4.17 UTILITIES AND SERVICE SYSTEMS

This chapter describes the potential impacts associated with the adoption and implementation of the proposed project related to utilities. Specifically, water supply, wastewater, stormwater, and solid waste are each addressed in separate subsections of this chapter. Utilities associated with energy use, energy providers, and the energy infrastructure are addressed in Chapter 4.6, Energy, of this Draft Environmental Impact Report (EIR). A summary of the relevant regulatory framework and existing conditions is followed by a discussion of project impacts and cumulative impacts.

4.17.1 WATER

4.17.1.1 ENVIRONMENTAL SETTING

Regulatory Framework

Federal Regulations

Federal Safe Drinking Water Act

The Safe Drinking Water Act, the principal federal law intended to ensure safe drinking water to the public, was enacted in 1974 and has been amended several times since then. It authorizes the United States Environmental Protection Agency (USEPA) to set national standards for drinking water, called the National Primary Drinking Water Regulations, to protect against both naturally occurring and human-made contaminants. These standards set enforceable maximum contaminant levels in drinking water and require all water providers in the United States to treat water to remove contaminants, except for private wells serving fewer than 25 people. In California, the State Water Resources Control Board (SWRCB) conducts most enforcement activities. If a water system does not meet standards, it is the water supplier's responsibility to notify its customers.

America's Water Infrastructure Act of 2018

America's Water Infrastructure Act was signed into law on October 23, 2018, and authorizes federal funding for water infrastructure projects; expands water storage capabilities; assists local communities in complying with the Safe Drinking Water Act and Clean Water Act (CWA); reduces flooding risks for rural, western, and coastal communities; and addresses significant water infrastructure needs in tribal communities.[1] Additionally, the act requires that drinking water systems that serve more than 3,300 people develop or update risk assessments and emergency response plans. Risk assessments and emergency response plans must be certified by the USEPA within the deadline specified by America's Water Infrastructure Act.

[1] John Barasso, October 10, 2018, *Congress Passes America's Water Infrastructure Act*, https://www.barrasso.senate.gov/public/index.cfm/2018/10/congress-passes-america-s-water-infrastructure-act.

State Regulations

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Act (Water Code sections 13000 et seq.) passed in California in 1969 and was amended in 2013. It is the basic water quality control law for California. Under this act, the SWRCB has authority over state water rights and water quality policy. The act divided the state into nine regional basins, each under the jurisdiction of a Regional Water Quality Control Board (RWQCB) to oversee water quality on a day-to-day basis at the local and regional levels. RWQCBs engage in various water quality functions in their respective regions and regulate all pollutant or nuisance discharges that may affect either surface water or groundwater. The EIR Study Area is overseen by the San Francisco Bay RWQCB (Region 2).

Urban Water Management Planning Act (Senate Bills 610 and 221)

The California Urban Water Management Planning Act and Section 10620 of the Water Code require that all urban water suppliers in California that provide water to more than 3,000 customers or supply more than 3,000 acre-feet per year (afy)[2] to prepare and adopt an urban water management plan (UWMP) and update it every five years. The act is intended to support efficient use of urban water supplies. The act requires the UWMP to compare water supply and demand over the next 20 years for normal years, single dry years, and multiple dry years and to determine current and potential recycled water uses. Senate Bill (SB) 610 and SB 221 were enacted to 1) ensure better coordination between local water supply and land use decisions and 2) confirm that there is an adequate water supply for new development. Both statutes require city and county decision makers to review detailed information regarding water availability prior to the approval of large development projects. SB 610 requires the preparation of a Water Supply Assessment (WSA) for certain types of projects subject to the California Environmental Quality Act (CEQA) Projects that are required to prepare a WSA are:

- Residential development consisting of more than 500 dwelling units.
- Shopping center or business establishment employing more than 1,000 people or having more than 500,000 square feet of floor area.
- Commercial office building employing more than 1,000 people or having more than 250,000 square feet of floor space.
- Hotel or motel, or both, having more than 500 rooms.
- Industrial, manufacturing, or processing plant, or industrial park employing more than 1,000 people, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area.
- Mixed-use project that includes one or more of the projects specified above.
- Project that requires an amount of water equivalent to, or greater than, the amount of water required by a 500-dwelling-unit project.

SB 221 requires written verification that there is sufficient water supply available for new residential subdivisions that include more than 500 dwelling units. The water supplier must provide written verification that sufficient water is available before construction begins.

[2] One acre-foot is the amount of water required to cover 1 acre of ground (43,560 square feet) to a depth of 1 foot.

Water Conservation Act of 2009 (Senate Bill X7-7)

The Water Conservation Act of 2009 (SB X7-7) requires all water suppliers to increase water use efficiency. The legislation sets an overall goal of reducing per capita water use by 20 percent by 2020, with an interim goal of a 10 percent reduction in per capita water use by 2015. Effective in 2016, urban retail water suppliers who do not meet the water conservation requirements established by this bill are not eligible for State water grants or loans. SB X7-7 requires that urban water retail suppliers determine baseline water use and set reduction targets according to specified standards. It also requires that agricultural water suppliers prepare plans and implement efficient water management practices.

2018 Water Conservation Legislation (Senate Bill 606 and Assembly Bill 1668)

In 2018, the California Legislature enacted two policy bills to establish long-term improvements in water conservation and drought planning to adapt to climate change and longer and more intense droughts in California. The Department of Water Resources (DWR) and the SWRCB will develop new standards for:

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

Urban water suppliers will be required to stay within annual water budgets, based on their standards for their service areas, and to calculate and report their urban water use objectives in an annual water use report. For example, the bills define a daily standard for indoor residential use of 55 gallons per person until 2025, when it decreases to 52.5 gallons and further decreases to 50 gallons by 2030. The legislation also includes changes to UWMP preparation requirements.

Water Conservation in Landscaping Act of 2006

The Water Conservation in Landscaping Act (AB 1881) required the State Department of Water Resources to update the State of California's Model Water Efficient Landscape Ordinance (MWELO) by 2009. Under AB 1881, cities and counties were required to adopt the MWELO by January 31, 2010, or to adopt a different ordinance that is at least as effective in conserving water as the MWELO.

The MWELO was revised in July 2015 via Executive Order B-29-15 to address the ongoing drought and to build resiliency for future droughts. The 2015 revisions to the MWELO increased water efficiency standards for new and retrofitted landscapes through more efficient irrigation systems, greywater usage, on-site stormwater capture, and by limiting the portion of landscapes that can be covered in turf.

The City of San Rafael adopts the Marin Municipal Water District (MMWD) Ordinance (Water Conservation), as specified in Section 14.16.370, Water-Efficient Landscape, of the San Rafael Municipal Code (SRMC). The City defers to MMWD to enforce the ordinance and review the required landscape and irrigation plans for applicable projects. New construction projects with an aggregate landscape area of 500 square feet or greater are subject to the MMWD landscape plan requirements. In addition, rehabilitated landscape projects with an aggregate landscape area of 1,000 square feet or greater are also covered under this ordinance. The MMWD landscape plan review process requires submittal of the maximum

applied water allowance and estimated total water use worksheets as well as grading plans, landscape planting plans, and irrigation design plans.

California Building Code: CALGreen

The California Building Standards Commission adopted the nation's first green building standards in July 2008, the California Green Building Standards Code (California Code of Regulations [CCR], Part 11, Title 24), also known as CALGreen. CALGreen applies to the planning, design, operation, construction, use, and occupancy of every newly constructed building or structure in California, unless otherwise indicated in the Code. CALGreen establishes planning and design standards for sustainable site development, including water conservation measures and requirements that new buildings reduce water consumption by 20 percent below a specified baseline. CALGreen is updated every three years to allow for consideration and possible incorporation of new efficiency technologies and methods. The mandatory provisions of CALGreen became effective January 1, 2011, and the latest version, the 2019 California Green Building Standards Code, became effective on January 1, 2020. The building efficiency standards are enforced through the local building permit process. The City has regularly adopted each new CALGreen update under the SRMC Title 12, Building Regulations, Chapter 12.100, Adopted Codes, and Chapter 12.235, California Green Building Construction Standards Code Amendment.

California Plumbing Code

The latest version of the California Plumbing Code (CCR, Part 5, Title 24) was issued in 2019 and is updated on a three-year cycle. It includes new standards for plumbing fixtures, new provisions for storm drain systems, and design criteria for potable and recycled water systems. The City adopts the California Plumbing Code and latest updates under SRMC Chapter 12.16, California Plumbing Code.

Recycled Water Regulations

Two State agencies have primary responsibility for regulating the application and use of recycled water: the California Department of Public Health and the SWRCB. Planning and implementing water recycling projects entail numerous interactions with these regulatory agencies prior to project approval. The California Department of Public Health establishes the statewide effluent bacteriological and treatment reliability standards for recycled water uses in CCR, Title 22, Division 4, Environmental Health. Title 22 establishes standards for each general type of use based on the potential for human contact with recycled water. The SWRCB is responsible for establishing and enforcing requirements for the application and use of recycled water within California. Permits are required from the SWRCB for a water recycling operation. As part of the permit application process, applicants are required to demonstrate that the proposed recycled water operation will not exceed the ground and surface water quality objectives in the basin management plan and that the operation is compliant with Title 22 requirements.[3]

[3] Further information is available at the following link: http://www.waterboards.ca.gov/water_issues/programs/grants_loans/water_recycling/statutes_regulations.shtml, accessed on March 11, 2019.

California Health and Safety Code

A portion of the California Health and Safety Code is dedicated to water issues, including testing and maintenance of backflow prevention devices, coloring of pipes carrying recycled water, and programs addressing cross-connection control by water users.

California Water Code

The California Water Code contains many statutes surrounding various water-related issues, including water shortage emergencies, on-site wastewater treatment systems, potable water reuse, greywater systems, appropriation of water, water rights, and the establishment of California water districts.

Mandatory Water Conservation

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

Regional Regulations

2015 MMWD Urban Water Management Plan

In compliance with the Urban Water Management Planning Act and the Water Conservation Act of 2009, the MMWD adopted its current 2015 UWMP in June 2016. All urban water suppliers are required to prepare, adopt, and file a UWMP with DWR every five years. The 2015 UWMP describes water demands, water supply sources, and supply reliability for its service area in five-year increments for average years, single dry years, and multiple dry years. The UWMP also provides water supply contingency planning in case of shortage emergencies, demand management measures to increase water use efficiency, and current and planned water conservation efforts.

Marin Municipal Water District Water Resources Plan

The MMWD prepared the 2040 *Water Resources Plan* to evaluate resiliency and the ability to meet future water demands, considering both chronic events (such as prolonged drought and climate change impacts on water supply) and acute events (such as earthquakes, water quality events, wildfires, etc.). The plan identifies 40 resiliency options to meet demands in times of potential supply shortages caused by variable hydrological conditions or system disruption.[4]

Marin Municipal Water District Code

The MMWD Code includes various regulations to manage water infrastructure and services within the EIR Study Area. Most provisions related to water services are found in Title 11, Water Service Rules and Regulations, and Title 13, Water Service Conditions and Water Conservation Measures, as follows:

- Title 11, Water Service Rules and Regulations. This section details the adopted rules and regulations that establish uniform practices governing water service and to define the obligations of the MMWD to consumers and the obligations of consumers to the MMWD. Title 11 includes requirements governing the application for water service, installation of new service connections, cross-connections, water main extensions, and fire taps. Title 11 also includes service charges and connection fees. Consumers are advised to obtain information from MMWD on the availability of water, water facilities to provide service, pressure conditions, and other pertinent data before undertaking any development or construction.
- Title 13, Chapter 13.02, Water Conservation and Dry Year Water Use Reduction Program. This chapter provides a water conservation plan to minimize the effect of a water shortage on MMWD's consumers and to adopt provisions that will significantly reduce the consumption of water during an extended dry weather period (drought).
- Title 13, Chapter 13.03, Water Budgets and Related Conservation Measures. This chapter specifies the terms and conditions under which water budgets will be required and when consumers will be required to retrofit water fixtures with low flow or ultra-low flow fixtures to reduce the per capita consumption of water by MMWD's customers.

Local Regulations

San Rafael General Plan 2020

The City of San Rafael 2020 General Plan goals, policies, and programs that are relevant to water infrastructure and services are primarily in the Land Use, Infrastructure, and Air and Water Quality Elements. As part of the proposed project, some existing General Plan policies would be amended or substantially changed, and new policies would be added. A comprehensive list of policy changes is provided in Appendix B, Proposed General Plan Goals, Policies, and Programs, of this Draft EIR. Applicable

[4] Marin Municipal Water District, March 2017. *Water Resources Plan 2040*, https://www.marinwater.org/DocumentCenter/View/5095/Final-Water-Resources-Plan-2040?bidId=.

goals, policies, and programs are identified and assessed for their effectiveness and potential to result in an adverse physical impact later in this chapter under Section 4.17.1.3, Impact Discussion.

San Rafael Municipal Code

The SRMC includes various directives to ensure the efficient use of water in San Rafael. The SRMC is organized by title, chapter, and section. Most provisions related to water supply and conservation are found in Title 9, Health and Sanitation, Title 12, Building Regulations, Title 14, Zoning, Title 15, Subdivisions, and Title 18, Protection of Flood Hazard Areas, as follows:

- **Chapter 9.24, Well Standards.** The purpose of this chapter is to protect groundwater and surface water by establishing standards regulating the construction, placement, reconstruction and destruction of water wells, water supply sources, test holes, cathodic protection wells and monitoring wells. In addition, Section 9.24.070, Prohibition, states that no permit shall be issued for a well or water well on a parcel of land serving more than one lot if the parcel is located within the service area of a public water district or private water company.
- **Chapter 12.235, California Green Building Construction Standards Code Amendments.** Section 12.235.020, Amendments, describes the deletions and amendments to the adopted 2019 CALGreen Building Code Standards as described in Section 12.100.010, Adopted Codes.
- **Chapter 14.16, Site and Use Regulations.** Section 14.16.370, Water-Efficient Landscape, includes the water-efficient landscape ordinance. The purpose of this section is to adopt by reference the MMWD Ordinance (Water Conservation), as adopted and periodically amended. For projects that are subject to the water-efficient landscape requirements, the City defers to MMWD to administer the provisions of this chapter, which include:
  - The application and monitoring of a "maximum applied water allowance," that is established for applicable projects.
  - The review of required landscape and irrigation plans, specifications and supportive documents prepared for applicable projects for compliance with water-efficient landscape restrictions, including limitations on the type and amount of landscape materials and plant species.
  - The review, inspection and approval of landscape and irrigation that is installed for applicable projects to ensure compliance with the approved landscape and irrigation plans and specifications.
  - The post-installation monitoring of water usage for irrigation by applicable projects.
- **Chapter 15.06, Utilities and Services.** Section 15.06.020, Utilities and Services, states no subdivision of land into two or more lots or parcels for the purpose of development shall be approved by the City unless it is determined that domestic water service for all new lots or parcels shall be provided by the MMWD.
- **Chapter 18.50, Provisions for Flood Hazard Reduction.** Section 18.50.020, Standards for Utilities, states that all new and replacement water supply and sanitary sewage systems within the 100-year floodplain shall be designed to minimize or eliminate (1) the infiltration of flood waters into the systems and (2) the discharge from the systems into flood waters. Also, on-site waste disposal systems shall be located to avoid impairment or contamination that could occur during flooding.

Climate Change Action Plan 2030

The San Rafael Climate Change Action Plan (CCAP) 2030 was issued in April 2019 and includes a variety of strategies to reduce greenhouse gas emissions from both existing and future development in San Rafael.[5] The CCAP focuses on mitigation efforts such as renewable energy, low-carbon transportation, composting, and water conservation. San Rafael has responded to the need to conserve water by reducing its per capita water use by about 28 percent in the last ten years. Residents and businesses are installing low-flow fixtures (showerheads, faucets, and toilets); planting native, drought-tolerant species; and replacing lawns with low-water-use gardens. The CCAP has the following goals for community and municipal water use:

- WC-C1: Community Water Use. Reduce indoor and outdoor water use in residential and commercial buildings and landscaping.
  - Work with MMWD and other organizations to promote water conservation programs and incentives.
  - Educate residents and businesses about local and State laws requiring retrofit of noncompliant plumbing fixtures during remodeling and at resale.
  - Ensure all projects requiring building permits, plan check, or design review comply with State and MMWD regulations.
  - Encourage the installation of greywater and rainwater collection systems and the use of recycled water where available through ordinance or engagement campaigns.
- WC-M1: Municipal Water Use. Reduce indoor and outdoor water use in municipal facilities and operations.
  - Replace high water use plants and inefficient irrigation systems with water-efficient landscaping.
  - Investigate synthetic turf that uses organic infill for ball fields and parks to reduce water, herbicide use, and maintenance costs, while increasing field use throughout the year.
  - Replace inefficient plumbing fixtures with high-efficiency fixtures.
  - Use recycled water as available and practicable.

Existing Conditions

Water Supply Sources

The MMWD serves roughly 190,000 customers within approximately 147 square miles along the eastern corridor of Marin County from the Golden Gate Bridge northward. MMWD serves ten incorporated cities and towns, including San Rafael, Mill Valley, Fairfax, San Anselmo, Ross, Larkspur, Corte Madera, Tiburon, Belvedere, and Sausalito. Approximately 27 percent of MMWD's customer meters are in San Rafael.[6] The MMWD's water supplies presently come from a combination of local surface water supplies, imported water from the Sonoma County Water Agency (SCWA), and recycled water.[7]

[5] City of San Rafael, 2019. *Climate Change Action Plan 2030*. Dated April 23, 2019.

[6] Marin Municipal Water District, May 31, 2019, Email correspondence with Lucy Croy, Senior Engineer.

[7] Marin Municipal Water District, June 2016, *Urban Water Management Plan, 2015 Update*, http://marinwater.org/DocumentCenter/View/3828/MMWD-2015-UWMP-Final---Report-Only?bidId=.

Groundwater

There are two groundwater basins identified in DWR Bulletin 118 that are at least partially within the EIR Study Area: San Rafael Valley and Novato Valley Basins. However, existing groundwater resources in the EIR Study Area are very limited due to a lack of substantial underlying groundwater aquifers and poor groundwater quality. Because of these limitations, the MMWD does not use groundwater as a supply source. In addition, SRMC Section 9.24.070, Prohibition, prohibits the use of well water for more than one residential lot if the well is in the MMWD's service area.

The DWR's Sustainable Groundwater Management program uses a scoring system of eight components to evaluate the need for more sustainable groundwater policies and programs in a basin. The scoring components include the population in the basin; the rate of current and projected growth of the populations in the basin; the number of public supply wells that draw from the basin; the total number of wells that draw from the basin; the irrigated acreage within the basin; the degree to which persons in the basin rely on groundwater as their primary source of water; any documented impacts on groundwater in the basin; and any other information determined to be relevant by DWR.[8] Based on this prioritization method, the two groundwater basins in the EIR Study Area are categorized as very low priority basins.[9]

Groundwater use within MMWD's service area is limited to small, domestic private groundwater wells. The MMWD has studied the potential for municipal groundwater use since the 1970s, and the results of these studies have shown that the potential for municipal groundwater use within the boundaries of the MMWD service area is very limited due to limited production capabilities, water quality constraints, and potential water rights issues. As a result of these studies, groundwater is not currently used or planned to be used as a municipal water supply source by MMWD, though private groundwater wells are used in the EIR Study Area.[10]

Surface Water

The MMWD's primary water supply is local surface water from a network of seven local, rain-fed reservoirs. Five of the seven MMWD reservoirs (Alpine, Bon Tempe, Kent, Lagunitas, and Phoenix Lake) are on the north slope of Mt. Tamalpais. The remaining two MMWD reservoirs (Nicasio and Soulajule) are outside the MMWD's service area in western Marin County. The total reservoir storage operated by the MMWD is 25.9 billion gallons (79,566 afy).[11] Characteristics of the MMWD's reservoir system are summarized in Table 4.17-1.

[8] Department of Water Resources, 2018. *2018 SGMA Basin Prioritization Process and Results*. Dated May 2018.

