4.14 UTILITIES AND SERVICE SYSTEMS

This section describes the utility systems (water, wastewater, solid waste, energy, and telecommunications) serving the project site and identifies the potential impacts to utility services and infrastructure that could result from implementation of the proposed project. Standard conditions of approval and/or mitigation measures to reduce or avoid potentially significant utility system impacts are identified, where appropriate. Impacts to the stormwater system are also more fully discussed in Section 4.7, Hydrology and Water Quality, of this Environmental Impact Report (EIR).

4.14.1 Setting

This section addresses the following utilities: (a) water supply, treatment, and distribution; (b) wastewater collection, treatment, and disposal; (c) solid waste; (d) energy; and (e) telecommunications.

4.14.1.1 Water Service, System and Supply

The following discussion provides background information on the sources of water, water treatment facilities, and water distribution system in the project area.

Water Supply. Potable water that is suitable for human consumption is provided to the project area by a publicly-owned and managed water system, administered by Marin Water, formerly known as the Marin Municipal Water District (MMWD). Marin Water serves more than 191,000 people in a 147-square-mile area[1] within eastern Marin County south of Novato. Twenty-seven (27) percent of the customers served by Marin Water are located in San Rafael.[2,3]

Marin Water's primary water supply is local surface water. The Marin Water water supply system consists of a network of 7 reservoirs with a total storage capacity of 25.9 billion gallons, 3 water treatment plants, 97 pump stations, 130 water storage tanks, and 908 miles of pipeline that collect, transmit, treat, and distribute water to Marin County customers.[4] Water is sourced locally, primarily from reservoirs on Mt. Tamalpais (75 percent of the water supply) and in west Marin. The estimated amount of water available from these surface sources is approximately 142,000 acre-feet per year (AFY), 75 percent of which originates from rainfall.[5] Marin Water also has an agreement with the Sonoma County Water Agency, effective through June 2025 with a renewal provision extending it through 2040, to import up to 14,300 AFY, primarily from the Russian River. Other water sources used by the Sonoma County Water Agency include surface diversions from Lake Mendocino, Lake Sonoma, and groundwater from the Santa Rosa Plain Subbasin of the Santa Rosa Valley Basin, although groundwater is used primarily as a drought period supply, or when the Russian River

1 Marin Water. 2021. *2020 Urban Water Management Plan.* May.
2 Marin Water. n.d. *Mission and History.* Website: https://www.marinwater.org/mission-and-history (accessed January 17, 2022).
3 City of San Rafael. 2021. *San Rafael General Plan 2040.*
4 Marin Water. *2019 Annual Water Quality Report.*
5 Marin Water. n.d. *Water Quality.* Website: https://www.marinwater.org/water-quality (accessed January 17, 2022).

supplies are otherwise constrained.[6] Marin Water's normal year water supply and projected demand through 2045 is show in Table 4.14.A.[7] As shown in Table 4.14.A, the Marin Water water demand is, and will remain, significantly lower than its normal year water supply. Table 4.14.A also shows available water supplies for a single dry year through 2045. Similar to the normal year supply, water demand would remain well below the single dry year water supply through 2045.

As shown in Table 4.14.A, under multiple dry years from 2025 through 2045 there is also no shortfall in the water supply for each consecutive 5-year period.[8] However, as shown in Table 4.14.A, under extreme drought conditions, which is the "worst-case" supply scenario in which total available supply is reduced to below 14,000 AFY by 2025, maximum shortfalls of up to 65 percent are projected, beginning with a 7.5 percent shortfall in the third year, then a 36 percent shortfall in the fourth year, followed by up to a 65 percent shortfall in the fifth year.[9]

The water system includes pipelines ranging in size from 0.75-inch-diameter pipes that connect to customers' water meters to 42-inch-diameter transmission mains that carry source water to the treatment plants. From 2016–2020, 54 percent of Marin Water's provided water was associated with residential use, 10 percent with commercial use, 5.5 percent with landscape, and 5.3 percent with institutional/governmental uses. Marin Water also supplies non-potable water, primarily for outdoor irrigation to commercial customers, which makes up about 3.7 percent of total water use within the District. Historical potable water use at the project site ranged from 17 to 32 AFY between 2017 and 2021, and historical recycled water use ranged from 9.7 to 17 AFY.[10]

