 1 and Tier 2) for new buildings in California. The mandatory provisions in CALGreen will reduce the use of volatile organic compound (VOC)-emitting materials, strengthen water efficiency conservation, increase construction waste recycling, and increase energy efficiency. Tier 1 and Tier 2 are intended to further encourage building practices that minimize the building's impact on the environment and promote a more sustainable design.

3.12.2.3 Regional Policies and Regulations

MWD Water Supply Allocation Plan

On February 12, 2008 the Board of Directors of the MWD approved a Water Supply Allocation Plan. The Plan was prepared to address a balanced water allocation in the event that there is a water shortage. The plan provides reduced allocations to all of MWD's service area; encompassing all Southern California counties. The intent is to share the burden of reduced water deliveries. The plan incorporates a number of elements including past conservation efforts, local water supplies and penalty fees. The penalty fees, if collected, would be re-invested in that area for further conservation efforts and extended development of local supplies.

The plan was most recently updated in December 2014. Under the plan, MWD's member agencies and their retailers would be allocated supplies partly based on their dependency on the district's imported supplies, while taking into account other local supply sources. Among the changes were an update to the base period to fiscal years ending 2013 and 2014, and revised credits for per capita water use reductions for agencies that have already put in place mandatory conservation ordinances and requirements. Other changes establish a separate allocation for drought-impacted groundwater basins and replace current penalty rates with an allocation surcharge based on MWD's current turf removal program cost. This plan is not in effect now and would have to be brought to the Board for action before implementation. The plan was last implemented in 2009.

3.12.2.4 Local Policies and Regulations

Fountain Valley Urban Water Management Plan (UWMP)

The City has recently adopted its 2015 UWMP, which provides the State of California's Department of Water Resources an assessment of the City's present and future water resources needs. Specifically, this document provides water supply planning for a 25-year planning period in 5-year increments. The plan identifies water supplies for existing and future demands; quantifies water demands during the normal year, single-dry year and multiple-dry years; and identifies supply reliability under the three hydrological conditions. The UWMP document has been prepared in compliance with the requirements of the Urban Water Management Planning Act as amended in 2009 (City of Fountain Valley 2016b)

City of Fountain Valley General Plan

The City of Fountain Valley General Plan contains the following relevant goals, policies, and actions in Chapter 2.0, *Land Use Element*, and Chapter 5.0, *Conservation Element*, related to water supply, water conservation, storm drain infrastructure, waste disposal, and groundwater resources in the Project area and surroundings:

Land Use Element

Goal 2.14 Manage growth and development to insure the maintenance or improvement of the existing quality of life in Fountain Valley.

Policy 2.14.2 Work with water services, sewer and flood control agencies to ensure the adequate maintenance of infrastructure facilities and provision for future maintenance and possible replacement or repair of such facilities.

Policy 2.14.3 Maintain streets, sidewalks, alleys, storm drains and sewers in a clean, safe and operational condition.

Policy 2.14.6 Insure proper disposal of solid waste.

Conservation Element

Goal 5.1 Conserve, protect and enhance the natural resources in Fountain Valley to ensure their optimal use and support to the benefit of all present and future citizens of the City.

Policy 5.1.1 Develop an environmental mitigation monitoring program to address the natural resources found in Fountain Valley.

Goal 5.2 Protect Fountain Valley's existing and future water resources.

Policy 5.2.1 Conserve scarce water resources.

Policy 5.2.2 Work with federal, state and County governments and agencies to maintain and improve the quality and quantity of local and regional groundwater resources available to the City.

Goal 5.6 Fulfill the requirements of the Integrated Waste Management Act of California.

Policy 5.6.1 While maintaining its current recycling policies, the City shall adopt additional incentives, regulations and procedures to further specify local recycling requirements and evaluate the potential for developing a recycling and/or composting center.

Fountain Valley Municipal Code (FVMC)

The FVMC establishes regulations and requirements mandated of all development and development projects within the City and includes the requirement for the payment of fees to ensure the adequate provisions and upkeep of City services and infrastructure. The following sections of the FVMC set minim design and construction standards, and establish regulations for the management of public utilities, including solid waste, wastewater, water supplies, stormwater, and electrical and natural gas supply and infrastructure.