[9] Department of Water Resources, 2020. *SGMA Basin Prioritization Dashboard*. Accessed at https://gis.water.ca.gov/app/bp-dashboard/final/ on July 29, 2020.

[10] Marin Municipal Water District, June 2016, *Urban Water Management Plan, 2015 Update*, http://marinwater.org/DocumentCenter/View/3828/MMWD-2015-UWMP-Final---Report-Only?bidId=.

[11] Marin Municipal Water District, June 2016, *Urban Water Management Plan, 2015 Update*, http://marinwater.org/DocumentCenter/View/3828/MMWD-2015-UWMP-Final---Report-Only?bidId=.

TABLE 4.17-1 MARIN MUNICIPAL WATER DISTRICT SURFACE WATER RESERVOIR SYSTEM

Reservoir Name	Year Constructed	Storage Capacity (Acre-Feet)
Lake Lagunitas	1873	350
Phoenix Lake	1905	411
Bon Tempe Reservoir	1948	4,017
Alpine Lake	1918, 1924, and 1941	3,069; 4,600; and 8,891
Kent Lake	1953 and 1982	16,050 and 32,895
Nicasio Reservoir	1960	29,000
Soulajule Reservoir	1980	10,572
	Total Existing Reservoir Storage:	**79,566**

Notes: One acre-foot is the amount of water required to cover 1 acre of ground (43,560 square feet) to a depth of 1 foot.
Source: Marin Municipal Water District, 2016, *Urban Water Management Plan, 2015 Update*.

Surface water from Kent Lake, Bon Tempe Lake, Alpine Lake, Phoenix Lake, and Lagunitas Lake is aerated seasonally to maintain adequate dissolved oxygen concentrations. From the reservoirs, the water is conveyed to either the Bon Tempe Treatment Plant near Ross or the San Geronimo Treatment Plant in Woodacre.[12] According to the 2015 UWMP, MMWD estimates the reasonable available amount of its surface water sources is 141,970 afy. The reasonably available volume is a historical average of water available to the MMWD based on beginning year reservoir storage, estimated inflow runoff, and imported water from SCWA.[13]

Purchased Water

Since 1975, the MMWD has contracted with SCWA for a supplemental supply of water, primarily from the Russian River. The agreement for water supply allows the MMWD to take deliveries of up to 14,300 afy. Projections are consistent with SCWA's UWMP. The agreement will remain in force through June 30, 2025, and includes a renewal provision that will extend the agreement through June 30, 2040. In addition to contractual delivery limits, Russian River water deliveries to the MMWD are subject to available pipeline capacity in facilities owned by SCWA and the North Marin Water District. Approximately 7,000 afy were delivered to MMWD in 2015, and this amount is assumed to increase to 10,000 afy in 2040.[14] Water imported from SCWA is naturally filtered in the deep sand and gravel below the riverbed and requires no further clarification. This water enters the MMWD's system at the Ignacio Water Quality and Pumping Station, where water quality is monitored continually and adjusted as needed.[15]

[12] Marin Municipal Water District, June 2016, *Urban Water Management Plan, 2015 Update*, http://marinwater.org/DocumentCenter/View/3828/MMWD-2015-UWMP-Final---Report-Only?bidId=.

[13] Marin Municipal Water District, May 31, 2019, Email correspondence with Lucy Croy, Senior Engineer.

[14] Marin Municipal Water District, June 2016*, Urban Water Management Plan, 2015 Update,* http://marinwater.org/DocumentCenter/View/3828/MMWD-2015-UWMP-Final---Report-Only?bidId=.

[15] Marin Municipal Water District, June 2016, *Urban Water Management Plan, 2015 Update*, http://marinwater.org/DocumentCenter/View/3828/MMWD-2015-UWMP-Final---Report-Only?bidId=.

Water Supply Infrastructure

The MMWD's water supply pipelines range from 0.75-inch pipes connecting customers' water meters to a 42-inch transmission main. The pipes are constructed of cast iron, polyvinyl chloride, and asbestos cement, depending on the date and location of installation. MMWD implements an ongoing Pipeline Replacement Program to replace pipelines that have reached the end of their useful life. Water distribution pipelines within the EIR Study Area range from 1- to 30-inch-diameter pipes.

As described in Table 4.17-2, the MMWD's potable water distribution system includes approximately 886 miles of water mains, 94 pump stations, and 127 treated water storage tanks with a total storage capacity of 81.9 million gallons (mg). To treat the MMWD water supply, the MMWD operates three water treatment plants, including the Bon Tempe Treatment Plant, the San Geronimo Treatment Plant, and the Ignacio Treatment Facility.[16] The San Geronimo and Bon Tempe Plants, with maximum capacities of 35 million gallons per day (mgd) and 20 mgd, respectively, treat water from the MMWD reservoirs. The Ignacio Pump Station, with a maximum capacity of 16 mgd, performs chemical treatment in a "polishing" operation on water received from SCWA via the North Marin Intertie Pipeline.[17] Together, these facilities have a combined design capacity of 71 mgd. Although maximum treatment rates have reached 58 mgd, the average daily maximum rate is approximately 25 mgd. In 2015, the total production of the three plants averaged 20.4 mgd.[18] The MMWD's potable water distribution system is shown on Figure 4.17-1.

TABLE 4.17-2 SUMMARY OF POTABLE WATER FACILITIES

Facility	Value
Miles of Pipeline	886
Number of storage tanks	127
Total tank storage capacity	81.9 mg
Number of pump stations	94
Number of potable water treatment plants	3
Maximum daily treatment capacity (designed)	71 mgd
Maximum daily treatment capacity (observed)	58 mgd
Average daily treatment plant production	20 mgd

Notes: mg = million gallons, mgd= million gallons per day
Source: Marin Municipal Water District, 2016, *Urban Water Management Plan*, 2015 Update.

[16] Marin Municipal Water District, June 2016 *Urban Water Management Plan, 2015 Update*, http://marinwater.org/DocumentCenter/View/3828/MMWD-2015-UWMP-Final---Report-Only?bidId=.

[17] Marin Municipal Water District, June 20, 2017. Final Proposed Fiscal Year 2017/18 and 2018/19 Operating and Capital Budget. https://www.marinwater.org/DocumentCenter/View/4723/Final-Proposed-Operating-and-Capital-Budget-for-Fiscal-Years-2017-18-and-2018-19?bidId=.

[18] Marin Municipal Water District, June 2016. Urban Water Management Plan, 2015 Update, http://marinwater.org/DocumentCenter/View/3828/MMWD-2015-UWMP-Final---Report-Only?bidId=.

The MMWD UWMP does not specify the water demand for each city or town within its service area. However, correspondence with MMWD engineers indicates that approximately 27 percent of the MMWD customer meters are in San Rafael.[19]

Recycled Water

MMWD's recycled water system consists of 27 miles of pipeline, three storage tanks with a total capacity of 1.9 mg, and four pump stations. MMWD delivers about 520 afy through 342 service connections in north San Rafael. The MMWD produces recycled water by treating secondary effluent from the Las Gallinas Valley Sanitary District (LGVSD).[20] The Las Gallinas Reclamation Plant, located in San Rafael, has a current maximum capacity of 2 mgd. The Las Gallinas Reclamation Plant performs tertiary treatment of wastewater effluent and produces recycled water used for irrigation, toilet flushing, and other nondrinking purposes.[21,22] The locations of the recycled water pipelines are shown on Figure 4-17.1, including the northern portion of San Rafael and the Terra Linda and Santa Venetia communities. The Downtown Precise Plan Area currently does not have a recycled water distribution system. There are five wastewater treatment plants (WWTP) within the EIR Study Area that collectively treat roughly 17,000 afy of wastewater. Of this amount, just over 2,000 afy are recycled for nonpotable purposes such as landscape irrigation.[23]

Marin Municipal Water District Water Supply and Demand

According to the 2015 MMWD UWMP, single- and multi-family residential homes make up 75 percent of MMWD's total water demand for its service area. Commercial, institutional, and landscape uses represent 13 percent, 6 percent, and 6 percent of the remaining water demand, respectively. The service area has a relatively low growth rate. The 2040 population is projected to be approximately 210,000, which is an increase from 190,000 in 2015. The Association of Bay Area Governments projects a continued slow growth rate of about 0.46 percent per year for the 25-year period. The 2015 demand for potable and recycled water in the MMWD service area was 38,866 afy, which is projected to increase to approximately 42,109 afy by 2040. Water losses and passive conservation measures are included in the water demand. Passive conservative measures are those that do not depend on financial assistance or educational programs, but result from the natural replacement of existing plumbing fixtures with water-efficient models and the installation of water-efficient fixtures in new buildings and retrofits, as required under the CALGreen standards.

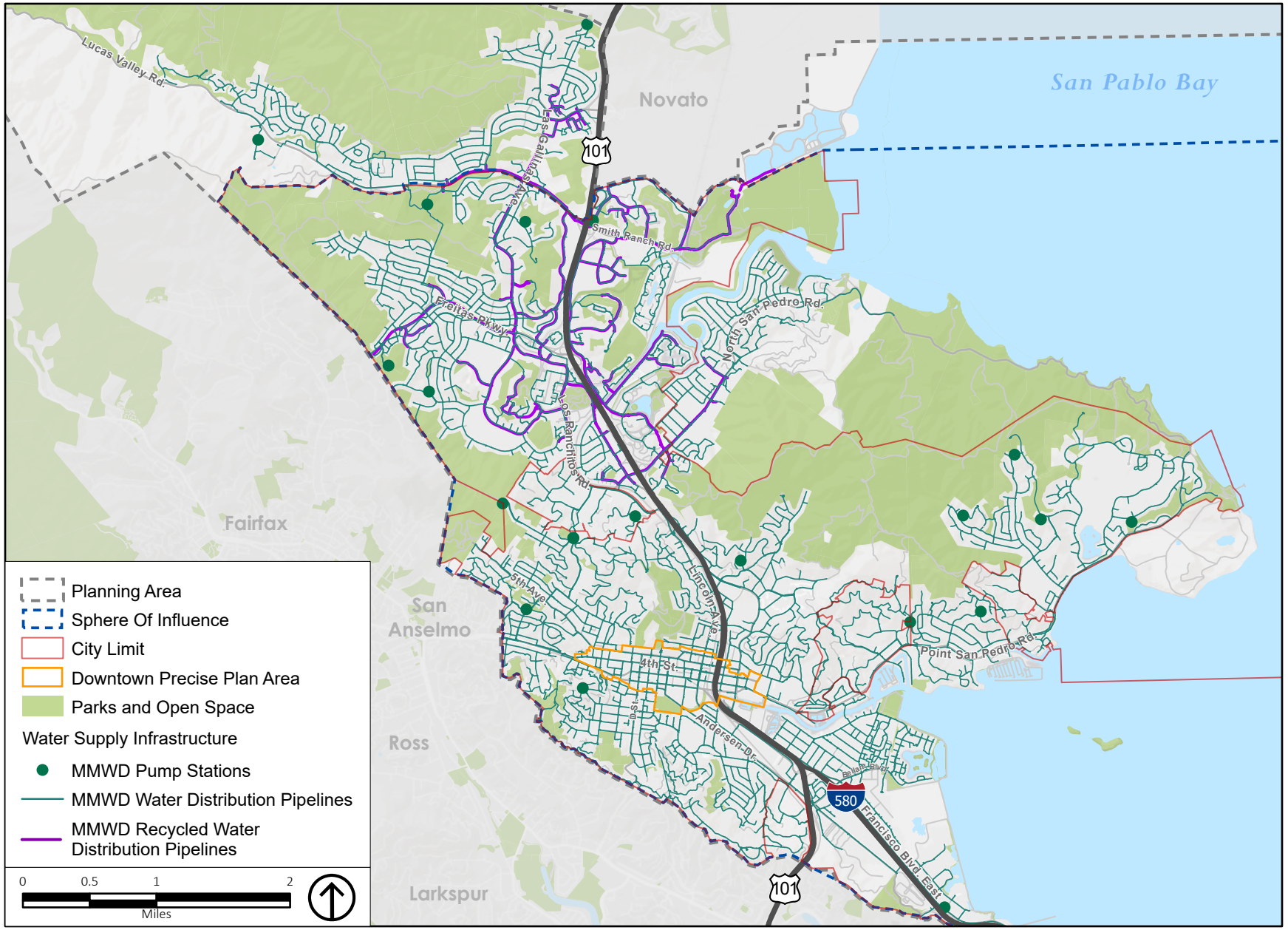
[19] Marin Municipal Water District, 2019. Email correspondence between Lucy Croy, P.E., Senior Engineering – Planning, MMWD and Steve Bush, P.E., Senior Engineer, PlaceWorks dated May 31, 2019.

[20] Marin Municipal Water District, June 2016 *Urban Water Management Plan, 2015 Update*, http://marinwater.org/DocumentCenter/View/3828/MMWD-2015-UWMP-Final---Report-Only?bidId=.

[21] Marin Municipal Water District, June 20, 2017, *Final Proposed Fiscal Year 2017/18 and 2018/19 Operating and Capital Budget.* https://www.marinwater.org/DocumentCenter/View/4723/Final-Proposed-Operating-and-Capital-Budget-for-Fiscal-Years-2017-18-and-2018-19?bidId=.

[22] Marin Municipal Water District, *Recycled Water*, https://www.marinwater.org/326/Recycled-Water, accessed on March 15, 2019.

[23] Marin Municipal Water District, June 20, 2017, *Final Proposed Fiscal Year 2017/18 and 2018/19 Operating and Capital Budget*. https://www.marinwater.org/DocumentCenter/View/4723/Final-Proposed-Operating-and-Capital-Budget-for-Fiscal-Years-2017-18-and-2018-19?bidId=.



Source: ESRI, 2017; County of Marin, 2009; City of San Rafael, 2019; PlaceWorks, 2019.

Figure 4.17-1

Marin Municipal Water District Supply Infrastructure

Table 4.17-3 provides the projected water demand and water supply comparisons for the MMWD service area for normal, single-dry, and multiple-dry years.

TABLE 4.17-3 PROJECTED NORMAL, DRY, AND MULTIPLE-DRY SUPPLY AND DEMAND COMPARISONS (AFY)

	2020	2025	2030	2035	2040
Normal Year					
Supply Totals	151,254	152,714	152,794	152,794	152,794
Demand Totals	41,940	41,797	41,685	41,835	42,109
Difference	*111,019*	*110,917*	*111,109*	*110,959*	*110,685*
Dry Year					
Supply Totals	60,442	60,442	60,442	60,442	60,442
Demand Totals	41,940	41,797	41,685	41,835	42,109
Difference	*18,502*	*18,645*	*18,757*	*18,607*	*18,333*
Multiple Dry Year [a]					
First Year					
Supply Totals	123,407	123,407	123,407	123,407	123,407
Demand Totals	41,940	41,797	41,685	41,835	42,109
Difference	*81,467*	*81,610*	*81,722*	*81,572*	*81,298*
Second Year					
Supply Totals	76,300	76,300	76,300	76,300	76,300
Demand Totals	41,940	41,797	41,685	41,835	42,109
Difference	*34,360*	*34,503*	*34,615*	*34,465*	*34,191*
Third Year					
Supply Totals	60,442	60,442	60,442	60,442	60,442
Demand Totals	41,940	41,797	41,685	41,835	42,109
Difference	*18,502*	*18,645*	*18,757*	*18,607*	*18,333*

[an] Estimated multiple-dry-year supplies reflect additional storage resulting from raising Kent Reservoir in 1982 and renegotiating SCWA agreements.
Source: Marin Municipal Water District, 2016, Urban Water Management Plan, 2015 Update.

The projections in Table 4.17-3 are conservative because they do not account for future active conservation measures that result from MMWD's conservation program. This approach, while conservative, safeguards against potential future shortages by projecting the highest level of demand. Therefore, any potential shortages at this demand could be alleviated by active conservation measures.[24]

SB X7-7 requires urban water suppliers to report in the UWMP a baseline water use calculation and specific water use targets to meet the 2020 goal of 20 percent water use reduction. All water suppliers are required to submit the SB X7-7 Verification Form to DWR, which is typically an appendix of the UWMP. The MMWD's 2020 water use target is 124 gallons per capita per day (gpcd), and its interim (2015) target

[24] Marin Municipal Water District, June 2016. Urban Water Management Plan, 2015 Update, http://marinwater.org/DocumentCenter/View/3828/MMWD-2015-UWMP-Final---Report-Only?bidId=.

is 137 gpcd. The MMWD is currently meeting both its interim and 2020 water use targets, as the daily per capita water use in 2015 was 110 gpcd, well below both target levels.[25]

Capital Improvement Program

According to the MMWD, the current water distribution system will be able to handle future growth and development throughout Marin County, including the EIR Study Area.[26] However, MMWD has an ongoing capital improvement program (CIP) to replace approximately eight miles of pipelines that have reached the end of their useful life. In the next five years, 4,000 feet of water pipelines beneath Third Street between Irwin Street and Fourth Street are planned for replacement in the Downtown Precise Plan Area. There are also plans to replace the Hind #1 and Hind #2 redwood storage tanks and seismically retrofit the Skyview Terrace and Loch Lomond steel tanks. The Fire Flow Improvement Program also plans to replace 52 miles of fire flow piping, including the pipeline on Fifth Avenue between A street and Grand Avenue, which is mostly within the Downtown Precise Plan Area. Additional water pipeline replacement is planned on Lochinvar Road and Knight Drive in the EIR Study Area.[27]

4.17.1.2 STANDARDS OF SIGNIFICANCE

Pursuant to Appendix G, Environmental Checklist Form, of the CEQA Guidelines, implementation of the proposed project would result in significant water supply impacts if it would:

1. Require or result in the relocation or construction of new or expanded water 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. Result in significant cumulative impacts related to water supply and facilities.

4.17.1.3 IMPACT DISCUSSION

UTIL-1	**Implementation of the proposed project could require or result in the construction of new water facilities or expansion of existing facilities, the construction of which would cause significant environmental effects.**

General Plan 2040

Implementation of the proposed project would have a significant impact if it would result in the construction of new water treatment facilities (plants) or the expansion of existing facilities that would

[25] Marin Municipal Water District, June 2016. *Urban Water Management Plan, 2015 Update*, http://marinwater.org/DocumentCenter/View/3828/MMWD-2015-UWMP-Final---Report-Only?bidId=.

[26] Marin Municipal Water District, 2019. Correspondence between Lucy Croy, P.E., Senior Engineer – Planning, MMWD, and Steve Bush, P.E., Senior Engineer, PlaceWorks, dated May 31, 2019.

[27] Marin Municipal Water District. June 5 and 10, 2019. Email correspondences with Lucy Croy, Senior Engineer.

have a significant effect on the environment. Under the proposed project, water demand would increase throughout the EIR Study Area due to increases in population.

A general plan is not considered a project under SB 610 that requires preparation of a WSA. Instead, a general plan relies on information prepared by the water supplier in the UWMP to demonstrate that the proposed population increase would not create a water demand that would exceed the supply in normal, dry, and multiple dry years, as discussed in the following paragraphs. Future projects under the General Plan 2040 that meet the criteria under California Water Code Section 10912 would be required to prepare a WSA.

The 2015 MMWD UWMP does not enumerate the water demands for individual cities or towns in its service area. However, the UWMP states that in 2015 the water demand rate was 110 gpcd. This number was obtained by adding together all of the land uses within the service area (e.g., single-family, multifamily, commercial, industrial, institutional and landscape), as well as water losses, fire flows, and water sold to the golf courses and dividing by the total population served. The water demand rate of 110 gpcd is also used in the *City of San Rafael Community Greenhouse Gas Emissions Inventory for the Year 2018*.[28] To determine current and future water demands for the EIR Study Area, which includes the Downtown Precise Plan Area, the water demand rate was multiplied by the proposed population increase in the EIR Study Area and the Downtown Precise Plan Area.[29] These numbers are conservative, because they do not account for future passive and active water conservation efforts, which will reduce the per capita water demand over time. Table 4.17-4 shows results by the entire EIR Study Area and the water demand for just the Downtown Precise Plan Area.