Water Treatment Facilities. There are three water treatment plants operated by Marin Water that treat approximately 20.4 million gallons of water per day and have a combined design capacity to treat up to 71 million gallons per day (mgd).[11] These include the Bon Tempe Treatment Plant near Ross, the San Geronimo Treatment Plant in Woodacre, and the Ignacio Treatment Facility in Novato. In addition, there are five wastewater treatment plants within Marin Water's service area that collectively treat approximately 17,200 AFY of wastewater (refer to additional discussion in Section 4.14.1.2, below). Marin Water produces its own recycled water from effluent provided by the Las Gallinas Valley Sanitary District (LGVSD). Water treatment operations include aeration of surface water stored in reservoirs, removal of suspended matter in clarifiers, removal of microscopic particles in deep bed multi-media filters, inactivation of bacteria and pathogens by disinfectants, treatment for corrosion control, and fluoridation.[12]

6 Marin Water. 2022. *Water Supply Assessment for Northgate Town Square.* November.
7 Ibid.
8 The Urban Water Management Plan requires that a multiple dry year drought scenario be presented for 5 consecutive years, although Water Supply Assessment rules only require a 3-year scenario.
9 Ibid.
10 Ibid.
11 Marin Water. 2021. *2020 Urban Water Management Plan.* May.
12 Ibid.

Table 4.14.A: Marin Water Supplies, Demand, and Surplus (Shortfalls) – 2025 to 2045

Years	Normal Year			Single Dry Year			Multiple Dry Years			Extreme Drought Years		
	Water Supply (AFY)	Total Water Demand (AFY)	Surplus (Shortfall) (AF)	Water Supply (AFY)	Total Water Demand (AFY)	Surplus (Shortfall) (AF)	Water Supply (AFY)	Total Water Demand (AFY)	Surplus (Shortfall) (AF)	Water Supply (AFY)	Total Water Demand (AFY)	Surplus (Shortfall) (AF)
2025												
Year 1	83,840	37,269	**46,571**	51,211	37,269	**13,942**	78,635	37,269	**41,366**	62,778	37,269	**25,509**
Year 2	–	–	–	–	–	–	83,400	37,269	**46,131**	46,161	37,269	**8,892**
Year 3	–	–	–	–	–	–	85,509	37,269	**48,240**	34,614	37,269	**(2,655)**
Year 4	–	–	–	–	–	–	71,779	37,269	**34,510**	23,956	37,269	**(13,313)**
Year 5	–	–	–	–	–	–	68,520	37,269	**31,251**	13,060	37,269	**(24,209)**
2030												
Year 1	84,093	37,296	**46,797**	51,213	37,296	**13,917**	78,636	37,296	**41,340**	13,060	37,296	**(24,236)**
Year 2	–	–	–	–	–	–	83,389	37,296	**46,093**	13,060	37,296	**(24,236)**
Year 3	–	–	–	–	–	–	85,524	37,296	**48,228**	13,060	37,296	**(24,236)**
Year 4	–	–	–	–	–	–	71,771	37,296	**34,475**	13,060	37,296	**(24,236)**
Year 5	–	–	–	–	–	–	68,508	37,296	**31,212**	13,060	37,296	**(24,236)**
2035												
Year 1	83,825	37,225	**46,600**	51,209	37,225	**13,984**	78,634	37,225	**41,409**	13,060	37,225	**(24,165)**
Year 2	–	–	–	–	–	–	83,416	37,225	**46,191**	13,060	37,225	**(24,165)**
Year 3	–	–	–	–	–	–	85,493	37,225	**48,268**	13,060	37,225	**(24,165)**
Year 4	–	–	–	–	–	–	71,802	37,225	**34,577**	13,060	37,225	**(24,165)**
Year 5	–	–	–	–	–	–	68,545	37,225	**31,320**	13,060	37,225	**(24,165)**
2040												
Year 1	83,858	37,301	**46,557**	51,213	37,301	**13,912**	78,636	37,301	**41,335**	13,060	37,301	**(24,241)**
Year 2	–	–	–	–	–	–	83,388	37,301	**46,087**	13,060	37,301	**(24,241)**
Year 3	–	–	–	–	–	–	85,527	37,301	**48,226**	13,060	37,301	**(24,241)**
Year 4	–	–	–	–	–	–	71,770	37,301	**34,469**	13,060	37,301	**(24,241)**
Year 5	–	–	–	–	–	–	68,506	37,301	**31,205**	13,060	37,301	**(24,241)**
2045												
Year 1	83,926	37,458	**46,468**	51,223	37,458	**13,765**	78,641	37,548	**41,093**	13,060	37,548	**(24,488)**
Year 2	–	–	–	–	–	–	83,336	37,548	**45,788**	13,060	37,548	**(24,488)**
Year 3	–	–	–	–	–	–	85,604	37,548	**48,056**	13,060	37,548	**(24,488)**
Year 4	–	–	–	–	–	–	71,701	37,548	**34,153**	13,060	37,548	**(24,488)**
Year 5	–	–	–	–	–	–	68,402	37,548	**30,854**	13,060	37,548	**(24,488)**