- Title 6 - *Health and Sanitation*. This title provides for garbage and solid waste regulations in compliance with all laws.
- Title 13 - *Public Works*. This title provides for public works regulations, including the City's drainage plan and underground wiring, in compliance with all laws.
- Title 14 - *Water and Sewers*. This title provides for the water and sewer system of the City in compliance with all laws and departments. In addition, the provisions of the chapters

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included under this title include requirements for the payment of development impact fees as determined by the City council.

- Title 18 - *Building Codes and Regulations*. This title provides for plumbing, electrical, energy, and building codes and regulations.

3.12.3 Impact Assessment and Methodology

3.12.3.1 Thresholds for Determining Significance

The following thresholds of significance are based on Appendix G of the 2016 CEQA Guidelines. For purposes of this EIR, implementation of the proposed Project may have a significant adverse impact on utilities and service systems if the Project would:

- Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board;
- Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
- Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
- Reduce sufficient water supplies available to serve the project from existing entitlements and resources, or require new or expanded entitlements;
- Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments;
- Be served by a landfill that lacks sufficient permitted capacity to accommodate the project's solid waste disposal needs; or,
- Conflict with federal, state, and local statutes and regulations related to solid waste.

3.12.3.2 Methodology

The section analyzes the Project's goals, policies, and development regulations to determine whether implementation of the proposed Project would result in significant impacts to existing water, wastewater, and solid waste infrastructure, and regional and local water supplies. The analysis further identifies and describes how the proposed goals and policies, in addition to existing regulations and standards, provide enforceable requirements and/or performance standards that avoid or minimize significant impacts and uphold the City's standing as an environmentally conscious community.

Descriptions of existing water and wastewater infrastructure were partially derived from City Geographic Information System (GIS) data and infrastructure maps. Information regarding the slope, length, and material of water and sewer pipelines within the Project area was gathered using pipeline data provided by the City.

3.12.4 Project Impacts and Mitigation Measures

Impact UT-1 Description

UT-1 Implementation of the proposed Project would not exceed wastewater treatment requirements of the Santa Ana Regional Water Quality Control Board (RWQCB) (*Less than Significant*).

The RWQCB, in connection with the implementation of the National Pollutant Discharge Elimination System (NPDES) program, has imposed requirements on the treatment of wastewater and its discharge into local water bodies, including the Santa Ana River. Wastewater produced by new land uses and development in the Project area would meet these requirements through treatment at the OCSD Reclamation Plant No. 1. The treatment plant utilizes chemically-enhanced primary and secondary treatment. In addition, the implementation of wastewater low impact development (LID) designs and best management practices (BMPs) required by the Project would also help meet wastewater quality treatment standards. Therefore, RWQCB wastewater treatment requirements would not be exceeded, and potential impacts related to the proposed Project are considered *less than significant*.

Mitigation Measures

No mitigation required.

Impact UT-2 Description

UT-2 Implementation of the proposed Project would result in an increase in wastewater generation; however, increased wastewater generation would not exceed the treatment capacity of existing wastewater facilities (*Less than Significant*).

The Project area is currently fully developed and existing wastewater flows are treated within the capacity of OCSD. Wastewater flows from the Project would also be treated at OCSD Reclamation Plant No. 1, which has a combined primary treatment capacity of 320 MGD. Currently this facility receives and treats an average flow of 115 MGD of wastewater. Implementation of the proposed Project would add approximately 144,866.2 gpd, or 0.14 MGD (Table 3.13-5). Implementation of the Project would result in an increase in current wastewater flows by approximately 0.13 percent.

Table 3.12-5. Estimated Project Wastewater Generation

Land Use	Projected Change in Land Use	Wastewater Flow Estimates ¹	Estimated Project Wastewater Generation (gpd)
Retail	134,010 sf	0.12 gpd/sf	16,081.2
Warehouse/ Commercial	-318,369 sf	0.05 gpd/sf	-15,918.5
Office/ Industrial ²	554,212 sf	0.07 gpd/sf	38,794.8
Net Development	258,011 sf	0.05 – 0.12 gpd/sf	38,957.5
Residential	491 units	215.7 gpd/unit	105,908.7
Total			144,866.2 gpd (0.14 MGD)

¹Wastewater Flow Estimates in gallons per day/square foot by land uses based on Wastewater Flow Estimates for Development Planning retrieved via email communication with OCSD staff (Daisy Covarrubias, OCSD 2016).

²The Office/Industrial land use is a sum of change in land use from existing Auto Retail, Office, and Industrial land uses under proposed buildout of the Project.