TABLE 4.17-4 EXISTING AND BUILDOUT WATER DEMAND WITHIN EIR STUDY AREA

Area	Existing Population	Population at Buildout	Population Increase at Buildout	Water Demand Rate (gpcd)	Increase in Water Demand at Buildout (gal/day)	Increase in Water Demand at Buildout (afy)
Total EIR Study Area	75,751	84,661	8,910	110	980,100	1,098
Downtown Precise Plan Area	2,315	5,885	3,570	110	392,700	440

Source: Marin Municipal Water District, 2016. *2015 Urban Water Management Plan*.

Water demand in the EIR Study Area is anticipated to increase by 1,098 afy by 2040. The anticipated increase in water demand in the Downtown Precise Plan Area is estimated to be 440 afy, which is approximately 40 percent of the projected EIR Study Area increase in water demand. As shown previously in Table 4.17-3, in the year 2040, MMWD will have a residual water supply capacity of 110,685 afy for a normal year and 18,333 afy at the end of three multiple dry years. Therefore, MMWD would have sufficient water supply to meet the demand of potential future buildout in the remainder of the EIR Study Area and buildout in the Downtown Precise Plan Area.

[28] Marin Climate & Energy Partnership, 2020. *City of San Rafael Community Greenhouse Gas Emissions Inventory for the Year 2018.* Dated April 2020.

[29] Marin Climate & Energy Partnership, 2020. *City of San Rafael Community Greenhouse Gas Emissions Inventory for the Year 2018.* Dated April 2020.

The three MMWD water treatment plants (Bon Tempe Treatment Plant, San Geronimo Treatment Plant, and Ignacio Treatment Facility) have a total capacity of 71 mgd, which equates to 79,530 afy. This substantially exceeds the water demand for the MMWD service area of 42,109 afy in 2040. Therefore, no new water facilities or expansion of existing facilities would be required.

New development or redevelopment within the EIR Study Area would be required to implement the water-efficient requirements for new construction in accordance with the SRMC, CALGreen, and the California Plumbing Code. In addition, all new landscapes associated with new development would be required to comply with the water-efficient-landscaping measures specified in the MMWD's Water Conservation Ordinance and the SRMC. Water infrastructure improvements must be designed, constructed, and operated in accordance with the applicable regulations in the MMWD Code. Service charges and connection fees will assist in funding MMWD's CIP, which includes treatment plant seismic and reliability upgrades, ongoing pipeline replacement, replacement and upgrades of aging pump stations, storage tank replacement and upgrades, and improvements to fire flow. These measures ensure that MMWD would have adequate capacity for the proposed increases in water flows within the EIR Study Area with implementation of the proposed General Plan 2040.

In addition, the proposed Community Design and Preservation (CDP), Conservation and Climate Change (C), and Community Services and Infrastructure (CSI) Elements contain goals, policies, and programs that require local planning and development decisions to consider impacts to water supply. The following General Plan goals, policies, and programs would serve to minimize potential adverse impacts to water supply:

Goal CDP-3: Attractive Streets and Public Spaces. Create streets, public spaces, and civic buildings that add value to private property, promote environmental sustainability, and contribute to San Rafael's visual quality and identity.

- Policy CDP-3.4, Landscape Maintenance, requires that the City prioritize landscape maintenance along the City's most heavily traveled roadways and gateways and that operational practices support the City's commitment to water conservation.
  - Program CDP-3.4A: Landscape Stewardship. Encourage partnerships with neighborhoods and civic organizations to maintain and improve the City's landscaped areas.

Goal C-1: Supporting Our Natural Communities. Protect, restore, and enhance San Rafael's environment and natural communities.

- Policy C-1.15, Landscaping with Appropriate Naturalized Plant Species, encourages landscaping with native and compatible non-native plant species that are appropriate for the dry summer climate of the Bay Area, with an emphasis on species determined to be drought-resistant.
  - Program C-1.15A: Education on Desirable Plant Species. Leverage the educational and website materials on "water-wise" plants developed by the Marin Municipal Water District and fire-prone plants from FireSafe Marin as resources for San Rafael property owners. The City should also create Resilient Landscape Templates (RLTs) that offer suggestions for homeowners to achieve beautiful, fire-resistant, drought tolerant landscaping.

Goal C-3: Clean Water. Improve water quality by reducing pollution from urban runoff and other sources, restoring creeks and natural hydrologic features, and conserving water resources.

- Policy C-3.8, Water Conservation, encourages water conservation and increased use of recycled water in businesses, homes, and institutions and requires that local development and building standards include the efficient use of water.
  - Program C-3.8A: Water Conservation Programs. Work with Marin Municipal Water District and other organizations to promote water conservation programs and incentives and ensure compliance with state and MMWD regulations, including the provisions of the Urban Water Management Plan (see Policy CSI-4.8 for additional guidance).
  - Program C-3.8B: Public Education. Continue and expand programs to educate residents and businesses about the benefits of water conservation and requirements for plumbing fixtures and landscaping.
  - Program C-3.8C: Reclaimed Water Use. Support the extension of recycled water distribution infrastructure by Las Gallinas Valley Sanitary and MMWD, along with programs to make the use of recycled water more feasible (see Policy CSI-4.12 for additional guidance).
  - Program C-3.8D: Graywater and Rainwater. Encourage the installation of graywater and rainwater collection systems. Explore revisions to building codes that would facilitate such projects where obstacles currently exist.
  - Program C-3.8E: Reducing Municipal Water Use. Reduce water use for municipal operations through water-efficient landscaping, maintenance of irrigation equipment, replacement of inefficient plumbing fixtures, and using recycled water where available and practical.
- Policy C-3.9, Water-Efficient Landscaping, encourages the use of vegetation and water-efficient landscaping that is naturalized to the San Francisco Bay region and compatible with fire-prevention and climate resilience goals.
  - Program C-3.9A: Demonstration Gardens. Maintain the Falkirk demonstration gardens illustrating xeriscaping principles and drought-tolerant plant materials.

Goal CSI-4: Reliable, Efficiently Managed Infrastructure. Support reliable, cost-effective, well-maintained, safe and resilient infrastructure and utility services.

- Policy CSI-4.1, Capital Investment, requires the City to provide for ongoing, preventative maintenance of infrastructure and timely replacement, repair, and upgrading of City equipment.
  - Program CSI-4.1A: Capital Improvement Programming. Maintain and regularly update a multi-year Capital Improvement Plan (CIP) covering City owned and operated infrastructure and public facilities. Seek the input of other local service providers (MMWD, LGVSD, etc.) when preparing the City's CIP and encourage these agencies to seek City input as they prepare their own CIPs.
  - Program CSI-4.1B: Funding for Maintenance and Capital Costs. Consider ways to improve the reliability of maintenance funding, such as establishing a reserve fund or voter-approved parcel taxes and special assessments. Identify potential funding sources for unmet and anticipated future capital project needs, such as grants, bond measures, and impact fees.
  - Program CSI-4.1C: Community-Supported Services. Consider community-supported (e.g., cooperative) services as an alternative to bring fundamental service upgrades to neighborhoods and managing capital costs.

- Policy CSI-4.2: Adequacy of City Infrastructure and Services, requires applicants to demonstrate that their projects can be adequately served by the City's infrastructure as part of the development review process. All new infrastructure shall be planned and designed to meet the engineering standards of the City and various local service and utility providers.
  - Program CSI-4.2A: Long-Term Planning. Continue to use the CIP to analyze and respond to local capital facility needs.
  - Program CSI-4.2B: Engineering Standards. Require new development to comply with the subdivision standards in the San Rafael Municipal Code, as well as relevant Marin County and utility district engineering standards. Where feasible, encourage development to reach beyond current standards and collaborate with the community to innovate and define new best practices.
  - Program CSI-4.2C: Impact Fees. Continue to collect impact fees and use other funding mechanisms to ensure that new development pays its fair share of providing/ upgrading services associated with that development.
- Policy CSI-4.8, Potable Water Supply and Delivery, requires that the City work with MMWD to meet projected water demand, encourage water conservation, and ensure the reliability and safety of the water supply and distribution system.
  - Program CSI-4.8A: Urban Water Management Plan. Support MMWD's efforts to regularly update and implement an Urban Water Management Plan.
  - Program CSI-4.8B: Water Supplies. Monitor efforts by the MMWD to implement conservation standards and expand the local water supply to meet long-term needs and potential future drought conditions. If desalination facilities are proposed along the bayfront in the future, ensure adequate review of environmental, design, and economic issues.
  - Program CSI-4.8C: Water Pressure and Storage. Work with MMWD to ensure that water pressure and storage remains adequate for fire-fighting, and to implement standards for new development that ensure adequate water flow.
- Policy CSI-4.12, Recycled Water. Encourage additional wastewater recycling by the Las Gallinas Valley Sanitary District, initiation of wastewater recycling by the Central Marin Sanitation Agency, additional recycled water distribution by MMWD, and additional use of reclaimed water where supply ("purple pipe") is available.
  - Program CSI-4.12A: CMSA Capacity Expansion. Support implementation of the CMSA/ MMWD Recycled Water Study recommendations, enabling increased use of recycled water and reduced potable water demand.
  - Program CSI-4.12B: Las Gallinas Expansion Project. Support completion of the Recycled Water Expansion Project and continued expansion of recycled water capacity.
  - Program CSI-4.12C: Sewer Line Replacement. Replace low-lying sewer pipes as needed to reduce saltwater intrusion, thereby reducing the cost of producing reclaimed water.

The 2015 MMWD UWMP indicates that there is a surplus water supply even during multiple dry years and water demand from potential future development from implementation of the proposed General Plan 2040 would not exceed the available supply. Therefore, no new water facilities or expansion of existing facilities would be required. In addition, compliance with the City and MMWD's regulatory requirements for new construction and water-efficient landscaping and implementation of the General Plan 2040 goals,

policies, and programs listed above would result in *less than significant* impacts with respect to water supply and the need for new and/or expanded water facilities.

Significance without Mitigation: Less than significant.

Downtown Precise Plan

As shown above in Table 4-17.4, the estimated water demand for the Downtown Precise Plan Area would be 440 afy at full buildout. This is approximately 1.0 percent of the projected water demand for the MMWD service area in 2040. Since MMWD has a surplus water supply of 110,685 afy for a normal year and 18,333 afy for a single dry year or at the end of three dry years, the water demand for the Downtown Precise Plan Area would not exceed MMWD's water supply.

In addition, MMWD has indicated that the current water distribution system will be able to handle future growth and development throughout Marin County, including the EIR Study Area.[30] As part of MMWD's ongoing capital improvement program to improve the water pipeline distribution system, 4,000 feet of water pipelines beneath Third Street between Irwin Street and Fourth Street will be replaced in the next five years. The Fire Flow Improvement Program also plans to replace the pipeline on Fifth Avenue between A street and Grand Avenue, which is mostly within the Downtown Precise Plan Area.[31]

The water demand for the Downtown Precise Plan Area would be only 1.0 percent of MMWD's projected water demand, and there is sufficient supply, even in single- and multiple-dry years. Also, MMWD's water treatment plants currently have the capacity to treat up to 1.9 times the projected water demand in the year 2040, and treatment plant upgrades are planned in the future. Therefore, no new water facilities or expansion of water facilities are necessary, and the impact is *less than significant*.

Significance without Mitigation: Less than significant.

UTIL-2	**Implementation of the proposed project could have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years.**

General Plan 2040

As shown on Table 3-6 in Chapter 3, Project Description, of this Draft EIR, the existing (2020) population within the EIR Study Area of 75,751 is projected to grow with implementation of the proposed project to 84,661 in 2040, for a net increase of 8,910 residents. The City's existing employment level of 44,200 jobs is projected to grow to 48,315 by 2040 for a net increase of 4,115 jobs. This results in a net increase of

[30] Marin Municipal Water District, 2019. Correspondence between Lucy Croy, P.E., Senior Engineer – Planning, MMWD, and Steve Bush, P.E., Senior Engineer, PlaceWorks, dated May 31, 2019.

[31] Marin Municipal Water District. June 5 and 10, 2019. Email correspondences with Lucy Croy, Senior Engineer.

13,025 people by 2040, including both residents and employees. This is consistent with the projected population increase for the MMWD service area.[32]

As described in Impact Discussion UTIL-1, a water demand of 110 gpcd was used in this evaluation, pursuant to the MMWD 2015 UWMP. This is also consistent with the water demand rate of 110 gpcd in the *City of San Rafael Community Greenhouse Gas Emissions Inventory for the Year 2018*. The water demand rate of 110 gpcd is conservative because it does not consider passive and active conservation measures that will reduce the water demand rate over time. The result is a water demand increase within the EIR Study Area of 1,098 afy by 2040. This projected net increase in water demand at buildout is approximately 2.6 percent of the total water demand within the MMWD service area.

As shown previously in Table 4.17-3, MMWD has a surplus water supply of 110,685 afy for a normal year and 18,333 afy at the end of a single dry year or three dry years. Therefore, MMWD would have sufficient water supply to meet the demand of the EIR Study Area at buildout.

Additionally, potential future development pursuant to the proposed General Plan 2040 would be required to implement the water-efficient requirements specified in the SRMC and MMWD's Water Conservation Ordinance. Any new water infrastructure or improvements must be designed, constructed, and operated in accordance with the applicable regulations in the MMWD Code. In addition, potential future development pursuant to the proposed General Plan 2040 and the City would be required to comply with and implement the General Plan goals, policies, and programs listed in Impact Discussion UTIL-1.

In summary, buildout associated with the proposed General Plan 2040 would not result in a shortage of water supplies from MMWD. In addition, compliance with City and MMWD code requirements for new construction and adherence to the General Plan policies, impacts associated with water supply would be *less than significant*.

Significance without Mitigation: Less than significant.

Downtown Precise Plan

As shown previously in Table 4.17-4, the estimated water demand for the Downtown Precise Plan Area will be 440 afy at full buildout. This is approximately 1.0 percent of the projected water demand for the MMWD service area in 2040. Since MMWD has a surplus water supply of 110,685 afy for a normal year and 18,333 afy for a single dry year or at the end of three dry years, the water demand for the Downtown Precise Plan Area would not exceed MMWD's water supply.

In addition, compliance with and implementation of the City and MMWD's regulatory requirements for new construction and water-efficient landscaping and the proposed General Plan goals, policies, and programs listed in Impact Discussion UTIL-1 would result in *less than significant* impacts with respect to water supply.

[32] Marin Municipal Water District, 2016. *Urban Water Management Plan, 2015 Update*. Dated June 2016.

Significance without Mitigation: Less than significant.

UTIL-3	Implementation of the proposed project could result in a cumulatively considerable impact to water service.

This section analyzes potential impacts to water supply that could occur from the proposed project in combination with other reasonably foreseeable projects in the surrounding area. The geographic scope of this cumulative analysis is the MMWD service area, and the analysis is based on MMWD's current UWMP. While the proposed project would contribute to an increased demand for water supply, the increased demand would not exceed the long-term supply under normal years or multiple dry years through 2040. Also, the 2020 UWMP, which is currently being prepared, will account for future development within the county and the resultant increases in demand based on population projections within MMWD's service area. With implementation of SB X7-7 and State, regional, and local water conservation ordinances, all new development would be required to conserve water use and implement water efficiency measures. In addition, pursuant to SB 610 and SB 221, WSAs would be prepared for large development projects prior to approval of each project to ensure adequate water supply for new development.

Overall, cumulative water demands would neither exceed planned levels of supply nor require building new water treatment facilities or expanding existing facilities beyond what is currently planned. In addition, future development would be required to pay connection fees to MMWD, which would offset the costs of system maintenance and capital upgrades to support the new development in the MMWD service area. Together, existing regulations, proposed policies, and other considerations would ensure that the proposed project would not result in a cumulatively considerable impact to water supply and cumulative impacts would be *less than significant.*

Significance without Mitigation: Less than significant

4.17.2 WASTEWATER

4.17.2.1 ENVIRONMENTAL SETTING

Regulatory Framework

Federal Regulations

Clean Water Act

The CWA of 1972 regulates the discharge of pollutants into watersheds throughout the nation. It is the primary federal law that governs water pollution and is implemented by the USEPA. Under the CWA, the USEPA sets wastewater standards and makes it unlawful to discharge pollutants from a point source into any navigable waters without obtaining a permit. Point sources include any conveyances, such as pipes and man-made drainage channels, from which pollutants may be discharged.

National Pollutant Discharge Elimination System

The National Pollutant Discharge Elimination System (NPDES) permit program was established as part of the CWA to regulate municipal and industrial discharges to surface waters of the United States. Federal NPDES permit regulations have been established for broad categories of discharges, including point-source municipal waste discharges and nonpoint-source stormwater runoff. NPDES permits generally identify effluent and receiving water limits on allowable connections and/or mass emissions of pollutants contained in the discharge; prohibitions on discharges not specifically allowed under the permit; and provisions that describe required actions by the discharger, including industrial pretreatment, pollution prevention, self-monitoring, and other activities. Wastewater discharge is regulated under the NPDES permit program for direct discharges into receiving waters and by the National Pretreatment Program for indirect discharges to a wastewater (sewage) treatment plant.

State Regulations

State Water Resources Control Board

On May 2, 2006, the SWRCB adopted Statewide General Waste Discharge Requirements (Order No. 2006-0003) and a monitoring and reporting program (Order No. WQ-2013-0058-EXEC) for all publicly owned sanitary sewer collection systems in California with more than one mile of sewer pipes. The order provides a consistent statewide approach to reducing sanitary sewer overflows (SSO). The Waste Discharge Requirements require public agencies that own or operate sanitary sewer systems to develop and implement Sewer System Management Plans (SSMPs) and report all SSOs to the SWRCB's online reporting system. The SWRCB has delegated authority to nine RWQCBs to enforce these requirements within their regions.

The San Francisco Bay RWQCB (Region 2) issues and enforces NPDES permits in the EIR Study Area. NPDES permits allow the RWQCB to regulate where and how waste is disposed, including the discharge volume and effluent limits of waste and the monitoring and reporting responsibilities of the discharger. The RWQCB is also charged with conducting inspections of permitted discharges and monitoring permit compliance.

Sanitary District Act of 1923

The Sanitary District Act of 1923 (California Health and Safety Code Section 6400 et seq.) authorizes the formation of sanitation districts and enables the sanitation districts to construct, operate, and maintain facilities for the collection, treatment, and disposal of wastewater.

Local Regulations

Wastewater collection and treatment for the City of San Rafael is provided by three entities: (1) LGVSD, which serves the area north of Puerto Suello Hill and operates the LGVSD WWTP; (2) San Rafael Sanitation District (SRSD), which collects wastewater from the area south of Puerto Suello Hill; and (3) Central Marin Sanitation Agency (CMSA), which receives wastewater from SRSD and operates the CMSA WWTP.

Las Gallinas Valley Sanitary District NPDES Permit

The NPDES permit for LGVSD's WWTP and its wastewater collection system was issued by the San Francisco Bay RWQCB as Order No. R2-2020-0022 (NPDES No. CA0037851), adopted on July 8, 2020. The permit details discharge prohibitions and effluent limitations on the discharge of treated wastewater to Miller Creek, receiving water limitations, and monitoring and reporting requirements. The new permit is scheduled to take effect on September 1, 2020, and expire on August 31, 2025.

Las Gallinas Valley Sanitary District Sewer System Management Plan

The LGVSD's current SSMP is dated May 2020 and was prepared in accordance with State regulations to manage, operate, and maintain all parts of the LGVSD's sanitary sewer collection system. The SSMP was prepared pursuant to the requirements of the SWRCB Order No. 2006-003-DWQ, Statewide General Waste Discharge Requirements for Sanitary Sewer Systems and the Monitoring and Reporting Program associated with the statewide order that was amended in July 2013 (SWRCB Order WQ-2013-0058-EXEC). The SSMP describes LGVSD's operations and maintenance program, design and performance standards, emergency response plan, SSO notification, reporting and record keeping, and system evaluation and capacity assurance plan.