Source: *Water Supply Assessment for Northgate Town Square* (Marin Water 2022).
AF = acre-feet
AFY = acre-feet per year

Distribution System. Treated water is distributed through a network of 886 miles of water mains, 94 pump stations, and 127 treated water storage tanks with a total capacity of 74.9 million gallons. In addition, Marin Water operates 27 miles of reclaimed water pipeline that is capable of delivering 1.9 million gallons of treated wastewater for irrigation and other non-potable purposes.[13]

The project site draws potable water from connections to existing 8-inch-diameter water mains in Las Gallinas Avenue, Los Ranchitos Road, and Northgate Drive. Connections to the existing 8-inch-diameter water mains are made at the northeast corner of the site in Las Gallinas Avenue, on the east side of the project site near the entrance opposite Merrydale Road and at the south end of the site near the intersection of Northgate Drive and El Faison Drive. In addition, there are two water main connections to an existing water main in Northgate Drive along the west boundary of the site near the Kohl's building. There is also a 21-inch-diameter water main along the eastern boundary of the project site in Las Gallinas Avenue and Los Ranchitos Road, but the project site does not appear to be connected to this line, nor is a future connection proposed for the project site. The potable water connections from the existing 8-inch-diameter mains in the public streets surrounding the project site provide water to an interconnected on-site water distribution system that supplies water for the building meters, building fire suppression systems, hydrants, and irrigation throughout the site.

There are separate recycled water mains in Las Gallinas Avenue to the north of the project site, in Los Ranchitos Road to the east of the project site, and in Northgate Drive to the south of the project site. There is no existing recycled water main in Northgate Drive to the west of the project site. There are existing connections to the recycled water main to the east of the project site. There are no known required, planned, or future upgrade projects within the vicinity of the project site that would impact the project site, and Marin Water has not indicated any concerns about the ability of the water delivery or treatment system to serve the project site.

Water Demand. In 2015, water demand on Marin Water's system was 37,547 AFY, including both potable and raw water. By 2045, Marin Water projects that water demand will increase to 37,458 AFY, including both potable and raw water, based on population and employment growth projections from the 2018 Association of Bay Area Governments Plan Bay Area Projections 2040. The projected water demand in 2045 would be approximately 45 percent of the available supply in 2045 during a normal water year (83,926 AFY), 73 percent of the available supply during a single dry year (51,223 AFY), and 55 percent of the available supply during multiple dry years (68,402 AFY in the fifth year of a 5-year drought).[14] Therefore, the projected water demand through 2045 would be within the system's capacity, even during periods of multiple dry years.[15] Under extreme drought

[13] Marin Water. 2021. *2020 Urban Water Management Plan.* May.

[14] As mentioned in Section 6.9 of the 2020 Urban Water Management Plan (2020 UWMP), projected supplies are based on modeling performed as part of the 2020 UWMP update. It is not uncommon for projected supplies to be higher during multiple-year droughts as compared to single-year droughts. The guidance from the Department of Water Resources for projected dry year supplies are to use the lowest available water supply for single dry years and the driest 5-year period in the district's historical record for multiple dry years (see Section 7.2 of the 2020 UWMP for more detail). Given this, it is possible for the single dry year to be lower than the multiple dry year supply values.