Given that the existing system has approximately 205 MGD of additional capacity and increased amounts of development under implementation of the proposed Project, increases in wastewater flows would be fully treatable by existing facilities. The OCSD Reclamation Plant No. 1 would have sufficient capacity to serve the anticipated Project demand in addition to the provider’s existing commitments. Therefore, impacts in regard to Project-related wastewater generation are considered *less than significant*.

Mitigation Measures

No mitigation required.

Impact UT-3 Description

UT-3 Implementation of the proposed Project may require or result in the construction of new site-specific wastewater facilities or expansion of existing facilities, the construction of which could cause significant environmental effects (*Less than Significant with Mitigation*).

Wastewater collection and conveyance systems within the Project area are currently sufficient in terms of size and age to service existing Project area development (Personal Communication with City Engineers, Temo Galvez and Alex Salazar 2016). Due to existing available capacity to treat wastewater existing and future wastewater in the City, construction or expansion of wastewater treatment facilities would not be required. However, it is possible that new development within the Project area would require on-site upgrades to serve the proposed new uses. For future development, individual development projects occurring under the Project would be reviewed to determine whether site-specific infrastructure improvements (e.g., pipe upsizing) would be required as part of project approval. Development projects may require the alteration of existing infrastructure, the construction of new wastewater collection pipes, and connection to existing systems to support an increase of approximately 0.14 MGD of wastewater flows (see Table 3.12-5).

While the location and size of specific wastewater improvements necessary to service individual development projects is undetermined, information regarding the improvement or construction of these facilities will be determined prior to approval of proposed projects. As standard City process, all necessary improvements and alterations to existing wastewater facilities would be required to be constructed in compliance with applicable state and City development codes and regulations. Construction of new sewer infrastructure would typically require excavation, removal of older pipelines, replacement and/or repair of inadequate pipe segments, and replacement of pavement, sidewalk, and landscaping disturbed during construction. This would involve typical short-term construction impacts, such as air emissions, noise, and disruption of traffic flows. Such impacts would vary depending on the individual development. As part of development review of individual projects, additional CEQA review may be required to analyze potential effects that may include the alteration of existing systems or construction of additional infrastructure. Replacement of several sewer mains in the Project area could also create secondary short-term periodic construction impacts.

Further, implementation of the Project would generate increased sewage flows within the existing sewer system. Development of land uses under the proposed Project would incrementally trigger the need for expansion or replacement of individual sewer line segments, resulting in potentially significant impacts. With assurance of adequate funds to finance the capital improvements necessary as provided for in MM U-3, impacts would be reduced to less than significant with mitigation. Therefore, Project impacts are considered *less than significant*.

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MM UT-3: FVCSP Utility Infrastructure Financing Program: *The City shall ensure adequate financing for funding of infrastructure improvements to serve the FVCSP through implementation of the FVCSP Utility Infrastructure Financing Program, including preparation of an AB 1600 fee justification study, for the FVCSP area. The Financing Program shall be developed prior to the approval of the first entitlements for a development within the Project area, following adoption of the Project. All new development within the FVCSP shall be conditioned to be subject to payment of its fair share of any impact fees identified under this program. The City shall determine the costs of and establish a funding program for the following capital improvements to upgrade water and wastewater delivery as needed to serve the demands of new land uses anticipated to occur under the FVCSP.*

The Program shall also:

- a. Identify the cost of improvements to or replacement of undersized water and wastewater lines within the FVCSP area needed to serve the Project.
- b. Clearly apportion existing and projected demand on these facilities and costs between existing users, the City and proposed future development.
- c. Identify potential funding mechanisms for sewer and water line construction, including the equitable sharing of costs between new development, the City and existing users, including development impact fees, grants, assessments, etc.

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- d. Identify development impact fees for all residential and non-residential development to ensure that development pays its fair share of public infrastructure costs.
- e. Include a regular fee update schedule, consistent with the City's Capital Improvement Program.

Residual Significance

Implementation of MM UT-3 and compliance with existing local regulations would ensure the funding of necessary improvements to the wastewater system to serve future land uses anticipated to occur under the proposed Specific Plan. Therefore, potential impacts to wastewater infrastructure would be reduced to *less than significant with mitigation*.