Las Gallinas Valley Sanitary District Ordinance Code

The ordinances of LGVSD are compiled, consolidated, and arranged as a comprehensive ordinance code:

- The Sanitary Code of LGVSD. This ordinance regulates the use of public and private sewers and drains, the installation and connection of building sewers and drains, and the installation of sewer laterals and public sewers and public sewer main extensions.
- The Acceptance of Non-Domestic Wastes Ordinance. This ordinance sets forth uniform requirements for industrial users of LGVSD's system to comply with all applicable state and federal laws, including the CWA, the General Pretreatment Regulations, and the California Water Code. The objective of the ordinance is to prevent the introduction of pollutants into the WWTP that will interfere with its operation or that will pass through the WWTP, inadequately treated, into receiving waters.
- The Construction and Installation of Sanitary Sewer Facilities in Areas Underlain by Bay Mud Ordinance. This ordinance regulates the construction and installation of sanitary sewer facilities in areas underlain by bay mud.
- The Acceptance of Fats, Oils, and Grease Ordinance. This ordinance develops and implements a program to reduce the discharge of fats, oils, and grease (FOG) from restaurants and other food service establishments to levels that will not cause blockage in sewer lines. The FOG ordinance requires restaurants and other food service establishments to have a grease removal device (grease trap or grease interceptor) in use.
- The Prohibition of Food Grinders in Commercial Food Service Establishment Ordinance. This ordinance prohibits the installation of food grinders in new or remodeled commercial food service establishments. For existing commercials food service establishments, food grinders shall be removed.

- The Sewer Connection Policy. This policy approves new sewer connections only after it has been determined that adequate line and WWTP capacity exist or will exist at the time the flow is expected to start.[33]

San Rafael Sanitation District Sewer System Management Plan

The SRSD's current SSMP is dated October 2015 and was prepared pursuant to SWRCB Order No 2006-0003-DWQ and its amendment. The SSMP describes measures to minimize the frequency of SSOs, implement a FOG control program, and provide adequate capacity to convey peak flows.

The SRSD Board of Directors passes ordinances and resolutions to govern all aspects of the SRSD's collection system. Regulations include the prevention of illicit discharges into the SRSD's sanitary sewer system; the design and construction of new and rehabilitated sewers and connections; SRSD access; limits on FOG and other debris; enforcement of violations; and the installation, testing, and inspection of new and rehabilitated sewers.[34]

Central Marin Sanitation Agency NPDES Permit

Wastewater discharge requirements for CMSA's WWTP are detailed in Order No. R2-2018-0003 (NPDES No. CA0038628), issued by the San Francisco RWQCB and adopted on January 10, 2018. The permit, which expires on February 28, 2023, includes discharge prohibitions without sufficient dilution, effluent flow limitations, receiving water limitations, reporting requirements, and a pollution minimization program.

Central Marin Sanitation Agency Ordinances

CMSA adopted a FOG ordinance (Ordinance No. 2007-1) to minimize SSOs in the CMSA service area. The FOG ordinance controls the discharge of FOG to the sanitary sewer from commercial food service establishments by establishing requirements for food service establishments to install and maintain grease traps and interceptors. This ordinance was adopted pursuant to provisions of Section 6400 et seq. of the Health and Safety Code of the State of California. CMSA Ordinance No. 2019-1 outlines the fees to be paid for each new sewer connection based on land use or plumbing fixtures. Fees are also assessed for septic and chemical toilet waste haulers, FOG haulers, and industrial waste discharges. CMSA Ordinance No. 2009-2 is aimed at reducing the mercury load to the sanitary sewer system by regulating the discharge of amalgam wastes from dental offices.

San Rafael General Plan 2020

The City of San Rafael 2020 General Plan goals, policies, and programs that are relevant to wastewater infrastructure and services are primarily in the Land Use, Infrastructure, and Air and Water Quality Elements. As part of the proposed project, some existing General Plan policies would be amended or

[33] Las Gallinas Valley Sanitary District, 2019, *Ordinance Code*. http://www.lgvsd.org/document-library/ordinance-code/.

[34] San Rafael Sanitation District, 2015, *Sewer System Management Plan*. https://storage.googleapis.com/proudcity/sanrafaelca/uploads/SRSD-SSMP-Final-2015-public-1.pdf

substantially changed, and new policies would be added. A comprehensive list of policy changes is provided in Appendix B, Proposed General Plan Goals, Policies, and Programs, of this Draft EIR. Applicable goals, policies, and programs are identified and assessed for their effectiveness and potential to result in an adverse physical impact later in this chapter under Section 4.17.2.3, Impact Discussion.

San Rafael Municipal Code

The SRMC includes various directives to minimize adverse impacts to water quality in San Rafael. The SRMC is organized by title, chapter, and section. The SRMC includes various directives pertaining to wastewater issues. Most such directives are found in Title 12, Building Regulations, and Title 15, Subdivisions, as follows:

- **Chapter 12.250, California Plumbing Code Amendments.** Section 12.25.010, Amendments, states there are no amendments to the 2019 California Plumbing Code, adopted as described in Section 12.100.010, Adopted Codes.
- **Chapter 12.235, California Green Building Construction Standards Code Amendments.** Section 12.235.020, Amendments, describes the deletions and amendments to the 2019 CALGreen Building Code Standards as described in Section 12.100.010, Adopted Codes.
- **Chapter 15.06, Subdivision Design Standards and Miscellaneous Requirements.** Section 15.06.020, Utilities and Services, states that no subdivision of land into two or more lots or parcels for the purpose of development shall be approved by the City unless it is determined that wastewater and sewage disposal for all new lots or parcels shall be provided by either the SRSD or the LGVSD, depending upon the property location. The creation of an individual on-site septic system intended to serve a new lot or parcel is prohibited.

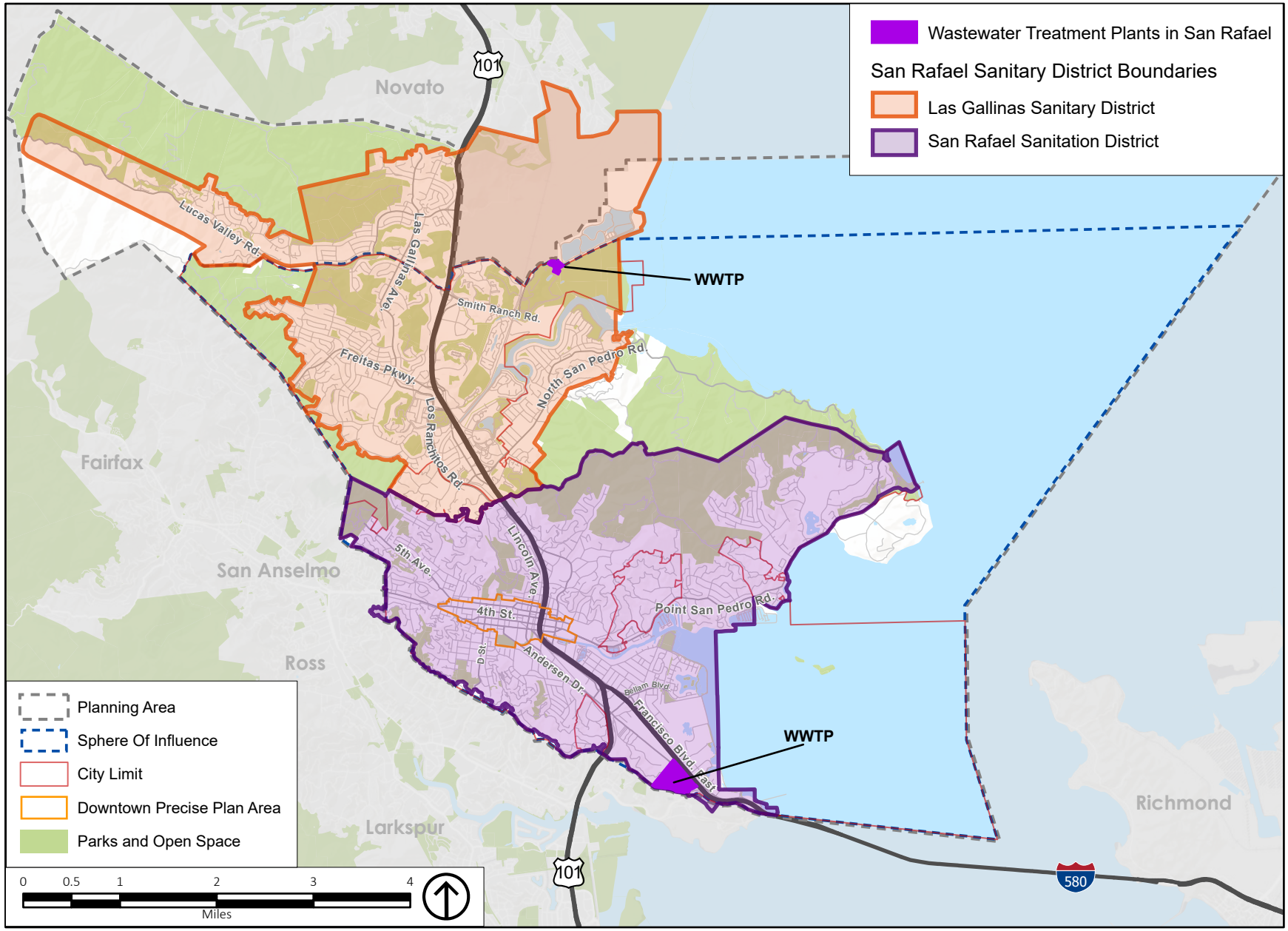
Existing Conditions

Wastewater Collection

Wastewater collection and treatment for the EIR Study Area is provided by three entities: (1) LGVSD, which serves the area north of Puerto Suello Hill and operates the LGVSD WWTP; (2) SRSD, which collects wastewater from the area south of Puerto Suello Hill; and (3) CMSA, which receives wastewater from SRSD and operates the CMSA WWTP. Figure 4.17-2 shows the service area of SRSD and LGVSD and the locations of the CMSA and LGVSD WWTPs.

Las Gallinas Valley Sanitary District

The LGVSD serves a population of approximately 32,000 persons north of Puerto Suello Hill and neighboring unincorporated areas of Marin County and covers approximately 20 square miles. The LGVSD's collection system consists of 105 miles of gravity sewer pipelines, 6.7 miles of force mains, and 28 pump stations. The LGVSD sewer pipelines in the EIR Study Area range from 6 to 24 inches.



Source: ESRI, 2017; County of Marin, 2009; City of San Rafael, 2019; PlaceWorks, 2019.

Figure 4.17-2

Sanitary Districts and Wastewater Treatment Plant Locations

The LGVSD also operates the LGVSD WWTP.[35] The LGVSD operates a preventative maintenance program designed to maintain the integrity of the system, reduce the frequency of SSOs, and reduce infiltration/inflow. The sewer collection pump stations are maintained by the WWTP operators, and the pump stations are inspected two to three times a week. Preventative activities that are performed in the field include flushing, rodding, and video inspections at frequencies designed to prevent or minimize blockages and/or SSOs. Revenue for operation and maintenance activities is derived from sewer rates paid by users of the collection system and treatment plant as well as property tax assessments.

LGVSD has an annual capital improvement program to address infiltration/inflow, capacity, storage, structural, and other potential issues in the collection system. In general, the sewer system functions adequately, even during flooding and wet weather conditions.[36] However, three trunk sewers that connect to the WWTP surcharge[37] occasionally during extremely high peak wet weather flow conditions following major storm events. These include the Marinwood-Lucas Valley Trunk Sewer between the railroad and the WWTP, the Terra-Linda Trunk Sewer near the Duckett pump station, and the Mulligan Trunk Sewer, which may surcharge when there is a malfunction of the Mulligan pump station. However, a relief sewer was installed in 2019 that should serve as a long-term solution for the Mulligan Trunk Sewer. A summary of proposed capital improvement projects is provided in the latest LGVSD SSMP.[38]

San Rafael Sanitation District

The SRSD was formed by the County of Marin in 1947 and collects wastewater from the area south of Puerto Suello Hill, the adjacent unincorporated areas, and San Quentin prison. SRSD is one of three service districts of the CMSA. SRSD provides wastewater collection over an area of 12.75 square miles and includes 134 miles of sewer pipelines, 32 wastewater pump stations, and 13 miles of force mains. The wastewater collected by SRSD is conveyed to the CMSA WWTP, located at 1301 Andersen Drive in San Rafael. SRSD sewer pipelines within the EIR Study Area range from 6 to 36 inches and include both gravity lines and pressurized lines (force mains).

The SRSD maintains a sewer pipeline cleaning program, where all gravity sewer pipes are cleaned at least once every three years. Gravity sewer lines with FOG issues or “hot spots” are cleaned more frequently with a hydro flusher. In addition, the SRSD performs annual maintenance on all pump station pumps, emergency generators, pump station wet wells, and force main valves. All pump station valves are exercised quarterly; all air relief valves are inspected and cleaned twice per year; and chemical injection systems are inspected weekly, with samples taken twice weekly. All pump stations are checked three times per week. The SRSD obtains its revenue from connection fees, service fees, and property taxes.[39]

[35] Las Gallinas Valley Sanitary District, 2016, *Sewer System Management Plan*. http://www.lgvsd.org/wp-content/uploads/LGVSD-SSMP-2016.pdf.

[36] Las Gallinas Valley Sanitary District, 2019. Correspondence between Michael P. Cortez, PE, District Engineer, LGVSD and Steve Bush PE, Senior Engineer, PlaceWorks. Dated July 12, 2019.

[37] Sewer surcharge refers to the overloading of the sewer beyond its design capacity due to inflow and infiltration of water. A surcharging sewer often results in sewer overflow at manholes and customers' overflow relief gully

[38] Las Gallinas Valley Sanitary District, 2016, *Sewer System Management Plan*. http://www.lgvsd.org/wp-content/uploads/LGVSD-SSMP-2016.pdf.

[39] San Rafael Sanitation District, 2015. *Sewer System Management Plan.* Dated October 2015. Prepared by Harris.

According to the SRSD, there are currently no deficiencies in capacity for the SRSD sewer system.[40] The SRSD performed a capacity assessment for four key trunk sewer lines to determine potential capacity issues in 2010. The recommended projects from the Capacity Assessment Report have been completed or will be completed by the end of 2020.[41]

Wastewater Treatment

Las Gallinas Valley Sanitary District Wastewater Treatment Plant

LGVSD owns and operates the LGVSD WWTP at 300 Smith Ranch Road in San Rafael (see Figure 4.17-2). It provides secondary treatment of domestic wastewater collected from the northern portion of the EIR Study Area and unincorporated portions of Marin County. The LGVSD WWTP uses a two-stage biofiltration process followed by ammonia removal and filtration. Prior to discharge, the treated sewage is chlorinated to kill bacteria and then dechlorinated to remove the chlorine toxicity to organisms in the receiving water bodies. Solids are processed through a sludge thickener, anaerobic digesters, and sludge lagoons. The methane gas produced by the digesters is processed in a cogeneration unit to produce electricity and waste heat.

During extreme wet weather events, the LGVSD WWTP initiates an operational strategy called blending to manage high flow rates. All wastewater undergoes primary treatment, which consists of screening, grit removal, and chemical removal of solids by settling. Most of the wastewater then continues to secondary treatment; however, a portion of the flow is routed around (i.e., bypasses) secondary treatment to protect the biological processes during high flow rates and then recombines with the main flow prior to disinfection. During the wet season, the facility discharges excess treated effluent to Miller Creek, which flows into San Pablo Bay. During the dry season, the LGVSD WWTP stores the effluent on-site in storage ponds and sends a portion of the treated effluent to the MMWD Las Gallinas Valley Water Recycling Facility.[42]

The NPDES permit for the LGVSD WWTP was issued by the San Francisco Bay RWQCB as Order No. R2-2020-0022 (NPDES No. CA0037851), adopted on July 8, 2020. This order establishes a maximum average dry weather effluent flow of 2.92 mgd. Blended secondary-treated wastewater discharges are approved under the bypass conditions of the NPDES permit when the peak wet weather influent flow volume exceeds the reliable process capacity of the secondary treatment units of 8 mgd. This number will be increased to 18 mgd upon completion of the LGVSD WWTP upgrade.

The LGVSD WWTP can reliably treat up to 8 mgd with full secondary treatment, although with completion of the LGVSD WWTP upgrade in 2021, the LGVSD WWTP will be able to increase its wet weather treatment capacity to 18 mgd. The average dry weather flow for the past few years is 2.36 mgd, and the

[40] San Rafael Sanitation District, 2019. Correspondence between Doris Toy, Sanitation District Manager, and Steve Bush, PE, Senior Engineer, PlaceWorks. Dated May 31, 2019.

[41] San Rafael Sanitation District, 2015. *Sewer System Management Plan.* Dated October 2015. Prepared by Harris.

[42] San Francisco Bay Regional Water Control Board, May 13, 2015., *Order No. R2-2015-0021*. https://www.waterboards.ca.gov/sanfranciscobay/board_decisions/adopted_orders/2015/R2-2015-0021.pdf.

peak wet weather flow is around 22 to 24 mgd.[43] Any additional flows are diverted around the secondary treatment units and blended with secondary-treated effluent. After disinfection, the blended flow is dechlorinated prior to discharge.

During dry weather, treated effluent is reclaimed on-site in accordance with Order No. 92-064. The on-site reclamation system consists of two 20-acre storage ponds, a 20-acre freshwater marsh/wildlife pond, and 200 acres of irrigated pasture. The storage ponds dechlorinate the effluent through natural processes. Surplus water remaining in the storage ponds at the end of the reclamation season is returned to the LGVSD WWTP for treatment before discharge to Miller Creek. LGVSD WWTP effluent and water from the storage ponds are also used by MMWD as feedstock in its recycled water plant, which produces disinfected tertiary recycled water during summer for distribution throughout its northern San Rafael service area.[44]

LGVSD is currently in the process of constructing a multiyear, multimillion-dollar LGVSD WWTP upgrade and recycled water treatment plant expansion, which should be completed by the end of 2021. This project was designed based on flow rates and growth projection factors from the City of San Rafael and Marin County's Countywide Plan.[45]

During 2017, LGVSD reached an agreement with MMWD to expand LGVSD's recycled water treatment plant to provide tertiary treated wastewater to be distributed to MMWD's customers. The expansion is expected to be completed by December 2021. LGVSD's recycled water treatment facility, which has been online since September 2012, currently has a capacity of 1.4 mgd but will be expanded to treat 5.4 mgd.[46]

Central Marin Sanitation Agency Wastewater Treatment Plant

The CMSA WWTP is at 1301 Andersen Drive in San Rafael, as shown on Figure 4.17-2. The WWTP has a two-mile outfall through which treated wastewater is discharged into Central San Francisco Bay. The CMSA WWTP serves an area of approximately 43.5 square miles and includes the residents, businesses, and institutions in the city of Larkspur; the towns of Corte Madera, Fairfax, Ross, and San Anselmo; portions of the city of San Rafael south of Puerto Suello Hill; the unincorporated areas of Ross Valley and San Quentin Village; and San Quentin State Prison.

The NPDES permit for the WWTP was issued by the San Francisco Bay RWQCB as Order No. R2-2018-0003 (NPDES No. CA0038628), which became effective in March 2018 and expires in February 2023. This order establishes a maximum average dry weather effluent flow of 10 mgd and a facility design flow of 30 mgd. The WWTP includes preliminary treatment (headworks with screening and grit removal), primary treatment, secondary treatment (biotowers, activated sludge, and secondary clarification), disinfection,

[43] Las Gallinas Valley Sanitary District, July 12, 2019, Email correspondence with Michael Cortez, District Engineer.

[44] San Francisco Bay Regional Water Control Board, May 13, 2015, *ORDER No. R2-2015-0021.* https://www.waterboards.ca.gov/sanfranciscobay/board_decisions/adopted_orders/2015/R2-2015-0021.pdf.

[45] Las Gallinas Valley Sanitary District, 2019. Email correspondence between Michael P. Cortez, PE, District Engineer, LGVSD and Steve Bush PE, Senior Engineer, PlaceWorks. Dated July 12, 2019.