[15] Marin Water. 2022. *Water Supply Assessment for Northgate Town Square.* November.

conditions, the potable and raw water supply would be reduced to 13,060 AFY, and the demand would exceed the supply by 24,398 AFY.

The largest proportion of water demand within the Marin Water service area is from the single-family residential sector, which represented approximately 39 percent of the demand in the 2017–2021 period. The remainder of the demand is split between environmental releases from the Kent Lake and Soulajule Reservoir (29 percent), the multi-family residential sector (8.7 percent), losses (7.2 percent), commercial (7 percent), industrial/governmental (3.8 percent), dedicated landscape (3.7 percent), other potable (1 percent), and non-potable demand (0.6 percent).

Marin Water is also pursuing additional water sources to supplement the available water supply in the future in times of drought. These include the following: (a) an Intertie Project that would consist of the construction of an 8-mile pipeline across the Richmond-San Rafael Bridge that would carry water purchased from third parties; (b) a potential desalination facility; and (c) a "Winter Water" project in which Marin Water would obtain excess water from the Russian River that is above the minimum in stream flow requirements.[16] The proposed Intertie Project is undergoing the California Environmental Quality Act (CEQA) environmental review process, a desalination facility is being investigated as a future supplemental water supply option, and Marin Water is currently working with Sonoma Water to explore the feasibility of capturing and using winter water as drinking water during periods of drought.[17,18,19]

Other efforts that Marin Water is making to assist in water conservation efforts include: (a) offering free non-potable recycled water for irrigation and other outdoor uses, a variety of rebates, and free water-efficient fixtures and water-saving kits; (b) providing free outdoor water use consultations with conservation and gardening tips for home gardens; and (c) imposing penalties for water use above certain amounts based on a customer's tier, seasonal restrictions on outdoor irrigation, and restrictions on the filling of swimming pools.[20]

Marin Water has a Water Shortage Contingency Plan[21] (WSCP) that defines water shortage levels and identifies corresponding response actions and procedures for reducing demand for water during mild to severe droughts or other water shortage conditions. The WSCP includes the stages of response to a water shortage caused by drought or by supply interruptions caused by infrastructure failure, regulatory mandate, or catastrophic human-caused or natural events. The primary objective of the WSCP is to ensure that Marin Water has in place the necessary resources and management

16 Marin Water. n.d. *Water Supply Projects.* Website: https://www.marinwater.org/WaterSupplyProjects (accessed January 17, 2022).

17 Marin Water. n.d. *Intertie Project.* Website: https://www.marinwater.org/Intertie (accessed August 4, 2023).

18 Marin Water. n.d. *Desalination.* Website: https://www.marinwater.org/desalination (accessed August 4, 2023).

19 Marin Water. n.d. *Winter Water from Sonoma County Water Agency.* Website: https://www.marinwater.org/SonomaWaterProject#:~:text=Overview,of%20water%20received%20from%20Sonoma (accessed August 4, 2023).

20 Marin Water. n.d. *Your Water*. Website: https://www.marinwater.org/your-water (accessed January 17, 2022).

21 Marin Water. 2023. *Water Shortage Contingency Plan.* February.

responses needed to protect health and human safety, minimize economic disruption, and preserve environmental and community assets during water supply shortages and interruptions. The WSCP also includes procedures to conduct an annual assessment of water supply and demand in order to determine whether water shortage conditions are likely to exist in the forthcoming year, and to proactively begin the process of implementing WSCP stages of action, as appropriate. Marin Water is also currently preparing a Strategic Water Supply Assessment, which will identify ways in which its water supply portfolio can be augmented to serve all users in an extreme drought scenario and will introduce new measures to augment supply to meet its customers' water needs.[22]

4.14.1.2 Wastewater (Sanitary Sewer) System

Sanitary sewer service is provided to the project area by the LGVSD. This section describes the LGVSD's wastewater collection, treatment, and disposal.