Impact UT-4 Description

UT-4 Implementation of the proposed Project may require or result in the construction of new stormwater drainage or expansion of existing facilities, the construction of which could cause significant environmental effects (*Less than Significant*).

Implementation of the proposed Project would result in partial redevelopment of the Project area for increased retail, commercial, industrial, warehouse, office, and residential uses. As the site is largely developed with impermeable surfaces, redevelopment under the proposed Project would primarily involve replacement rather than expansion of impermeable surfaces. Some permeable surface areas may also be introduced to the Project area via the installation of up to six half-acre public open space areas, though not all open space areas would be required to consist of permeable ground. Any potential increased development of impermeable surfaces and building square footage may result in increased stormwater and urban runoff that enters the City's storm drainage system. Storm drain infrastructure within the Project area presently accommodates and conveys stormwater flows adequately, and additional development under the Project is not expected to impede stormwater conveyance (Personal Communication with City Engineers, Temo Galvez and Alex Salazar 2016). However, it is possible that new development within the Project area would require on-site upgrades to serve the proposed new uses. Necessary improvements to site hydrology may be required to accommodate redevelopment and would be identified as part of review of proposed projects. While the location and extent of stormwater system improvements necessary to service individual development projects is presently undetermined, specific information regarding the improvement or construction of these facilities would be determined prior to approval of proposed project. Any construction of necessary facilities would be subject to applicable state and City development codes and regulations. As part of the development review of individual projects, additional CEQA review may be required, which would analyze potential effects including the potential alteration of the existing system. Therefore, the Project is not anticipated to have in significant adverse effects to the environment resulting from the construction of additional storm drain infrastructure, and impacts are considered *less than significant*.

Mitigation Measures

No mitigation required.

Impact UT-5 Description

UT-5 The proposed Project would increase the demand for water; however, this demand would be adequately met by existing and planned future water supplies (*Less than Significant*).

Commercial, industrial, and residential uses anticipated to occur under the proposed Project would incrementally increase water demand throughout the development of and life of the Project. Based on the water duty factors provided by the MWDOC and the change in population associated with proposed Project buildout, it is estimated that new land uses anticipated to occur under the proposed Project would potentially increase water demand by an estimated 499,855 gpd, or approximately 560.3 AFY (Table 3.12-6).

Table 3.12-6. Estimated Increased Water Demand Generated by the Project

Land Use	Projected Change in Land Use	Estimated Change in Project Area Employment/Population ¹	Water Use Factors ² (gpcd)	Estimated Increased Water Demand (gpd)
Retail	134,010 sf	350	173	60,550
Warehouse/Commercial	-318,369 sf	-408	173	-70,584
Office/Industrial³	554,212 sf	2,121	173	366,933
Net Development	258,011 sf	2,063	173	356,899
Residential	491 units	1,444	99	142,956
Total				499,855 gpd (560.3 AFY)

¹Refer to Section 3.9, *Population and Housing*, for detailed discussion of estimation of buildout population by land use.

²Water Use Factors retrieved from the Orange County Water Suppliers Water Rates & Financial Information (MWDOC 2013).

³The Office/Industrial land use is a sum of change in land use from existing Auto Retail, Office, and Industrial land uses under proposed buildout of the Project.

The increased demand for water would have the potential to result in the need for new or expanded water infrastructure and/or water supplies. While redevelopment of the Project area would result in a projected net increase in water demand by approximately 560.3 AFY, the MWDOC and the City currently project an estimated 11,800 AFY of potable water will be available at the time of buildout of the Project, approximately 1,025 AF more than current demands (see Table 3.12-3). This supply is managed through issuance of Will Serve Letters for individual projects which describe the service to be provided and ensures adequate supply for the development. Individual developments within the Specific Plan area would be required to obtain a Will Serve letter from the district prior to planning approval. As such, the MWD, MWDOC, and the City anticipate their ability to meet full-service demands through 2040 during both normal, dry, and multiple dry years. Further, increasing reliance on recycled water, City mandated water efficiency requirements, water conservation measures, and implementation of higher efficiency systems would contribute to decreased water demands within the Project area. Therefore, while

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implementation of the Project would result in an increase in water demand, impacts to existing and projected City water supply are considered *less than significant*.

Mitigation Measures

No mitigation required.

Impact UT-6 Description

UT-6 Implementation of the proposed Project may require or result in the construction of new water facilities or expansion of existing facilities; however, the construction of these facilities would not result in substantial environmental effects (*Less than Significant with Mitigation*).