[46] Las Gallinas Valley Sanitary District, 2016. *Las Gallinas Secondary Treatment and Recycled Water Plant Upgrade Project. MND – Mitigated Negative Declaration*. SCH No. 2016052009.

and dechlorination. Solids handling includes waste-activated sludge thickening, anaerobic digestion, biosolids dewatering, and cogeneration fueled by biogas. During wet weather periods, primary-treated wastewater greater than 30 mgd is routed around the secondary treatment processes and blended with the secondary-treated wastewater prior to disinfection, dichlorination, and discharge to San Francisco Bay via a gravity outfall and/or effluent pump station. Such discharges are approved under the bypass conditions of the NPDES permit if the blended discharge complies with the effluent and receiving water limitations in the order. CMSA discharges blended effluent about 11 times per year.[47]

According to Mr. Jason Dow, General Manager of CMSA, the WWTP typically receives and treats:

- Average dry weather flow of 3.1 mgd
- Average annual flow of 4.95 mgd
- Average wet weather flow of 6.51 mgd
- Peak wet weather flow of 58.5 mgd[48]

The current (2017) *CMSA Facilities Master Plan* focuses on the condition of the facilities and impacts associated with potential regulatory changes, reduction in energy usage and greenhouse gas emissions, operational improvements, and climate change. The *CMSA Facilities Master Plan* identifies 26 projects that are recommended for completion within the next 15 years and identifies facility and/or equipment improvements to address sea level rise and potential regulatory changes.[49]

4.17.2.2 STANDARDS OF SIGNIFICANCE

Pursuant to Appendix G, Environmental Checklist Form, of the CEQA Guidelines, implementation of the proposed project would result in significant wastewater-related impact if it would:

1. Require or result in the relocation or construction of new or expanded wastewater treatment or facilities, the construction or relocation of which could cause significant environmental effects.
2. 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.
3. Result in significant cumulative impacts related to wastewater facilities.

UTIL-4	**Implementation of the proposed project could require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which would cause significant environmental effects.**

[47] San Francisco Bay Regional Water Control Board, January 10, 2018, *Order No. R2-2018-0003*. https://www.cmsa.us/assets/documents/permits/2018/NPDES%20Order.pdf

[48] Central Marin Sanitation Agency, May 21, 2019, Email correspondence with Jason Dow, General Manager.

[49] Central Marin Sanitation Agency, *Adopted Operating and Capital Budget July 1,2018 – June 30, 2019.* https://www.cmsa.us/assets/documents/budget/FY19%20Budget%20Adopted%202018%2006-12%20WEB.pdf, accessed on March 19, 2019.

General Plan 2040

Implementation of the proposed project would have a significant impact if it would result in the construction of a new WWTP or the expansion of existing WWTP, the construction of which would have a significant effect on the environment. As discussed below, future demands from the increased population and land use changes from implementation of the proposed General Plan 2040 would not exceed the design or permitted capacity of the LGVSD'S and CSMA'S WWTP that serve the EIR Study Area, which includes the Downtown Precise Plan Area.

Under the proposed project, wastewater discharge would increase throughout the EIR Study Area due to increases in population. The proposed increase in population for the EIR Study Area is 8,910, with an increase of 3,570 within the Downtown Precise Plan Area (see Tables 3-6 and 3-7, respectively, in Chapter 3, Project Description, of this Draft EIR). Based on information provided in the MMWD 2015 UWMP, it was assumed that 70 percent of the water demand is indoor water use. It also was assumed that wastewater discharge would be 90 percent of the indoor water demand. Table 4.17-5 shows the increase in wastewater discharge for the total EIR Study Area and for the Downtown Specific Plan Area alone.

TABLE 4.17-5 INCREASE IN WASTEWATER DISCHARGE AT BUILDOUT IN 2040

Area	Increase in Water Demand at Buildout (gal/day)	Increase in Indoor Water Demand[a] (gal/day)	Increase in Wastewater Discharge[b] (gal/day)	Increase in Wastewater Discharge (mgd)
Total EIR Study Area	980,100	686,070	617,463	0.62
Downtown Precise Plan Area	392,700	274.890	247,401	0.25

Notes:
[a.] Indoor water demand is estimated at 70 percent of water demand.
[b.] Wastewater discharge is estimated at 90 percent of indoor water demand.
Source: Marin Municipal Water District, 2016. 2015 Urban Water Management Plan.

Implementation of the proposed project would generate an additional 0.62 mgd within the EIR Study Area. There are two WWTPs that serve the EIR Study Area: the LGVSD WWTP, which treats effluent from the areas north of Puerto Suello Hill, and the CSMA WWTP, which treats effluent from the areas south of Puerto Suello Hill. For this analysis, it is assumed that 35 percent of the effluent generated in the EIR Study Area is transported to LGVSD WWTP, and 65 percent is transported to CSMA WWTP for treatment.

The LGVSD WWTP has a maximum permitted dry weather flow of 2.92 mgd, and the WWTP has averaged a dry weather flow rate of 2.36 mgd for the past few years.[50] Therefore, the LGVSD WWTP has a surplus capacity of 0.56 mgd during dry weather conditions. For this analysis, it is assumed that 35 percent of the wastewater generated in the EIR Study Area (i.e., 0.22 mgd) is directed to the LGVSD WWTP. There is not expected to be a significant increase in wastewater demand in the LGVSD service area that is outside of the EIR Study Area. Therefore, the LGVSD WWTP can accommodate the increase in wastewater

[50] Las Gallinas Valley Sanitary District, 2019. Correspondence between Michael Cortez, PE, District Engineer, LGVSD, and Steve Bush, PE, Senior Engineer, PlaceWorks. Dated July 12, 2019.

generation from the EIR Study Area. In addition, the LGVSD WWTP is undergoing an upgrade that should be completed by the end of 2021 and will increase its wet weather treatment capacity to 18 mgd.[51]

According to Mr. Jason Dow of CMSA, the CMSA WWTP treats an average of 3.1 mgd during dry weather flows, and the CMSA WWTP has a permitted dry weather effluent flow of 10 mgd. The EIR Study Area is assumed to contribute an additional 0.40 mgd of wastewater at buildout, which represents about 4 percent of the permitted dry weather flow. Therefore, the CMSA WWTP can easily accommodate the wastewater increase from the EIR Study Area during dry weather conditions.

All potential future development would be required to pay a sewer connection fee prior to the issuance of building permits. Any sewer utility infrastructure improvement would be designed, constructed, and operated in accordance with the LGVSD and CMSA ordinance codes and the SRMC. The sewer connection fees and wastewater collection fees are used by LGVSD, SRSD, and CMSA to continually upgrade components of the wastewater collection and transmission systems through their CIP programs. The CIP improvements include collection system capacity upgrades, correction of structural problems, and modifications to pump stations and treatment facilities.

In addition, the proposed Community Services and Infrastructure (CSI) Element contains goals, policies, and programs that require local planning and development decisions to consider impacts to wastewater facilities. The following General Plan goals, policies, and programs would serve to minimize potential adverse impacts to these facilities:

Goal CSI-4: Reliable, Efficiently Managed Infrastructure. Support reliable, cost-effective, well-maintained, safe and resilient infrastructure and utility services.

- Policy CSI-4.1, Capital Investment, requires the City to provide for ongoing, preventative maintenance of infrastructure and timely replacement, repair, and upgrading of City equipment.
  - Program CSI-4.1A: Capital Improvement Programming. Maintain and regularly update a multi-year Capital Improvement Plan (CIP) covering City owned and operated infrastructure and public facilities. Seek the input of other local service providers (MMWD, LGVSD, etc.) when preparing the City's CIP and encourage these agencies to seek City input as they prepare their own CIPs.
  - Program CSI-4.1B: Funding for Maintenance and Capital Costs. Consider ways to improve the reliability of maintenance funding, such as establishing a reserve fund or voter-approved parcel taxes and special assessments. Identify potential funding sources for unmet and anticipated future capital project needs, such as grants, bond measures, and impact fees.
  - Program CSI-4.1C: Community-Supported Services. Consider community-supported (e.g., cooperative) services as an alternative to bring fundamental service upgrades to neighborhoods and managing capital costs.
- Policy CSI-4.2: Adequacy of City Infrastructure and Services, requires applicants to demonstrate that their projects can be adequately served by the City's infrastructure as part of the development review

[51] Las Gallinas Valley Sanitary District, 2019. Correspondence between Michael Cortez, PE, District Engineer, LGVSD, and Steve Bush, PE, Senior Engineer, PlaceWorks. Dated July 12, 2019.

process. All new infrastructure shall be planned and designed to meet the engineering standards of the City and various local service and utility providers.

- Program CSI-4.2A: Long-Term Planning. Continue to use the CIP to analyze and respond to local capital facility needs.
- Program CSI-4.2B: Engineering Standards. Require new development to comply with the subdivision standards in the San Rafael Municipal Code, as well as relevant Marin County and utility district engineering standards. Where feasible, encourage development to reach beyond current standards and collaborate with the community to innovate and define new best practices.
- Program CSI-4.2C: Impact Fees. Continue to collect impact fees and use other funding mechanisms to ensure that new development pays its fair share of providing/ upgrading services associated with that development.

- Policy CSI-4.9, Wastewater Facilities: Ensure that wastewater collection, treatment and disposal infrastructure is regularly maintained and meets projected needs. Improvements should be programmed to meet state and federal standards, respond to sea level rise and seismic hazards, repair and replace aging or leaking pipes, and protect environmental quality.
  - Program CSI-4.9A: Coordination of Services. Support efforts by the Las Gallinas Sanitary District, Central Marin Sanitation Agency and San Rafael Sanitation District to maintain high-quality wastewater collection and treatment facilities.

Potential future development in the EIR Study Area would not require the construction or expansion of a WWTP. Therefore, with adherence to and implementation of the NPDES permits and the City's regulatory requirements as well as the proposed General Plan goals, policies, and programs, impacts associated with WWTP's capacities would be *less than significant*.

Significance without Mitigation: Less than significant.

Downtown Precise Plan

Wastewater from the Downtown Precise Plan Area would be collected by SRSD and transported to the CSMA WWTP. As shown in Table 4.17-5, the estimated wastewater demand for the Downtown Precise Plan Area would be 0.25 mgd at full buildout. This is approximately 2.5 percent of the maximum permitted dry weather flow rate of 10 mgd for the CMSA WWTP. Since the WWTP currently has a surplus wastewater capacity of 6.9 mgd, the wastewater demand for the Downtown Precise Plan Area would not exceed the permitted capacity of CMSA's WWTP or require the construction or expansion of new wastewater facilities. In addition, compliance with and implementation of the City and LGVSD and CSMA's requirements for new sewer connections and the General Plan goals, policies, and programs listed above would result in *less than significant* impacts with respect to WWTPs.

Significance without Mitigation: Less than significant.

UTIL-5	**Implementation of the proposed project could result in the determination by the wastewater treatment provider which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.**

As described under Impact Discussion UTIL-4, the LGVSD WWTP is permitted by the RWQCB to treat 2.92 mgd during dry weather conditions, and the CSMA WWTP is permitted to treat 10 mgd during dry weather conditions. According to LGVSD and CSMA plant managers, the dry weather flows during recent years have averaged 2.36 mgd and 3.1 mgd, respectively. Therefore, the residual dry weather flow capacity is 0.56 mgd for the LGVSD WWTP and 6.9 mgd for the CSMA WWTP. The LGVSD WWTP is currently undergoing an expansion project and upgrades that will increase its capacity to 18 mgd during wet weather conditions.

Implementation of the proposed project would generate an additional 0.62 mgd within the EIR Study Area. Assuming that 65 percent of the wastewater is directed to the CSMA WWTP and 35 percent of the wastewater is directed to the LGVSD WWTP, the increased wastewater demand would represent about 39 percent of the LGVSD WWTP's excess capacity and about 5.8 percent of the CSMA WWTP's excess capacity. However, the LGVSD WWTP is currently undergoing an upgrade to increase its capacity, and there is not expected to be a significant increase in wastewater demand for the LGVSD service area outside the boundaries of the EIR Study Area. The CSMA WWTP has excess capacity to treat future wastewater demands within its service area.

In addition, new projects and redevelopment projects within the EIR Study Area would be required to comply with CALGreen plumbing codes and implement active and passive water conservation measures. The reduction in water demand would also result in a reduction in the amount of wastewater generated. Also, potential future development pursuant to the proposed General Plan 2040 and Downtown Precise Plan would be required to comply with—and the City would be required to implement—the proposed General Plan goals, policies, and programs listed in Impact Discussion UTIL-4.

With continued compliance with applicable regulations, wastewater generated by the proposed project would not exceed the capacity of the LGVSD and CMSA WWTPs or the permitted capacities specified in the RWQCB's NPDES permits. Also, the proposed General Plan goals, policies, and programs listed in Impact Discussion UTIL-4 would ensure that potential future development would minimize impacts to wastewater collection and treatment capacity. Therefore, the proposed project would not result in a determination by the wastewater treatment providers that they do not have adequate capacity to serve the EIR Study Area's projected demand in addition to their existing and future commitments, and impacts would be *less than significant*.

Significance without Mitigation: Less than significant.

Downtown Precise Plan

As described in Impact Discussion UTIL-4, the estimated wastewater demand for the Downtown Precise Plan Area would be 0.25 mgd at full buildout. This is approximately 2.5 percent of the maximum

permitted dry weather flow rate of 10 mgd for the CMSA WWTP. Since the WWTP currently has a surplus wastewater capacity of 6.9 mgd, the wastewater demand for the Downtown Precise Plan Area would not exceed the permitted capacity of CMSA's WWTP. Furthermore, the proposed General Plan goals, policies, and programs listed in Impact Discussion UTIL-4 would ensure that new development would minimize impacts to wastewater collection and treatment capacity. Sewer connection fees and wastewater collection fees associated with new development would help fund sewer and wastewater improvement projects. Impacts related to the capacity of the CSMA WWTP would be *less than significant*.

Significance without Mitigation: Less than significant.

UTIL-6 Implementation of the proposed project could result in a cumulatively considerable impact to wastewater service.

This section analyzes potential impacts related to wastewater treatment that could occur from the proposed project in combination with reasonably foreseeable growth within the service areas of SRSD, CMSA, and LGVSD.

Buildout of the EIR Study Area would generate an increase in the volume of wastewater delivered for treatment at the CMSA and LGVSD WWTPs. However, the increase in 2040 represents approximately 39 percent of the excess available treatment capacity of the LGVSD WWTP and approximately 5.8 percent of the excess treatment capacity of the CMSA WWTP. In addition, the LVGVSD WWTP is currently undergoing an expansion project to increase its capacity. The total increased wastewater flow represents less than 7.5 percent of the LGVSD WWTP's permitted dry weather flow and approximately 4.0 percent of the CMSA WWTP's permitted dry weather flow. Based on the current excess wastewater treatment capacities of the WWTPs, the current expansion of the LGVSD WWTP, and the projected population growth and water/wastewater demand in the service area, cumulative projected wastewater treatment demand is below the excess capacity of both WWTPs. Because the cumulative demand would not substantially impact the existing or planned capacity of the WWTP systems, which have sufficient capacity for wastewater that would be generated by the proposed project, the construction of new WWTPs would not be necessary.

Also, future development within the service area would be required to comply with all applicable regulations and ordinances issued by LGVSD, SRSD, and CSMA. Wastewater from cumulative projects is assumed in the LGVSD and SRSD SSMPs. The sanitation districts and WWTPs plan for increased demand with future development. Therefore, with continued compliance with applicable regulations, cumulative development combined with the proposed project would not exceed wastewater collection or treatment capacities. Therefore, the proposed project would not result in a cumulatively considerable impact related to wastewater and cumulative impacts would be *less than significant.*

Significance without Mitigation: Less than significant.

4.17.3 STORMWATER

4.17.3.1 ENVIRONMENTAL SETTING

Regulatory Framework

The regulatory framework for stormwater is described in detail in Chapter 4.10, Hydrology and Water Quality, of this Draft EIR. The regulatory requirements that pertain solely to storm drain systems are repeated below.

Federal Regulations

Federal Clean Water Act

Under Section 401 of the CWA, every applicant for a Section 404 permit that may result in a discharge to a water body must first obtain a state water quality certification indicating the proposed activity will comply with State water quality standards. Certifications are issued in conjunction with US Army Corps of Engineers (USACE) Section 404 permits for dredge and fill discharges. In addition, a water quality certification must be sought for any activity that would result in the placement of structures in waters of the United States that are not jurisdictional to the USACE, such as isolated wetlands, to ensure that the proposed activity complies with State water quality standards. In California, the authority to grant water quality certification or waive the requirement is delegated by the SWRCB to its nine RWQCBs.

National Pollutant Discharge Elimination System

Under the NPDES program, all facilities that discharge pollutants into waters of the United States are required to obtain an NPDES permit. Requirements for stormwater discharges are also regulated under this program. As previously described, the EIR Study Area lies within the jurisdiction of the San Francisco Bay RWQCB (Region 2). The City is subject to the requirements of the General Permit for Storm Water Discharges for Phase II Small Municipal Separate Storm Sewer Systems (MS4s).

Under Provision E.12 of the NPDES Permit, the co-permittees use their planning authorities to include appropriate source control, site design, and stormwater treatment measures in new development and redevelopment projects to address both soluble and insoluble stormwater runoff pollutant discharges and prevent increases in runoff flows from new development and redevelopment projects. The goal is to be accomplished primarily through the implementation of low impact development techniques. In addition, projects that create and/or replace one acre or more of impervious surfaces must comply with the hydromodification requirements specified in the E.12 provisions of the Phase II Small MS4 permit. These requirements include implementing site design measures to achieve infiltration, evapotranspiration, and/or harvesting/reuse of the 85th percentile, 24-hour, storm runoff event to the extent feasible and treatment of the remaining runoff with bioretention facilities. The hydromodification provisions also require that post-project runoff does not exceed pre-project runoff for the two-year, 24-hour storm event. The guidance document for implementing Provision E.12 of the NPDES permit is the Bay Area Stormwater Management Agencies Association (BASMAA) Post Construction Manual.

State Regulations

State Water Quality Control Board's Trash Amendment

On April 7, 2015, the SWQCB adopted an amendment to the Water Quality Control Plan for Ocean Waters of California to control trash. In addition, the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California added the section: Part 1, Trash Provisions. Together, they are collectively referred to as "the Trash Amendments." The purpose of the Trash Amendments is to provide statewide consistency for the RWQCBs in their regulatory approach to protect aquatic life and public health beneficial uses, reduce environmental issues associated with trash in State waters, and focus limited resources on high-trash-generating areas.[52]

The Trash Amendments apply to all Phase I and II permittees under the NPDES municipal separate storm sewer systems (MS4) permits. Compliance with the Trash Amendment requires municipalities to install certified trash treatment control systems on all catch basins no later than December 2, 2030.[53]

Regional Regulations

Marin County Flood Control and Water Conservation District

The mission of the Marin County Flood Control and Water Conservation District (MCFCWCD) is to reduce the risk of flooding for the protection of life and property within Marin County. It is responsible for the planning, design, construction, operation, and maintenance of facilities such as stormwater pump stations, detention basins, bypass drains, creeks, ditches, and levees.[54]

Eight zones have been established within the MCFCWCD to address specific flooding problems in watersheds in Marin County. Projects in each zone may include the construction, operation, and maintenance of levees, pumping stations, culverts, and drainage ways, and the cleaning and maintenance of creeks. All major actions within the zones require authorization by the board of supervisors of the MCFCWCD.[55] One of the eight zones is within the city limits of San Rafael. Zone 6, encompassing the residential area known as the San Rafael Meadows, was created in the 1960s to address frequent flooding in the low-lying area just west of US-101 across from the County Civic Center. It is overseen by a five-member advisory board. In the early 2000s, construction of a new subdivision rerouted stormwater around the community, eliminating a significant source of flooding in the zone. Work within Zone 6 includes an annual vegetation maintenance program along 0.75 mile of Gallinas Creek.

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[52] State Water Resources Control Board, April 7, 2015, *Amendment to the Water Quality Control Plan for the Ocean Waters of California to Control Trash and Part 1 Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California*, https://www.waterboards.ca.gov/water_issues/programs/trash_control/docs/01_final_sed.pdf.