Wastewater Collection. The LGVSD collection system consists of 105 miles of gravity sewer pipelines, 6.7 miles of force mains/pressure sewers, and 28 pump stations. The LGVSD collects and treats wastewater for approximately 32,000 residents and businesses in North San Rafael and neighboring parts of unincorporated Marin County. The service area spans roughly 20 square miles. All wastewater collected by the LGVSD is conveyed to the LGVSD treatment and recycling facilities, which are located on over 400 acres on San Pablo Bay.[23,24,25]

The project site has three existing points of connection to the existing public sewer system maintained by the LGVSD. Two points of connection are in manholes located in Las Gallinas Avenue at the northern boundary of the site, and the third connection is at a manhole in Los Ranchitos Road at the southeast corner of the site. The sewer pipes within the project site are 6 to 8 inches in diameter. The existing sewer main in Las Gallinas Avenue is 8 inches in diameter and conveys sewer flows northerly to a 12-inch-diameter gravity sewer main that terminates northeasterly of the project site at the John Duckett sewer pump station. The John Duckett sewer pump station pumps sewer flows through a force main to the LGVSD wastewater treatment plant. The existing sewer main in Los Ranchitos Road is an 8-inch-diameter main that conveys sewer flows northerly toward Merrydale Road then easterly and southerly to the San Rafael Meadows pump station. The San Rafael Meadows pump station pumps sewer flows east across United States Route 101 (US-101) into a gravity and force main system that eventually terminates at the LGVSD wastewater treatment plant.

Wastewater Treatment. The LGVSD Wastewater Treatment Plant (WWTP) was constructed in 1955 and expanded in 1958, 1972, and 1984. The WWTP has the capacity to treat 2.92 mgd. From November through April, the treated wastewater is released to Miller Creek, which leads to San Pablo Bay. From May through October, effluent is reused to irrigate pasture land, is stored in ponds to accelerate evaporation, and is either later discharged to Miller Creek or taken to Marin Water for

22 Marin Water. 2022. *Water Supply Assessment for Northgate Town Square.* November.
23 City of San Rafael. 2021a. *San Rafael General Plan 2040.*
24 Las Gallinas Valley Sanitary District (LGVSD). n.d. *Our Service Area.* Website: http://www.lgvsd.org/about-us/our-service-area/ (accessed January 17, 2022).
25 Las Gallinas Valley Sanitary District (LGVSD). n.d. *About Us.* Website: https://www.lgvsd.org/about-us/ (accessed January 17, 2022).

further treatment and distribution for landscape irrigation. The LGVSD WWTP has a dry weather capacity of 8 mgd and a wet weather capacity of 18 mgd. The LGVSD WWTP treats an average flow of 2.36 mgd, and the peak wet weather flow is approximately 22 to 24 mgd. Additional flows beyond the treatment capacity are diverted around the secondary treatment units and blended with secondary-treated effluent, all of which is then dechlorinated prior to discharge.[26]

4.14.1.3 Storm Drainage System

The City of San Rafael (City) Department of Public Works (DPW) owns and maintains the storm drain system that is located throughout San Rafael. 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. The DPW also maintains approximately 35 miles of open ditches and culverts and operates 12 stormwater pump stations. Stormwater pipelines in San Rafael range from 4 to 48 inches in diameter.[27]

The existing stormwater from the project site either infiltrates through the surface soils within the landscaped areas of the project site, or runs off the impervious surfaces into the adjacent streets where it collects in the San Rafael storm drainage system. The storm drainage system is a combination of private and public systems. The public systems lie within storm drain easements and intercept runoff from surrounding, off-site areas and from private connections within the project site.

The pipe systems are sloped similarly to the ground surface, and runoff ultimately flows downstream from west to east. However, after intercepting runoff from the highest areas of the project site, near the middle of the western boundary along Northgate Drive, the storm drain system is split. Runoff from a majority of the buildings and the northern half of the site flows north to Las Gallinas Avenue, then eastward to the public system in Merrydale Road. Runoff from the southern half of the site flows south to Northgate Drive, then north along Los Ranchitos Road until it is also intercepted by the public storm drain system in Merrydale Road. The storm drain pipe size is 48 inches and is approximately 13.5 feet deep where site runoff is intercepted in Merrydale Road, near the intersection of Las Gallinas Avenue and Los Ranchitos Road. After being intercepted by the storm drain pipe in Merrydale Road, runoff continues eastward, crossing US-101 and then enters storm drain channels on the east side of US-101. The storm drain channels on the east side of US-101 receive and convey storm water runoff to South Fork Gallinas Creek and then to San Pablo Bay.