Additional commercial, industrial, office, retail, and residential uses to be developed under the proposed Project would increase water demand. Based on water demand factors for the City and other service areas within the County, water demand resulting from implementation of the Project is expected to increase by approximately 499,855 gpd (560.3 AFY) (Table 3.12-6). The increased demand for water would have the potential to result in need for additional water supply infrastructure. Currently, the Project area is largely developed and is served by an existing water supply system which provides sufficient service (Personal Communication with City Engineers, Temo Galvez and Alex Salazar 2016). Development under the proposed Project would occur within the existing developed spaces of the Project area and is not expected to require substantial alternations to the existing water system given the incremental and limited increase in water demand from the Project. However, new land uses anticipated to occur under the Project could nonetheless result in the need for construction of new water facilities or expansion of existing infrastructure such as upsizing of certain pipeline segments. However, individual development projects would be reviewed to determine any necessary alternations to existing infrastructure to serve the development site. As part of development review of individual projects, additional CEQA review may be required that would analyze potential effects including the alteration of existing systems or construction of additional infrastructure. The construction or implementation of necessary onsite infrastructure improvements would occur in conformance with applicable state and City development codes and regulations. Due to the limited increase in water demand associated with the Project, as well as conformance to mandated water supply infrastructure regulations and standards, and with assurance of adequate funds to finance the capital improvements necessary for the Project as described in MM UT-3, impacts to the environment due to potential construction or expansion of water supply facilities are considered *less than significant with mitigation*.

Mitigation Measures

MM UT-3 shall apply.

Residual Impact

Implementation of MM U-3 and compliance with existing local regulations would ensure the funding of necessary improvements to the water distribution system to serve future land uses anticipated to occur under the proposed Project. MM UT-3 would ensure that responsible agencies and developers would be responsible to pay a fee to fund the improvements. Therefore, potential impacts to water infrastructure would be reduced to *less than significant with mitigation*.

Impact UT-7 Description

UT-7 The proposed Project would potentially increase solid waste generation within the Project area; however, existing sorting and disposal facilities currently possess sufficient capacity to accommodate additional Project solid waste generation (*Less than Significant*).

Under implementation of the proposed Project, redevelopment of the Project area is expected to result in a net increase of approximately 258,011 sf of retail, industrial, commercial, warehouse, and office development and 491 residential units. This increase in Project area buildout would result in an increase in solid waste generation and a subsequent need for waste disposal. Based on approximate Project buildout, the estimated potential net increase in solid waste generation in the Project area is 4,828.76 lbs of solid waste per day, equating to 2.41 tpd (see Table 3.12-7). Assuming required diversion rate of 75 percent is applied, this would result in up to an additional 1.81 tpd of non-recyclable waste that would need to be disposed in a landfill.

Table 3.12-7. Estimated Additional Solid Waste Generation from Project Implementation

Land Use	Projected Change in Land Use	Waste Generation Factor ¹	Estimated Waste
Retail	134,010 sf	0.006 lbs/sf/day	712.84 lbs/day
Warehouse/Commercial	-318,369 sf	0.005 lbs/sf/day	-1,700.15 lbs/day
Office/Industrial	554,212 sf	0.006 lbs/sf/day	3,208.86 lbs/day
Net Development	258,011 sf	0.005 – 0.006 lbs/sf/day	2,221.55 lbs/day
Residential	491 units	5.31 lbs/du/day	2,607.21 lbs/day
Total			4,828.76 lbs/day

¹ Estimated solid waste generation was calculated using waste generation rates from CalRecycle.

Source: CalRecycle 2013.

It is not anticipated that an additional net 258,011 sf of development would substantially strain Rainbow Environmental Services' ability to service the Project area. In addition, the MRF has available capacity to receive and process an additional 1,000 tpd of solid waste under their existing permit. As such, the MRF possess adequate capacity to receive an estimated 2.41 tpd of additional Project waste, or approximately 0.006 percent of the facility's permitted daily capacity. Furthermore, disposal of approximately 1.81 tpd of non-recyclable solid waste at the Frank R. Bowerman Landfill would incrementally contribute to the facility's typical daily intake and would not result in exceedance of the facility's total daily capacity. Therefore, impacts resulting from additional solid waste generation under the proposed Project are considered *less than significant*.