[53] State Water Resources Control Board, January 7, 2019, *Storm Water Program - Trash Implementation Program.* https://www.waterboards.ca.gov/water_issues/programs/stormwater/trash_implementation.html.

[54] Marin County Flood Control & Water Conservation District, , *Flood Protection Introduction*. https://www.marinwatersheds.org/flood-protection, accessed on June 6, 2019.

[55] Marin County Flood Control & Water Conservation District, 2019, *Flood Control*. https://www.marincounty.org/depts/pw/divisions/creeks-bay-and-flood/flood-control.

Another zone is located outside of the city limits but within the EIR Study Area. Zone 7, Santa Venetia, was created in 1962 to address creek and tidal flooding within the low-lying unincorporated neighborhood of Santa Venetia. Santa Venetia was one of the first developments in Marin County to be constructed on fill over Bay mud. Due to the low initial elevation of the fill and compression of the underlying Bay mud, the area has subsided and is now below the high tide level. Work in Zone 7 includes regular servicing of 14 pumps at five pump stations, maintenance of five portable pumps, maintenance of 1.9 miles of flood protection levees, maintenance of tide gates and trash racks, and an annual vegetation maintenance program along 0.85 mile of Gallinas Creek.[56]

Local Regulations

San Rafael General Plan 2020

The City of San Rafael 2020 General Plan goals, policies, and programs that are relevant to stormwater infrastructure and services are primarily in the Land Use, Infrastructure, and Air and Water Quality Elements. As part of the proposed project, some existing General Plan policies would be amended or substantially changed, and new policies would be added. A comprehensive list of policy changes is provided in Appendix B, Proposed General Plan Goals, Policies, and Programs, of this Draft EIR. Applicable goals, policies, and programs are identified and assessed for their effectiveness and potential to result in an adverse physical impact later in this chapter under Section 4.17.3.3, Impact Discussion.

San Rafael Municipal Code

The SRMC includes various directives to ensure the safe, efficient management of stormwater in San Rafael. The SRMC is organized by title, chapter, and section. Most provisions related to stormwater are found in Title 9, Health and Sanitation, and Title 15, Subdivisions, as follows:

- Chapter 9.30, Urban Runoff Pollution Prevention. The purpose of this chapter is to ensure the future health, safety, and general welfare of the citizens of San Rafael and to protect and enhance watercourses and fish and wildlife habitat by:
  - Minimizing discharges other than stormwater runoff to storm drains or watercourses;
  - Responding to the discharge of spills, preventing and controlling the discharge of spills to storm drains or watercourses, and prohibiting dumping or disposal of materials other than stormwater;
  - Reducing pollutants in stormwater discharges to the maximum extent practicable;
  - Requiring operators of construction sites, new or redeveloped land, and industrial and commercial facilities to install, implement, or maintain appropriate best management practices;
  - Maintaining pre-development stormwater runoff rates and preventing nonpoint source pollution whenever possible, through stormwater management controls and ensuring that these management controls are properly maintained.
- Chapter 9.40, Regulatory Fee for Clean Stormwater Activities. This chapter ensures the future health, safety, and general welfare of the citizens of the city by establishing a funding source to provide

[56] Marin County Flood Control and Water Conservation District, 2020. About the Flood Control Zones. Accessed at https://www.marinwatersheds.org/flood-protection/flood-control-zones#undefined6 on June 23, 2020.

enforcement of the city's Urban Runoff Pollution Prevention Ordinance, to provide maintenance and repair of the city's stormwater drainage facilities, to provide capital improvements to the city's storm drainage system, and to provide other clean stormwater activities.

- Chapter 15.06, Subdivision Design Standards and Miscellaneous Requirements. Section 15.05.110, Grading and Drainage, mandates that all subdivisions be designed and improved to provide proper grading, drainage, and erosion and sediment control. All subdivisions must comply with the provisions of the Uniform Building Code for design of grading and the conveyance of drainage and stormwater runoff and must also comply with best management practices.

Existing Conditions

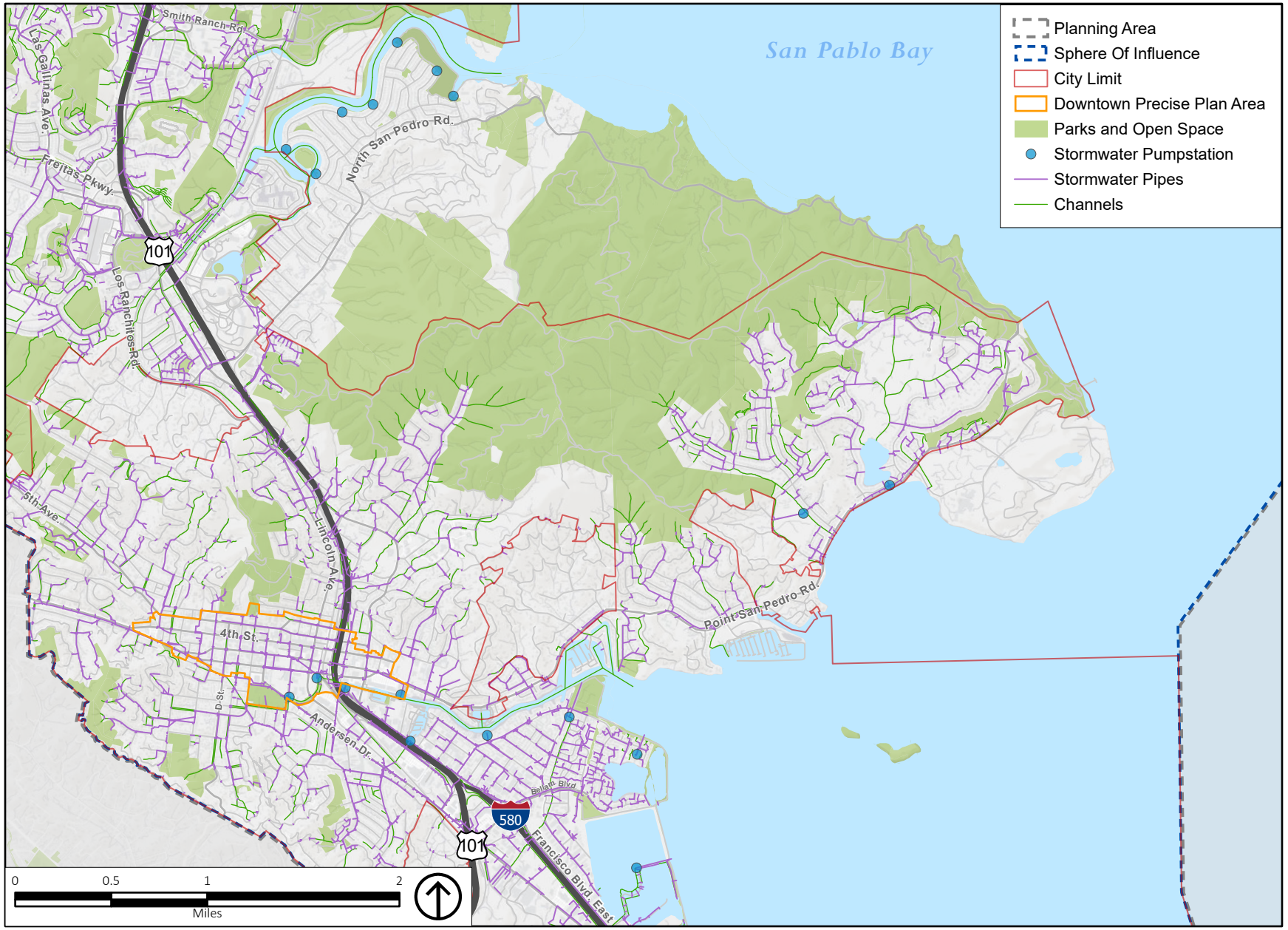
The City of San Rafael Department of Public Works (DPW) owns and maintains the storm drain system that is located throughout the city. The storm drain system comprises 20 miles of corrugated metal pipes, 84 miles of concrete pipe, and 12 miles of plastic pipe. It has 3,800 drain inlets, 20 major headwalls, and 745 smaller headwalls. DPW also maintains approximately 35 miles of open ditches and culverts and operates 12 stormwater pump stations.[57] Stormwater pipelines in San Rafael range from 4 to 48 inches in diameter. Stormwater pipes and pumping stations are shown on Figure 4.17-3.

The DPW is responsible for maintaining the storm drains in City easements, and property owners are responsible for storm drains on their properties. Similarly, DPW maintains certain waterways that have easements, and waterways without easements are maintained by private property owners. San Rafael Creek is maintained by the USACE because it is classified a navigable waterway.

The SWRCB, as the implementing agency for the Trash Amendments, mandates that the City must install certified trash treatment control systems on all catch basins no later than December 2, 2030. There currently are some trash devices installed at commercial properties, such as the Northgate Mall, but the City does not maintain these devices.

The MCFCWCD is responsible for the operation and maintenance of storm drains within the EIR Study Area that are outside of the city limits (e.g., the Lucas Valley-Marinwood neighborhood). The MCFCWCD is also responsible for the planning, design, construction, operation, and maintenance of all stormwater pump stations, detention basins, bypass drains, creeks, ditches, and levees in the county. Revenue is collected via taxes and fees paid by property owners in eight flood control zones in Marin County. Two of the flood control zones are in the EIR Study Area.

[57] City of San Rafael Department of Public Works, 2019. Correspondence between Kevin McCowan, Assistant Public Works Director/City Engineer, DPW, and Steve Bush, PE, Senior Engineer, PlaceWorks. Dated June 10, 2019.



Source: ESRI, 2017; County of Marin, 2009; City of San Rafael, 2019; PlaceWorks, 2019.

Figure 4.17-3
Stormwater Drainage System

Flood Control Zone 6 is entirely within the city limits and is MCFCWCD's smallest flood control zone, covering only 0.16 square mile. Zone 6 occupies a very small portion of the Gallinas Creek Watershed and was created in the 1960s to address frequent flooding in the low-lying neighborhood just west of US-101 across from the County Civic Center.[58] At that time, the neighborhood was unincorporated county land. However, the area was annexed by the City in 1975, at which point the MCFCWCD transferred easements to the City. The City now owns and maintains the drainage easements. In the early 2000s, construction of a new subdivision, Redwood Village, resulted in the diversion of stormwater around the Corrillo Drive neighborhood, which greatly improved the issues of flooding. In addition, the City DPW recently rehabilitated a set of storm drain pipes at the end of Corrillo Drive.[59] In the past, there have been issues with flooding of the tracks near the Marin Civic Center SMART station. The easement is not owned by the City or MCFCWCD, but Sonoma-Marin Area Rail Transit has agreed to keep the drainage ditches and culverts under US-101 clear of debris and maintain their capacity on an ongoing basis.

Flood Control Zone 7 is not within the city limits but is within the EIR Study Area. Zone 7, which encompasses the unincorporated neighborhood of Santa Venetia, was created in 1962 to address creek and tidal flooding within the low-lying area. Santa Venetia was one of the first developments in Marin County to be constructed on fill over bay mud and occurred in an era before the County had the authority to regulate or control development. Due to the low initial elevation of the fill and the compressible nature of the underlying bay mud, the area has subsided and is now below the high tide level. MCFCWCD currently operates and maintains five pumping stations within the affected area, maintains 1.9 miles of flood protection levees, maintains tide gates and trash racks, and conducts an annual vegetation maintenance program along 0.85 mile of creek.[60]

Capital Improvement Initiatives

Construction of new stormwater facilities and maintenance of existing facilities are managed through the City's CIP, which is updated on a bi-annual basis. The list of CIP projects and funding priorities change in response to the amount of funds available. Sources of funding include the City's General Fund, Stormwater Fund, State and regional grants, and private donations.[61] The Stormwater Fund receives approximately $840,000 in annual revenues from the City's Stormwater Activity fee. This covers expenses incurred in the maintenance of the City's storm drainage system and its stormwater pump stations and covers the cost of CIP projects to improve the City's drainage infrastructure, including storm drain pipes, drainage basins, levees, and pump stations. Future CIP projects include repair and replacement of damaged culverts, storm drain replacement/improvements at various locations, a flood warning system at Oleander Drive and Los Gamos Road, pump station reconstruction at San Quentin, and Spinnaker Point

[58] Marin County Flood Control & Water Conservation District, 2019, *Flood Control Zones*, http://www.marinwatersheds.org/flood-protection/flood-control-zones#undefined5, accessed on April 29, 2019.

[59] Marin County Flood Control & Water Conservation District, 2019. Flood Zone 6 Advisory Board Meeting. Dated March 5, 2019.

[60] Marin County Flood Control & Water Conservation District, 2019, *Flood Control Zones*, http://www.marinwatersheds.org/flood-protection/flood-control-zones#undefined5, accessed on June 2, 2020.

[61] City of San Rafael. April 28, 2017. General Plan 2020 – Infrastructure. https://www.cityofsanrafael.org/documents/gp-8-infrastructure-element/

salt marsh remediation. The City is also conducting studies to determine the feasibility of catch basin trash capture devices to comply with the State Trash Amendments and a levee analysis inventory.

The City's latest CIP (FY20/21-22/23) has specified funding to address current storm drain issues within the Downtown Precise Plan Area. This includes preparation of a design study to address flooding at the intersection of Second Street and C Street, which is caused by the settlement of storm drain pipes and the inability to adequately convey water to the downstream portion of the storm drain system. Pipe repairs as well as installation of a new underground drainage system on C Street from Second to First Street will be part of the project.[62] Another scheduled CIP project is located at the edge of the Downtown Precise Plan boundary at the intersection of First Street and D Street. The project has funding to replace the corrugated metal pipe storm drain on D Street between Frances Street and First Street and improve stormwater flow. Several storm drain pipes at the intersection of D Street and First Street feed into San Rafael Creek. The City's Third Street Rehabilitation Project will also make storm drain improvements along Third Street, where necessary. Within the Downtown Gateway sub-area of the Downtown Precise Plan, an urban flood control wetland project is suggested for consideration south of Second Street and east of Lincoln Avenue near US-101. The proposed urban flood control wetland project would help alleviate local flooding during the rainy season and combat sea-level rise in the future. The proposed urban flood control wetland project would require parcel acquisition along San Rafael Creek and is considered a high-priority project within the Downtown Precise Plan Area. The proposed urban flood control wetland project would widen the confluence of Irwin Creek and San Rafael Creek and create a natural downtown amenity.

4.17.3.2 STANDARDS OF SIGNIFICANCE

Pursuant to Appendix G, Environmental Checklist Form, of the CEQA Guidelines, implementation of the proposed project would result in significant stormwater related impacts if it would:

1. Require or result in the relocation or construction of new or expanded storm water drainage facilities, the construction or relocation of which could cause significant environmental effects.
2. Result in significant cumulative impacts related to stormwater facilities.

4.17.3.3 IMPACT DISCUSSION

UTIL-7	**Implementation of the proposed project could require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which would cause significant environmental effects.**

General Plan 2040

Potential future development as part of the proposed General Plan 2040 and the change in land uses could result in an increase in impervious surfaces, which in turn could result in an increase in stormwater

[62] City of San Rafael, 2020. Capital Improvement Program, FY 20/21-22-23.

runoff, higher peak discharges to drainage channels, and the potential to cause nuisance flooding in areas without adequate drainage facilities. Potential future development sites are in infill areas or already developed areas that are paved, and new development on these sites should not create a substantial increase in impervious surfaces.

In addition, potential future development that involves the disturbance of one acre or more of land would be subject to NPDES construction permit requirements, including preparation of a Storm Water Pollution Prevention Plan, which includes best management practices to limit the discharge of sediment and non-stormwater discharges from the site. Potential future development that involve the creation and/or replacement of 2,500 square feet or more of impervious surfaces would trigger the implementation of source control measures and site design measures to address stormwater runoff, per the BASMAA Post-Construction Manual and the Phase II Small MS4 Permit requirements. In addition, stormwater treatment measures are required to contain site runoff for regulated projects that create or replace 5,000 square feet or more of impervious surface, using specific numeric sizing criteria based on volume and flow rate. Regulated projects would also be required to prepare a stormwater control plan that demonstrates that the regulatory requirements for temporary on-site stormwater runoff retention have been met. This would minimize the amount of stormwater runoff from potential future development in the EIR Study Area.

With the implementation of these provisions for potential future development, there would not be a significant increase in stormwater runoff to the City's storm drain system. The construction of stormwater facilities, implementation of best management practices, and preparation of related plans would serve to minimize any potential impacts.

The City's Public Works Department stated that there currently are no constraints in the storm drain system that would impact the proposed development in the EIR Study Area.[63] In addition, revenue from the City's Stormwater Activity fee (SRMC Chapter 9.40, Regulatory Fee for Clean Stormwater Activities) is used to fund storm drain improvements throughout the city, as described in the City's latest CIP. In addition to the storm drain improvements within the Downtown Precise Plan Area that are described in the Capital Improvement Initiatives section, there are current projects in the CIP to (1) replace the damaged CMP culvert located beneath Rotary Manor (on Fifth Avenue just west of Downtown); (2) reconstruct the San Quentin Pump Station; (3) replace the storm drain pipes on Francisco Boulevard East from the Bay Park Center office complex to Grange Way; (4) install a warning system to inform motorists of possible flooding at the intersection of Los Gamos Road and Oleander Drive; and (5) install an underground storm drain system on Woodland Avenue between Eva Street and Picnic Avenue that connects to the open ditch behind Woodland Avenue. The City is also conducting a study to design a storm drain system on Jessup Street between West Street and East Street that would connect to the City's existing system at Second Street and East Street.

In addition, the proposed Community Design and Preservation (CDP), Conservation and Climate Change (C), Safety (S), and Community Services and Infrastructure (CSI) Elements contains goals, policies, and

[63] City of San Rafael Public Work Department. May 8, 2019. Interview with Kevin McGowan, Assistant Public Works Director/City Engineer.

programs that require local planning and development decisions to consider impacts related to stormwater and stormwater facilities. The following General Plan goals, policies, and programs would serve to minimize potential adverse impacts related to stormwater:

Goal CDP-4: Quality Construction and Design. Encourage quality construction and design that enhances San Rafael's character and creates places of lasting value.

- Policy CDP-4.10: Landscape Design. Encourages privately owned and maintained landscaping that contributes to neighborhood quality, complements building forms and materials, improves stormwater management and drainage, and enhances the streetscape.
  - Program CDP-4.10A: Zoning Regulations. Periodically evaluate the landscape provisions in the Zoning Ordinance to respond to climate change, hazards, water availability, shading needs, and other issues. Zoning should support the City's goal of having a strongly landscaped character.
  - Program CDP-4.10B: Industrial Landscape Design. Ensure that landscape guidelines for new industrial and general commercial development provide effective buffering, while also supporting water conservation, water quality, and fire hazard reduction goals.
  - Program CDP-4.10C: Parking Lot Landscaping Requirements. Review City standards for parking lot landscaping to ensure that they adequately address visual screening, environmental quality, and climate-related issues. Standards should allow for solar shade structures within parking areas.

Goal C-3: Clean Water. Improve water quality by reducing pollution from urban runoff and other sources, restoring creeks and natural hydrologic features, and conserving water resources.

- Policy C-3.3: Low Impact Development. Encourages construction and design methods that retain stormwater on-site and reduce runoff to storm drains and creeks.
  - Program C-3.3A: Development Review. Provide guidance to developers, contractors and builders on the use of rain gardens, bioswales, bio-retention facilities, permeable pavers, grass parking lots, and other measures to absorb stormwater and reduce runoff rates and volumes.
  - Program C-3.3B: Non-Traditional Gardens. Evaluate best practices in the use of roof gardens, vertical gardens/ green walls, pollinator gardens and other measures that increase the City's capacity to sequester carbon, plant trees, and enhance environmental quality. Encourage the incorporation of such features in new development.

Goal S-3: Resilience to Flooding and Sea Level Rise. Recognize, plan for, and successfully adapt to the anticipated effects of increased flooding and sea level rise.