4.14.1.4 Solid Waste

The Marin Hazardous and Solid Waste Management Joint Powers Authority (JPA), now known as Zero Waste Marin, consists of member agencies that collectively implement programs to comply with Assembly Bill (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 Marin County, has the goal of 94 percent waste diversion from landfills by 2025. As the

[26] City of San Rafael. 2021. *San Rafael General Plan 2040 & Downtown Precise Plan Draft EIR for the City of San Rafael.* January 7.

[27] Ibid.

regional agency, Zero Waste Marin reports diversion progress to the California Department of Resources Recycling and Recovery (CalRecycle) on a countywide basis. Zero Waste Marin's disposal rate in 2018 was 5.2 pounds per day (lbs/day) of waste per resident and 11.8 lbs/day per employee, which is well below the CalRecycle targets of 7.6 lbs/day per resident and 17.3 lbs/day per employee.[28]

Marin Sanitary Service oversees garbage, recycling, and compost collection as well as street sweeping services within San Rafael and nearby unincorporated areas. Marin Sanitary Service currently services more than 33,000 residential and commercial accounts.[29]

Residential and commercial recyclable and waste materials are processed at the Marin Sanitary Service Transfer Station, Marin Resource Recovery Center, Marin Recycling Center, and Marin Household Hazardous Waste Facility. Approximately 3,000 tons of recyclables are processed each month at the Marin Recovery Center and Marin Recycling Center. The Marin Household Hazardous Waste Facility is located adjacent to the Marin Recycling Center and accepts paint, household cleaning products, automotive products, and other materials that would be hazardous if disposed in a landfill.[30,31]

Refuse that is not recyclable or hazardous is transported to the Marin Sanitary Service Transfer Station, which has a maximum daily permitted throughput of 2,640 tons.[32] Waste is then transferred to one of several landfills. Approximately 54 percent of landfill waste from San Rafael goes to the Redwood Landfill, located north of Novato. Redwood Landfill is a 420-acre site with 222.5 acres dedicated to waste disposal, which has a maximum daily throughput of 2,300 tons and a remaining capacity of 26,000,000 cubic yards.[33] About 41 percent is transported to the Potrero Hills Landfill near Suisun City, which has a maximum daily permitted throughput of 4,330 tons and a remaining capacity of 13,872,000 cubic yards.[34] The remaining 5 percent goes to landfills around the State. The Redwood Landfill is expected to close in 2024 and the Potrero Hills landfill (13.8 million tons remaining capacity) is expected to be operational through 2048.

---

28 City of San Rafael. 2021. *San Rafael General Plan 2040 & Downtown Precise Plan Draft EIR for the City of San Rafael*. January 7.

29 Marin Sanitary Service. n.d. *About Marin Sanitary Service*. Website: https://marinsanitaryservice.com/support/about-us/ (accessed January 17, 2022).

30 City of San Rafael. 2021. *San Rafael General Plan 2040 & Downtown Precise Plan Draft EIR for the City of San Rafael*. January 7.

31 Marin Sanitary Service. n.d. *About Marin Sanitary Service*. Website: https://marinsanitaryservice.com/support/about-us/ (accessed January 17, 2022)

32 California Department of Resources Recycling and Recovery (CalRecycle). n.d. *SWIS Facility/Site Activity Details: Marin Sanitary Service Transfer Station (21-AA-0005)*. Website: https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/3059?siteID=1731 (accessed January 17, 2022).

33 California Department of Resources Recycling and Recovery (CalRecycle). n.d. *SWIS Facility/Site Activity Details: Redwood Landfill (21-AA-0001)*. Website: https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/3054?siteID=1727 (accessed January 17, 2022).

34 California Department of Resources Recycling and Recovery (CalRecycle). n.d. *SWIS Facility/Site Activity Details: Potrero Hills Landfill (48-AA-0075)*. Website: https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/1194?siteID=3591 (accessed January 17, 2022).