Mitigation Measures

No mitigation required.

Impact UT-8 Description

UT-8 Due to existing and proposed City programs, implementation of the proposed Project would not result in the generation of waste in a manner that may potentially conflict with federal, state, and local statutes and regulations related to solid waste (No Impact).

California state law AB 341 requires that at least 75 percent of solid waste be diverted from landfills. As previously discussed, solid waste generated by the Project would be transported to a MRF that separates and sorts solid waste to ensure a minimum of 75 percent is diverted for recycling and reuse before being transported to the Frank R. Bowerman Landfill. In addition, development under the Project would be required to comply with all applicable City solid waste regulations, permitting processes, and policies in effect at the time of operation, including the policies and regulations described under FVMC Chapter 6.08, *Solid Waste*. As the City is in compliance with applicable state, federal, and local regulations and implementation of the Project would not conflict with regulations related to solid waste, *no impact* would occur.

Mitigation Measures

No mitigation required.

3.12.4.1 Cumulative Impacts

Implementation of the proposed Project would result in the incremental increase in demand for water supply, stormwater, wastewater, and solid waste management. Cumulative impacts to utility services are largely related to City-wide population growth and development. Under the City Capital Improvements Program, facilities providing these services City Public Works staff identifies deficiencies in current infrastructure systems and anticipates the demand of these services for the build-out population of the City, and The City and facilities providing these services are prepared to adequately supply these services with regard to current and future developments and planned growth anticipated under the 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (2016-2040 RTP/SCS). The Project could contribute to impacts to the City's water infrastructure and wastewater conveyance system, potentially contributing to exceedance of utility line segment capacities. In addition, cumulative development citywide may also increase demand on existing water and sewer lines. However, it is anticipated that such infrastructure would be evaluated on a project-by-project basis and implementation of MM UT-3 would ensure that funding is available for required improvements.

As described in Section 3.12.1, *Environmental Setting*, existing utility services including water supply, wastewater treatment, and solid waste are all currently operating under capacity, and have sufficient remaining capacity to absorb cumulative increases in demand. Water supply availability near full buildout of the Project is anticipated to be 11,800 AFY, which is designed to fully meet projected City water demand. Presently, many cumulative projects consist largely of

redevelopment of existing developed areas of the City which have contributed towards citywide water demand, and redevelopment under these projects would result in relatively minor new demand for water. With consideration of cumulative development under the Sakioka Site, the project may result in a considerable increase in water demand due to the amount of proposed development under this project and the present vacant nature of this site. However, requirements for the acquisition of Will Serve letters would ensure available supply exists to service proposed the Project and proposed cumulative development.

Regional water supplies delivered by the MWD have constituted an important component of the City's historic water supply and currently meet approximately 24 percent of current citywide water demand. The District would ensure adequate water supply for cumulative development including the Project through the purchase of additional water supplies. Over the long-term, key MWD supply sources such as the SWP and the Colorado River have the potential to be reduced due to environmental regulations, increased demands from other water agencies and states, extended drought and changes in snowpack, rainfall and runoff associated with climate change. The MWD is addressing these variables in supply through increased reliance on conservation, increased system storage and flexibility, use of local sources such as groundwater, conjunctive use, and reclamation.

Wastewater treatment within the district is currently operating at approximately 36 percent of its total capacity, and the solid waste facilities for the County are already meeting waste reduction requirements and operate well below permitted capacities. As such, utility infrastructure and services within the region has sufficient remaining capacity to account for cumulative increases in demand resulting from development within these utility service areas.

Planned and pending development in the City includes multiple mixed-use development, large scale commercial development, and capital improvement projects. These projects are also expected to contribute to additional population increases in the City either through residential development or through generation of additional employment opportunities, thereby increasing demand for the City's utility infrastructure services. Implementation of this Project and other proposed or current projects in Table 3.0-2 within the range of these services would increase the demand on utility services; however, these projects would be required to comply with standards for the provision of adequate utility services set forth in the City's General Plan and Municipal Code, and would be subject to City planning and review processes that would ensure that adequate utility infrastructure. Developers would be required to pay development impact fees to offset any impacts to utility service infrastructure and capacities. As such, cumulatively the Project would not result in any significant or adverse effects on utilities and the provision of these services. Therefore, the cumulative impact of this Project and projects (listed in Table 3.0-2) within the vicinity are considered *less than significant*.

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