- Policy S-3.8: Storm Drainage Improvements. Require new development to mitigate potential increases in runoff through a combination of measures, including improvement of local storm drainage facilities. Other measures, such as the use of porous pavement, bioswales, and "green infrastructure" should be encouraged.
  - Program S-3.8A: Storm Drainage Improvements. Consistent with Countywide and regional stormwater management programs, require new development with the potential to impact storm drainage facilities to complete hydrologic studies that evaluate storm drainage capacity, identify improvements needed to handle a 100-year storm, and determine the funding needed to complete those improvements.

- Program S-3.8B: Green Infrastructure Guidelines. Evaluate potential measures to more sustainably manage stormwater, erosion, and improve water quality associated with urban runoff.

Goal CSI-4: Reliable, Efficiently Managed Infrastructure. Support reliable, cost-effective, well-maintained, safe and resilient infrastructure and utility services.

- Policy CSI-4.1, Capital Investment, requires the City to provide for ongoing, preventative maintenance of infrastructure and timely replacement, repair, and upgrading of City equipment.
  - Program CSI-4.1A: Capital Improvement Programming. Maintain and regularly update a multi-year Capital Improvement Plan (CIP) covering City owned and operated infrastructure and public facilities. Seek the input of other local service providers (MMWD, LGVSD, etc.) when preparing the City's CIP and encourage these agencies to seek City input as they prepare their own CIPs.
  - Program CSI-4.1B: Funding for Maintenance and Capital Costs. Consider ways to improve the reliability of maintenance funding, such as establishing a reserve fund or voter-approved parcel taxes and special assessments. Identify potential funding sources for unmet and anticipated future capital project needs, such as grants, bond measures, and impact fees.
  - Program CSI-4.1C: Community-Supported Services. Consider community-supported (e.g., cooperative) services as an alternative to bring fundamental service upgrades to neighborhoods and managing capital costs.
- Policy CSI-4.2: Adequacy of City Infrastructure and Services, requires applicants to demonstrate that their projects can be adequately served by the City's infrastructure as part of the development review process. All new infrastructure shall be planned and designed to meet the engineering standards of the City and various local service and utility providers.
  - Program CSI-4.2A: Long-Term Planning. Continue to use the CIP to analyze and respond to local capital facility needs.
  - Program CSI-4.2B: Engineering Standards. Require new development to comply with the subdivision standards in the San Rafael Municipal Code, as well as relevant Marin County and utility district engineering standards. Where feasible, encourage development to reach beyond current standards and collaborate with the community to innovate and define new best practices.
  - Program CSI-4.2C: Impact Fees. Continue to collect impact fees and use other funding mechanisms to ensure that new development pays its fair share of providing/ upgrading services associated with that development.
- Policy CSI-4.10, Storm Drainage Facilities: Requires the continued monitoring and improving of the storm drainage system, including programs to reduce flooding, improve water quality, remove trash, and respond to climate-related changes. Evaluate the potential for restoration of the natural hydrologic function of creeks and drainageways where possible.
  - Program CSI-4.10A: Replacement of Aging Facilities. Pursue the replacement of older or failing drainage facilities such as metal pipes and stormwater pumping stations with more durable and resilient materials, or with new structures and pumps.
  - Program CSI-4.10B: Silt Removal. Continue to remove accumulated silt from City maintained drainageways, ponds, and creeks subject to tidal siltation such as Mahon and Irwin Creeks. Sediment from stream flow and deposition should be considered a potential resource.
  - Program CSI-4.10C: Sustainable Stormwater Management. Seek funding for projects that restore the natural characteristics and functions of stormwater systems, such as bioswales and conversion

of concrete ditches to natural creeks. Such projects should mitigate the effects of urban runoff, reduce flood hazards, and improve water quality and habitat value.

Compliance with and implementation of these proposed General Plan goals, policies, and programs that ensure adequate infrastructure and the regulatory provisions in the Phase II Small MS4 permit that limit runoff from new development would ensure that the implementation of the proposed General Plan 2040 would not result in significant increases in runoff that contribute to the construction of new storm drain facilities or expansion of existing facilities, the construction of which would cause significant environmental impacts. In addition, the City will continue to repair, rehabilitate, and upgrade the storm drain system through implementation of the CIP program funded through the General Fund and Storm Water Fund, and potential future development would also be required to pay public facilities fees per Chapter 9.40 of the SRMC. Therefore, impacts with respect to stormwater infrastructure would be *less than significant*.

Significance without Mitigation: Less than significant.

Downtown Precise Plan

The storm drain system in the Downtown Precise Plan Area is operated and maintained by the City's Public Works Department. The network of storm drains within the Downtown Precise Plan Area is shown on Figure 4.17-3. As stated above, potential future development within the Downtown Precise Plan Area as well as the rest of the EIR Study Area would be required to implement site design, source control, and treatment control measures that would limit the amount of stormwater runoff that can be discharged from the site, per the E.12 provisions of the Phase II Small MS4 permit. Potential future development that create or replace 5,000 square feet of impervious surface or more are required to route runoff to bioretention or other facilities that are sized in accordance with the BASMAA Post Construction Manual. In addition, new projects that create or replace one acre or more of impervious surfaces will be required to match post-construction runoff rates to pre-development rates for the two-year, 24-hour storm event. This would minimize the amount of stormwater runoff that enters the City's storm drain system.

The City's Public Works Department has stated that there are no current deficiencies in the City's storm drain system that would hinder planned development as part of the proposed Downtown Precise Plan. Also, new development and redevelopment projects would create revenue for the Stormwater Fund that is used for storm drain improvement projects. Several storm drain improvement projects planned for the Downtown Precise Plan Area are discussed in the Capital Improvement Initiatives section. The City will continue to repair, rehabilitate, and upgrade the storm drain system through its CIP. Although there are plans for future replacement of storm drains in the Downtown Precise Plan Area, the construction of new storm drain facilities or the expansion of existing facilities is not required as part of the proposed project, and the impact to storm drain infrastructure would be *less than significant*.

Significance without Mitigation: Less than significant.

UTIL-8 Implementation of the proposed project could result in a cumulatively considerable impact to stormwater infrastructure.

The analysis of cumulative storm drainage impacts considers future development within the three major watersheds that encompass the EIR Study Area. Cumulative impacts can occur when impacts that are significant or less than significant from a proposed project combine with similar impacts from other past, present, or reasonably foreseeable future projects within a similar geographic area. Cumulative impacts could result from incremental changes that contribute to drainage and stormwater infrastructure problems within the watersheds or the city.

Development within the EIR Study Area would require conformance with State and local policies that would reduce hydrology and infrastructure construction impacts to less than significant levels. Any new development in the city would be subject to City policies and ordinances, design guidelines, zoning codes, and other applicable City requirements that reduce impacts related to hydrology and stormwater drainage facilities. More specifically, potential changes related to stormwater flows, drainage, impervious surfaces, and flooding would be minimized by the implementation of stormwater control measures, retention, infiltration, and low-impact-development measures and review by the City's Public Works Department to integrate measures to reduce potential stormwater drainage and flooding impacts.

All cumulative projects in towns and cities within the watershed areas would be subject to similar permit requirements and would be required to comply with various municipal codes and policies and County ordinances, as well as numerous water quality regulations that control construction-related and operational discharge of pollutants in stormwater. The water quality regulations implemented by the San Francisco Bay RWQCB take a basinwide approach and consider water quality impairment in a regional context. For example, the NPDES Construction Permit ties receiving water limitations and basin plan objectives to terms and conditions of the permit, and the Phase II Small MS4 Permit applies to all of the surrounding municipalities to manage stormwater systems and be collectively protective of water quality. For these reasons, impacts from future development within the EIR Study Area related to stormwater infrastructure construction are not cumulatively considerable.

In addition, the implementation of goals, policies, and programs of the proposed General Plan 2040 would require coordination with MCFCWCD to minimize potential impacts to hydrology and stormwater infrastructure from other projects within the watersheds. Therefore, the proposed project would not result in a cumulatively considerable impact to hydrology and stormwater infrastructure and cumulative impacts would be *less than significant.*

Significance without Mitigation: Less than significant.

4.17.4 SOLID WASTE

4.17.4.1 ENVIRONMENTAL SETTING

Regulatory Framework

Federal Regulations

Resource Conservation and Recovery Act of 1976

The Resource Conservation and Recovery Act of 1976 (Title 40 of the Code of Federal Regulations), Part 258, contains regulations for municipal solid waste landfills and requires states to implement their own permitting programs incorporating the federal landfill criteria. The federal regulations address the location, operation, design (liners, leachate collection, run-off control, etc.), groundwater monitoring, and closure of landfills.

State Regulations

Sanitary District Act of 1923

The Sanitary District Act of 1923 (Health and Safety Code Section 6400 et seq.) authorizes the formation of sanitation districts and enforces the sanitation districts to construct, operate, and maintain facilities for the collection, treatment, and disposal of wastewater. This act was amended in 1949 to allow sanitation districts to also provide solid waste management and disposal services, including refuse transfer and resource recovery.

California Integrated Waste Management Act

California's Integrated Waste Management Act of 1989 (AB 939) set a requirement for cities and counties throughout California to divert 50 percent of all solid waste from landfills as of January 1, 2000, through source reduction, recycling, and composting. To help achieve this, the act requires that each city and county prepare a source reduction and recycling element to be submitted to the Department of Resources Recycling and Recovery (CalRecycle). AB 939 also established a goal for all California counties to provide at least 15 years of ongoing landfill capacity.

In 2007, SB 1016 amended AB 939 to establish a per capita disposal measurement system. The per capita disposal measurement system is based on two factors: a jurisdiction's reported total disposal of solid waste divided by the jurisdiction's population. The California Integrated Waste Management Board was replaced by CalRecycle in 2010. CalRecycle sets a per capita disposal rate target for each jurisdiction. Each jurisdiction must submit an annual report to CalRecycle with an update of its progress in implementing diversion programs and its current per capita disposal rate.

Organic Waste Methane Emissions Reduction Act (Senate Bill 1383)

In September 2016, SB 1383 was signed into law establishing methane emissions reduction targets in a statewide effort to reduce emissions of short-lived climate pollutants in various sectors of California's

economy. SB 1383 establishes goals to reduce the landfill disposal of organics by achieving a 50 percent reduction in the 2014 level of statewide disposal of organic waste by 2020 and a 75 percent reduction by 2025. SB 1383 grants CalRecycle the regulatory authority to achieve the organic waste disposal reduction targets and establishes an additional target that at least 20 percent of currently disposed edible food must be recovered for human consumption by 2025. Methane emissions resulting from the decomposition of organic waste in landfills are a significant source of greenhouse gas emissions contributing to global climate change. Organic materials—including waste that can be readily recycled or composted—account for a significant portion of California's overall waste stream.

Mandatory Commercial Recycling Requirements (Assembly Bill 341)

Assembly Bill (AB) 341 (Chapter 476) set a statewide solid waste diversion goal of 75 percent by 2020. AB 341, which was passed in 2011 and took effect July 1, 2012, mandates recycling for businesses producing four or more cubic yards of solid waste per week or multi-family residential dwellings of five or more units. Under AB 341, businesses and multi-family dwellings of five or more units in the EIR Study Area must separate recyclables from trash and either subscribe to recycling services, self-haul their recyclables, or contract with a permitted private recycler.

Mandatory Commercial Organics Recycling (Assembly Bill 1826)

AB 1826, which was enacted in 2014, mandates organic waste recycling for businesses and multifamily dwellings with five or more units. The commercial organics recycling law took effect on April 1, 2016, and organic waste includes food waste, green waste, landscape and pruning waste, nonhazardous wood waste, and food-soiled paper waste that is mixed in with food waste. Currently, businesses and multi-family residences of five or more units that generate four or more cubic yards per week of solid waste (including recycling and organic waste) must arrange for organic waste recycling services. In the fall of 2020, CalRecycle will review the annual reports from various jurisdictions, and if the statewide goal of 50 percent reduction in organic waste as compared to 2014 has not been met, the organic recycling requirements will cover businesses and multi-family residences that generate two or more cubic yards of solid waste per week. Marin Sanitary Service offers two organics recycling programs that allow businesses to comply with the requirements of AB 1826:

- Food 2 Energy (F2E): The F2E program diverts organic food waste from local restaurants, delis, food vendors, and grocery stores and converts the material into biogas through anaerobic digestion that is used as a power source for the CSMA WWTP.
- Commercial Compost: This program provides commercial compostable carts for businesses that generate organic material, including food scraps, food-soiled paper, and plant/landscape trimmings, that are turned into organic compost at Redwood Landfill.

California Solid Waste Reuse and Recycling Access Act of 1991

The California Solid Waste Reuse and Recycling Access Act requires development projects to set aside areas for collecting and loading recyclable materials. This act required CalRecycle to develop a model ordinance for adoption by any local agency to provide adequate areas for the collection and loading of recyclable materials as part of development projects. Local agencies are required to adopt the model or

an ordinance of their own that establishes standards, including space allocation, for the collection and loading of recyclable materials.

CALGreen Building Code

As previously described in Section 4.17.1.1 (Water Regulatory Setting) CALGreen establishes building standards for sustainable site development. Sections 4.408 and 5.408, Construction Waste Reduction Disposal and Recycling, mandate that, in the absence of a more stringent local ordinance, a minimum of 65 percent of nonhazardous construction and demolition debris generated during most new construction must be recycled or salvaged. CALGreen requires developers to prepare and submit a waste management plan for on-site sorting of construction debris, which is submitted to the City for approval, or use a waste management company with verifiable documentation. The waste management plan must:

- Identify the materials to be diverted from disposal by recycling, reuse on the project, or salvage for future use or sale.
- Specify if materials will be sorted on-site or mixed for transportation to a diversion facility.
- Identify the diversion facility where the material collected can be taken.
- Identify construction methods employed to reduce the amount of waste generated.
- Specify that the amount of materials diverted shall be calculated by weight or volume, but not by both.

Local Regulations

Zero Waste Marin

Zero Waste Marin is the formal name for the Marin County Hazardous and Solid Waste Management Joint Powers Authority (JPA), which was formed in 1997 and consists of city and town managers from Belvedere, Corte Madera, Fairfax, Larkspur, Mill Valley, Novato, Ross, San Anselmo, San Rafael, Sausalito, Tiburon, and Marin County. The goal of Zero Waste Marin is to help residents and businesses in Marin County meet the County's goal of 94 percent diversion from landfills by 2025 by reducing and recycling their solid waste and safely disposing of hazardous wastes. Zero Waste Marin ensures the County's compliance with State recycling mandates and provides information on household hazardous waste collection, recycling, composting, and waste disposal. The Marin County Department of Public Works/Waste Management administers Zero Waste Marin, and the AB 939 Local Task Force provides citizen and industry review.[64]

Climate Change Action Plan 2030

The San Rafael Climate Change Action Plan 2030 was issued in April 2019 and includes a variety of strategies to reduce greenhouse gas emissions from both existing and future development in San Rafael.[65] The CCAP focuses on mitigation efforts such as renewable energy, low-carbon transportation, composting, and water conservation. About half of the organic material that is landfilled is recoverable. The City

[64] Zero Waste Marin, 2020. About Zero Waste Marin, accessed at https://zerowastemarin.org/who-we-are/about-zero-waste-marin/ on June 24, 2020.

[65] City of San Rafael, 2019. *Climate Change Action Plan 2030*. Dated April 23, 2019.

encourages residents and businesses to divert, recycle, and compost organic waste. The CCAP has the following goals for community and municipal waste.

- WR-C1: Commercial Organic Waste. Work with Zero Waste Marin, Marin Sanitary Service, and nonprofits such as Extra Food to divert commercial organic waste from the landfill through recycling, composting, and participation in waste-to-energy and food recovery programs.
  - Conduct outreach and education to businesses subject to State organic waste recycling mandates (AB 1826) and encourage or enforce compliance with the law.
  - Refer new and major remodel commercial and multifamily residential project proposals to the City's waste hauler for review and comment and require projects to provide adequate waste and recycling facilities and access as feasible.
  - Encourage and facilitate commercial and multifamily property owners to require responsible use of on-site recycling facilities in lease and rental agreements and to train and regularly evaluate janitorial, landscape, and other property management services.
- WR-C2: Residential Organic Waste. Work with Zero Waste Marin, Marin Sanitary Service, and other organizations to educate and motivate residents to utilize curbside collection services and home composting for food waste.
- WR-C3: Construction and Demolition Debris and Self-Haul Waste. Require all loads of construction and demolition debris and self-haul waste to be processed for recovery of materials as feasible. Investigate creation or an ordinance requiring deconstruction of buildings proposed for demolition or remodeling when materials of significant historical, cultural, aesthetic, functional, or reuse value can be salvaged.
- WR-C4: Mandatory Waste Diversion. Adopt an ordinance requiring mandatory subscription to and participation in waste diversion activities, including recycling and organics collection provided by Marin Sanitary Service. Consider including phase implementation of the ordinance, penalties, and practical enforcement mechanisms.
- WR-C5: Waste Processing Infrastructure. Review and revise the City's franchise agreement with Marin Sanitary Service to ensure waste reduction and diversion targets are met. Conduct a feasibility study and consider investing in new solid waste processing infrastructure to remove recoverable materials (recycling and organics) from the waste stream and reduce contamination. Require regular residential and commercial waste audits and waste characterization studies to identify opportunities for increased diversion and to track progress in meeting targets.
- WR-C6: Extended Producer Responsibility. Encourage the State to regulate the production and packaging of consumer goods and take-back programs. Encourage on-demand delivery services like Amazon and Blue Apron to reduce packaging waste and investigate requirements and incentives for same through ordinance or engagement campaigns.
- WR-C7: Inorganic Waste. Promote reuse, repair, and recycling of inorganic materials, and encourage reduced use of packaging and single use items through engagement campaigns. Investigate supporting a local building material reuse center.
- WR-M1: Waste from Public Facilities. Increase opportunities for recycling, reuse, and composting at City facilities.

- WR-M2: Waste from City Operations. Embark on an educational and social marketing-based campaign to increase recycling, composting, reuse, and waste reduction within municipal operations. Conduct periodic waste audits of City facilities to understand where opportunities for increased diversion lie and to track progress.

Marin Countywide Integrated Waste Management Plan

The California Integrated Waste Management Act of 1989 (AB 935) requires each county to prepare and adopt a Countywide Integrated Waste Management Plan (CIWMP). The CIWMP is a State-mandated plan prepared by Zero Waste Marin. The plan identifies solid waste facilities within Marin County and describes the countywide plan for reaching the State-mandated 50 percent recycling goal. Waste reduction and disposal facilities in the county that require solid waste facility permits must conform to policies and siting criteria in the CIWMP. The CIWMP includes, by reference, source reduction and recycling elements, household hazardous waste elements, and nondisposal facility elements as well as a plan that describes countywide diversion programs and landfill disposal needs. The elements must be reviewed every five years and revised if necessary. The latest five-year review report for the CIWMP was submitted by Zero Waste Marin in March 2018.

In addition, each city, county, or regional agency must prepare an annual report for submittal to CalRecycle that summarizes its progress in reducing solid waste as required by Public Resources Code Section 41821. Once every two or four years (depending on the compliance schedule), CalRecycle conducts its own jurisdictional review of the annual reports to determine if the jurisdiction has met the Integrated Waste Management Act goals.

San Rafael General Plan 2020

The City of San Rafael 2020 General Plan goals, policies, and programs that are relevant to solid waste facilities are primarily in the Sustainability and Conservation Elements. As part of the proposed project, some existing General Plan policies would be amended or substantially changed, and new policies would be added. A comprehensive list of policy changes is provided in Appendix B, Proposed General Plan Goals, Policies, and Programs, of this Draft EIR. Applicable goals, policies, and programs are identified and assessed for their effectiveness and potential to result in an adverse physical impact later in this chapter under Section 4.17.4.3, Impact Discussion.

San Rafael Municipal Code

The SRMC includes various directives to manage solid waste in San Rafael. The SRMC is organized by title, chapter, and section. Most such directives are found in Title 9, Health and Sanitation, and Title 12, Building Regulations, as follows:

- Chapter 9.19, Refuse and Recycled Materials Collections and Disposal. The purpose of this chapter is to prevent actual or potential public health hazards and/or public nuisance within the city of San Rafael by regulating the accumulation, collection and disposal of solid waste, including but not limited to garbage, rubbish, waste matter, yard waste, recyclable materials and refuse.

- Chapter 12.235, California Green Building Construction Standards Code Amendments. Section 12.235.020, Amendments, describes the deletions and amendments to the adopted 2019 CALGreen Building Code Standards as described in Section 12.100.010, Adopted Code.

Existing Conditions

The Marin Hazardous and Solid Waste Management JPA, now known as Zero Waste Marin, consists of member agencies that collectively implement programs to comply with AB 939 requirements and divert from landfills 50 percent of all the solid waste that is generated. Zero Waste Marin, which includes 11 cities and towns as well as unincorporated areas in the county, has the goal of 94 percent waste diversion from landfills by 2025. As the regional agency, the JPA reports diversion progress to CalRecycle on a countywide basis.[66] The JPA's disposal rate in 2018 was 5.2 pounds of waste per day (ppd) per resident and 11.8 ppd per employee, which is well below the CalRecycle targets of 7.6 ppd per resident and 17.3 ppd per employee.[67]

Marin Sanitary Service provides residential, multi-family, and commercial garbage, recycling, and compostable collection services in the city and the unincorporated areas that are in the EIR Study Area. Marin Sanitary Service also provides the Food 2 Energy program for large generators of food waste, such as restaurants and grocery stores. The program collects organic food waste, diverts it from the landfill, and delivers it to the CSMA WWTP where it is converted into biogas to power the WWTP.

The Marin Recycling Center (MRC), located at 565 Jacoby Street in San Rafael, is the processing facility for all residential and commercial curbside recyclable materials. These materials are collected by Marin Sanitary Service in dual-sort carts at the curbside throughout the city. In addition to processing all curbside recyclables, the Buy Back center inside the MRC pays for certain recyclable items. MRC accepts and processes collected recyclables, including glass bottles and jars, aluminum and tin cans, and plastic bottles that have California Redemption Value. In addition, the MRC provides safe, secure document shredding services for all of Marin County. A mobile shredding van is also available on an on-call basis, or an account can be established for regular pick-up service.

The Marin Resource Recovery Center (MRRC), also located at 565 Jacoby Street in San Rafael, accepts and processes nonhazardous materials that are not picked up curbside. Waste accepted at the MRRC includes mixed construction and demolition debris; building construction and remodeling materials; landscaping materials; and bulky items, such as mattresses, box springs, bed frames, furniture, and noncommercial car and truck tires. Waste at the MRRC goes through a customized system of screens, conveyors, blowers, magnets, and hand-sorting. Each month, the MRRC processes nearly 3,000 tons of recyclables. The recycling rate for the second quarter of 2020 was 55.6 percent.[68]

[66] R3 Consulting Group, Inc., March 2011, *Marin County Hazardous and Solid Waste Management JPA Zero Waste Tool Kit*. https://zerowastemarin.org/assets/Toolkits/FinalDraftZeroWasteFeasibilityStudy012710.pdf

[67] CalRecycle, 2020*, Jurisdiction Review Reports*. https://www2.calrecycle.ca.gov/LGCentral/AnnualReporting/ReviewReports/PerCapitaDisposalTrends.

[68] Marin Recycling Center, 2020. Marin Resource Recovery Center, Q2 2020 Recycling Certification. Accessed at https://marinresourcerecoverycenter.com/mobius_cms/mrrcwp-content/uploads/2020/07/Q2-20202-Recycling-Certification.pdf on July 24, 2020.

The Marin Household Hazardous Waste Facility, also located at 565 Jacoby Street in San Rafael, accepts hazardous materials from Marin County residents and businesses.[69] The Reuse It Marin program encourages the reuse of certain hazardous materials that otherwise would be disposed of. Some of the items offered for reuse include latex paint, aerosol cans, household cleaning products, and automotive products. Approximately 61 percent of the collected hazardous waste material is recycled, and only 2 percent is landfilled.[70]

There are currently two landfills that accept most of the solid waste from the county:

- Redwood Landfill. This landfill currently accepts approximately 54 percent of the solid waste generated by the county. The landfill is operated by Waste Management and is located on a 420-acre site at 8950 Redwood Highway north of Novato and east of US-101. Approximately 220 acres are dedicated to landfill operations, and the remaining 200 acres support composting, recycling, and reuse services as well as open space and a freshwater lagoon for migratory waterfowl. A plant was constructed in 2017 that converts landfill gas to clean, renewable electricity for use by Marin Clean Energy customers. Waste Management also operates the largest composting facility in Marin County and offers recycled compost and mulch as WM EarthCare products. The landfill is licensed as a Class III nonhazardous disposal facility. It has a maximum permitted throughput of 2,300 tons/day and a remaining capacity of 26 million tons. The estimated closure date is July 1, 2024.
- Potrero Hills Landfill. This landfill accepts approximately 41 percent of the waste generated by the county. The landfill is operated by Waste Connections Company and is located on a 526-acre site at 3675 Potrero Hills Lane, a few miles south of Suisun City in the hills of Suisun Marsh in Solano County. A compost facility and a landfill-gas-to-energy plant is also operated at this site. The landfill has a maximum permitted throughput of 4,330 tons/day and a remaining capacity of 13,872,000 tons. The closure date is estimated to be February 14, 2048.

Other landfills that accepted waste from the county in 2018 (latest year in CalRecycle records) were, in decreasing tonnage amounts:

- Keller Canyon: 14,029 tons
- Monterey Peninsula: 1,625 tons
- Recology Hay Road: 1,240 tons
- Altamont Landfill & Resource Recovery: 632 tons
- Corinda Los Trancos (Ox Mountain): 358 tons
- Vasco Road Sanitary: 77 tons
- Forward: 42 tons
- Azusa Land Reclamation County: 34 tons
- Guadalupe Sanitary: 21 tons
- Fink Road: 14 tons
- Sacramento County: 11 tons
- Foothill Sanitary: 8 tons
- Kirby Canyon Recycling and Disposal Facility: 8 tons
- Yolo County Central: 2 tons
- Newby Island Sanitary: 1 ton

[69] Marin Sanitary Service, About Marin Sanitary Service, https://marinsanitaryservice.com/support/about-us/, accessed on May 24, 2019.

[70] Marin Household Hazardous Waste Facility, 2020. About the Marin HHW Facility. Accessed at https://marinhhw.com/about-marin-hhw/ on July 24, 2020.

According to the latest available data (2018) from CalRecycle, 95 percent of solid waste collected from the county was taken to the Redwood and Potrero Hills landfills.[71] Table 4.17-6 describes these two facilities in addition to the other three landfills that received the majority of the solid waste in 2018. Comparing the maximum permitted daily throughput to the average disposal amounts in 2018, the five landfills in Table 4.17-6 collectively have an excess capacity of 5,888 tons/day. Although the Redwood Landfill is scheduled to close in 2024 and the Keller Canyon Landfill is scheduled to close in 2030, the other three landfills will be open to accept waste from 2048 to 2107. The latest five-year review of the Marin County Integrated Waste Management Plan prepared in March 2018 indicates that the county has adequate disposal capacity (i.e., equal to or greater than 15 years).

TABLE 4.17-6 LANDFILLS SERVING ZERO WASTE MARIN

Landfill	Redwood Landfill	Potrero Hills Landfill	Keller Canyon Landfill	Monterey Peninsula Landfill	Recology Hay Road Landfill
Total Waste received in 2018 (tons)	360,730	933,379	811,886	220,370	716,235
Waste received from Zero Waste Marin in 2018 (tons)	134,862	97,201	14,029	1,625	1,240
Percentage of total waste from Zero Waste Marin	37%	10%	1.7%	0.7%	0.2%
Maximum permitted throughput (tons/day)	2,300	4,330	3,500	3,500	2,400
Average 2018 daily disposal rate (tons/day)	1,202	3,111	2,706	734	2,387
Remaining capacity (tons)	26,000,000	13,872,000	63,408,410	48,560,000	30,433,000
Estimated closing date	7/1/2024	2/14/2048	12/31/2030	2/28/2107	1/1/2077

Sources: CalRecycle. 2019. Solid Waste Information System (SWIS) Facility/Site Search; CalRecycle. 2019. Landfill Tonnage Reports.

Zero Waste Marin has set a goal of 94 percent diversion from landfills by 2025, which would greatly reduce the need for landfill disposal. The current diversion rate for 2018 is 66 percent, which is down from 75 percent in 2014.[72] Zero Waste Marin also provides grants to its member agencies to develop and implement programs that work toward the zero waste goal. The City has received an ongoing grant to continue its efforts for FY 2020–2021.

4.17.4.2 STANDARDS OF SIGNIFICANCE

Pursuant to Appendix G, Environmental Checklist Form, of the CEQA Guidelines, implementation of the proposed project would result in significant impacts related to solid waste if it would:

1. Generate solid waste in excess of State and local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals.

[71] CalRecycle, 2019, Jurisdiction Disposal and Alternative Daily Cover (ADC) Tons by Facility. https://www2.calrecycle.ca.gov/LGCentral/DisposalReporting/Destination/DisposalByFacility.

[72] Marin County Hazardous & Solid Waste Management JPA, 2020. Board of Directors Meeting, May 28,2020. Accessed at https://zerowastemarin.org/wp-content/uploads/2020/05/Agenda-Packet.pdf on July 25, 2020.

2. Comply with federal, State, and local management and reduction statutes and regulations related to solid waste.
3. Result in significant cumulative impacts related to solid waste.

4.17.4.3 IMPACT DISCUSSION

UTIL-9	**Implementation of the proposed project would not 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.**

General Plan 2040

Zero Waste Marin does not differentiate the amount of solid waste generated by each city or town within its jurisdiction. Therefore, the total amount of solid waste sent to landfills in 2018 (the latest year of record) for the service area was determined. The proportion of waste generated by the EIR Study Area was determined by dividing the service population of the EIR Study Area (i.e., residents plus employees) by the service population of the county. The existing service population of the EIR Study Area is approximately 32 percent of the county's service population. A three-year average disposal rate (from 2016 to 2018) for Zero Waste Marin shows that it collects approximately 235,070 tons of waste per year for landfill disposal.[73] Assuming that 32 percent of the collected solid waste is generated by the EIR Study Area, this equals approximately 75,222 tons/year under current conditions.

The service population in the EIR Study Area is anticipated to increase by 11 percent by the year 2040, which would result in an increase of 8,274 tons/year. At year 2040, it is estimated that 83,496 tons/year or approximately 278 tons/day would be sent to landfills for disposal. This estimate is conservative because it assumes that there is no change in the current diversion rate of 66 percent. With implementation of the Zero Waste Marin program's Integrated Waste Management Program, the diversion and recycling rate should increase over time. The results for the EIR Study Area and the Downtown Precise Plan Area are summarized in Table 4.17-7.

As shown in Table 4.17-7, a total of 83,496 tons/year would equate to about 278 tons/day (assuming 300 disposal days/year). Assuming that half of the solid waste is sent to Redwood Landfill and half to Potrero Hills Landfill, this would be about 12.5 percent of the current excess capacity of 1,098 tons/day at Redwood Landfill and about 11 percent of the current excess capacity of 1,219 tons/day at Potrero Hills Landfill. Assuming that Redwood Landfill closes in 2024 and Keller Canyon Landfill closes in 2030, the other three landfills would have an excess capacity of 4,020 tons/day, which would easily accommodate the 278 tons/day from the proposed project. In addition, these calculations conservatively assume that there is no increased diversion rate for recycling. The goal for Zero Waste Marin is a diversion rate of 94 percent by 2025, which would reduce the solid waste disposal to landfills. Also, the latest annual report by

[73] CalRecycle, 2019, Jurisdiction Disposal and Alternative Daily Cover (ADC) Tons by Facility. https://www2.calrecycle.ca.gov/LGCentral/DisposalReporting/Destination/DisposalByFacility.

Zero Waste Marin indicates that there is sufficient landfill capacity to meet the needs of the county for the next 15 years.

TABLE 4.17-7 SOLID WASTE LANDFILL DISPOSAL FOR THE EIR STUDY AREA

Area	Existing Service Population [a,b]	Existing Solid Waste Generation (tons/years)	Service Population at Buildout [a,b]	Percentage Increase	Solid Waste Generated at Buildout (tons/year)
Total EIR Study Area	119,951	75,222	132,976	11	83,496
Downtown Precise Plan Area	9,015	5,642	14,605	62	9,140

Notes:
[a] Refer to Tables 3-4 and 3-5 of this Draft EIR.
[b] Service population is the sum of population and employment.

Furthermore, potential future development pursuant to the proposed General Plan 2040 would comply with Section 4.408 of the 2019 CALGreen, which requires that at least 65 percent of nonhazardous construction and demolition waste from nonresidential construction operations be recycled and/or salvaged for reuse. Development would also comply with AB 341, which mandates recycling for commercial and multifamily residential land uses as well as schools and school districts. Additionally, potential future businesses pursuant to the proposed General Plan 2040 that generate organic waste in amounts over a certain threshold would be mandated to recycle organic matter in accordance with AB 1826. Therefore, solid waste facilities would be able to accommodate project-generated solid waste.

In addition, the proposed Community Services and Infrastructure (CSI) Element contains goals, policies, and programs that require local planning and development decisions to consider impacts related solid waste and solid waste facilities. The following General Plan goals, policies, and programs would serve to minimize potential adverse impacts related to solid waste:

Goal CSI-4: Reliable, Efficiently Managed Infrastructure. Support reliable, cost-effective, well-maintained, safe and resilient infrastructure and utility services.

- Policy CSI-4.17, Reducing Landfilled Waste Disposal: Requires the reduction of landfilled waste disposal and related greenhouse gas emissions by reducing material consumption; requiring curbside collection and composting of organic materials; increasing recycling, re- use, and resource recovery; and encouraging the use of recyclable goods and materials.
  - Program CSI-4.17A: Waste Reduction. Implement waste reduction programs consistent with the San Rafael Climate Change Action Plan and Zero Waste Goal. These include partnerships with Zero Waste Marin, Marin Sanitary Service, and other organizations; requirements for construction and demolition debris recycling; increased monitoring of waste diversion targets; waste audits; and additional infrastructure for removal of recoverable materials from the waste stream.
  - Program CSI-4.17B: Recycling. Continue recycling programs and expand these programs to increase waste diversion rates for homes, apartments and workplaces. .
  - Program CSI-4.17C: Construction and Demolition Waste. Continue to implement programs requiring recycling of construction and demolition debris. Encourage the reuse of recycled building materials in future projects.
  - Program CSI-4.17D: Waste Reduction Programs. Continue efforts to reduce electronic waste, refrigerants, and single use plastics; and ensure proper disposal of household hazardous waste.

This should include enforcement of City bans on plastic bags and polystyrene foam and potential new programs to reduce microplastics from waterways.
    - Program CSI-4.17E: Community Composting. Consider a mandatory community-scale program for curbside collection and composting of food and green waste, as well as vegetation cleared through fire prevention efforts.
    - Program CSI-4.17F: Food to Energy. Support the Central Marin Sanitation/ Marin Sanitary Food to Energy Program.
    - Program CSI-4.17G: Recyclable Waste Receptacles. Support efforts by Marin Sanitary to install waste receptacles for recyclables in areas of heavy pedestrian traffic.
- Policy CSI-4.18, Waste Reduction Advocacy and Education: Work with other cities and the County of Marin to advocate for programs and legislation to reduce waste and share waste reduction responsibilities with the manufacturers of consumer products.
    - Program CSI-4.18A: Recycling Education. Encourage Marin Sanitary to continue its recycling education programs and to expand awareness of "reduce, reuse, and recycle" principles among all residents and employees. Programs to promote reuse and repair of consumer goods rather than landfill disposal should also be supported.

With continued compliance with the applicable regulations, leading to increased recycling and waste diversion and adherence to and implementation of the proposed General Plan 2040 goals, policies, and programs, anticipated rates of solid waste disposal from the potential future development pursuant to the proposed project would be *less than significant* with respect to permitted landfill capacity.

Significance without Mitigation: Less than significant.

Downtown Precise Plan

As shown in Table 4.17-7, the existing service population for the Downtown Precise Plan is 9,015 (see Table 3-5). This amounts to approximately 2.4 percent of the service population of the county. Since Marin County generated on average approximately 235,070 tons of waste per year in the past three years, it is assumed that the Downtown Precise Plan Area generated 5,642 tons/year. With a service population increase to 14,605 by 2040, this would equate to an increased solid waste disposal rate of 3,498 tons/year for a total of 9,140 tons/year. This is equivalent to about 30 tons/day (assuming 300 disposal days/year), which is a small percentage of the existing capacity of the five landfills that serve Marin County. In addition, Zero Waste Marin plans to increase recycling and waste diversion rates to 94 percent by 2025. Therefore, there would be sufficient landfill capacity to accommodate the proposed potential future development in the Downtown Precise Plan Area, and impacts would be *less than significant*.

Significance without Mitigation: Less than significant.

UTIL-10 Implementation of the proposed project would comply with federal, State, and local statutes and regulations related to solid waste.

General Plan 2040

As discussed above, Zero Waste Marin, which serves the EIR Study Area, complies with State requirements to reduce the volume of solid waste through recycling and organic waste diversion. Its per capita disposal rates of 5.2 ppd per resident and 11.8 ppd per employee are well below the CalRecycle targets of 7.6 ppd per resident and 17.3 ppd per employee. In addition, all potential future development pursuant to the proposed General Plan 2040 would comply with CALGreen, which requires that at least 65 percent of nonhazardous construction and demolition waste from nonresidential construction operations be recycled and/or salvaged for reuse (Section 4.408 of the 2019 CALGreen). Potential future development would also comply with AB 341, which mandates recycling for commercial and multifamily residential land uses as well as schools and school districts. Additionally, potential future businesses pursuant to the proposed General Plan 2040 that generate organic waste in amounts over a certain threshold would be mandated to recycle organic matter in accordance with AB 1826. Therefore, the City and waste service providers would comply with all applicable federal, State, and local solid waste regulations, and impacts would be *less than significant*.

Significance without Mitigation: Less than significant.

Downtown Precise Plan

Zero Waste Marin, which serves the Downtown Precise Plan Area, complies with State requirements to reduce the volume of solid waste through recycling and organic waste diversion. Similar to potential future development in the areas outside of the Downtown Precise Plan Area, all potential future development pursuant to the Downtown Precise Plan would comply with Section 4.408 of the 2019 CALGreen and with the requirements of AB 341. Therefore, the City and waste service providers would comply with all applicable federal, State, and local solid waste regulations, and impacts would be *less than significant*.

Significance without Mitigation: Less than significant.

UTIL-11 Implementation of the proposed project could result in a cumulatively considerable impact to solid waste.

The discussion below addresses two aspects of cumulative impacts: (1) would the effects of the cumulative development result in a cumulatively significant impact on the resources in question and, if that cumulative impact is likely to be significant, (2) would the contributions to that impact from the project, which is the subject of this Draft EIR, be cumulatively considerable?[74]

[74] CEQA Guidelines Section 15064(h)(1), "cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of past, current, and probable future projects.

The area considered for cumulative impacts to solid waste disposal facilities is Marin County. As reported in Chapter 4.14, Population and Housing, of this Draft EIR (see Table 4.14-1), the 2040 projected service population for Marin County is 417,630, which amounts to an increase of 46,336, or approximately 12.5 percent, over the county's existing service population of 371,294. Since the county generated 235,070 tons of solid waste in 2019, it is assumed that in 2040 it would generate approximately 264,454 tons, or 882 tons per day. The five landfills that receive the majority of that solid waste have an excess capacity of 5,888 tons/day and could easily provide for the projected growth. In addition, 15 other landfills received solid waste from Marin County in 2018. If one or more of the landfills that currently receive most of the solid waste from the county were unavailable in the future, it is likely that the solid waste volume could be increased at one or more of the other landfills. In addition, Zero Waste Marin has a goal to recycle or divert 94 percent of its waste by 2025, which would reduce the volume of solid waste transported to landfills. Therefore, with continued compliance with the applicable regulations, in combination with past, present, and reasonably foreseeable development, solid waste cumulative impacts would be *less than significant*.

Significance without Mitigation: Less than significant.

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