Other landfills serving Zero Waste Marin include Keller Canyon Landfill (63 million tons remaining capacity), Monterey Peninsula Landfill (48 million tons remaining capacity), and Recology Hay Road Landfill (30 million tons remaining capacity). 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 have a combined capacity of 91.8 million tons and will be open to accept waste from 2048 to 2107, and the latest 5-year review of the Marin County Integrated Waste Management Plan prepared in March 2018 indicates that Marin County has adequate disposal capacity (i.e., equal to or greater than 15 years). Furthermore, Zero Waste Marin has set a goal of 94 percent diversion from landfills by 2025, which would greatly reduce the need for landfill disposal.[35]

4.14.1.5 Energy and Telecommunications

The following describes energy and telecommunications services within the project area. All of the energy and telecommunications lines that serve the project site are currently underground. There are no aboveground lines that serve the project site.

Energy. Marin Clean Energy (MCE) provides electrical service to the project area using infrastructure owned and operated by the Pacific Gas and Electric Company (PG&E). Natural gas service is currently provided to the project site by PG&E. PG&E charges connection and user fees for all new development in addition to sliding rates for electrical and natural gas service based on use. Electrical services are currently available at the project site. Title 24, California's Energy Efficiency Standards for Residential and Nonresidential Buildings, details requirements to achieve the minimum energy efficiency standards of the State of California. The standards regulate energy consumed by new residential and non-residential building construction for heating, cooling, ventilation, water heating, and lighting. The local building permit process verifies and enforces compliance with these standards.

Electric and natural gas service is provided to the project site through a combination of joint trenches that include both services or individual lines, all of which are located underground. The joint trench is generally located along the eastern boundary of the project site within Northgate Drive, with individual electrical and gas lines branching off from the joint trench and running through the project site to connect to transformers and smaller gas lines. The lines are separated within Las Gallinas Avenue and Los Ranchitos Road, including a 16-inch-diameter gas main along the western border of the project site.

Telecommunications. Multiple telecommunications providers, which include telephone, cable, and internet services, serve San Rafael. The City regulates service providers in accordance with federal law. Service providers are privately owned and operated, and recover the costs of operation, maintenance, and capital improvement through connection and user fees collected from all

[35] City of San Rafael. 2021. *San Rafael General Plan 2040 & Downtown Precise Plan Draft EIR for the City of San Rafael*. January 7.

customers. These services are currently available at the project site either through connections within existing joint trenches or overhead lines or individual overhead or underground lines.

The California Public Utilities Commission (CPUC) regulates California's telecommunications industry and requires that local telecommunications service providers anticipate and serve new growth. To meet this requirement, local providers continually upgrade their facilities, technology, and infrastructure to remain in conformance with California Public Utilities Commission tariffs and regulations and to serve customer demand in San Rafael.

4.14.1.6 Regulatory Framework

The following section describes the federal, State, and local regulatory framework related to water service and supply, solid waste management, and other utilities.

Federal Regulations. The following describes federal regulations concerning utilities, including the Safe Drinking Water Act, National Pollutant Discharge Elimination System (NPDES), and the Energy Policy Act.

Safe Drinking Water Act. The Safe Drinking Water Act (SDWA) of 1974 gave the United States Environmental Protection Agency (EPA) the authority to set standards for contaminants in drinking water supplies. The EPA was required to establish primary regulations for the control of contaminants that affected public health and secondary regulations for compounds that affect the taste, odor, and aesthetics of drinking water. Under the provisions of the SDWA, the California Department of Health Services (DHS) has the primary enforcement responsibility. Title 22 of the California Administrative Code establishes DHS authority, and stipulates State drinking water quality and monitoring standards.

National Pollutant Discharge Elimination System. Treated wastewater is closely regulated for health and environmental concerns and is included in the NPDES program. The City of San Rafael has been designated as a small Municipal Separate Storm Sewer System (MS4) and is responsible for implementing the requirements of the Phase II Program statewide general permit, State Water Board Order No. 2013-0001 DWQ, adopted February 5, 2013. The permit provides a uniform standard for wastewater and stormwater discharges for the counties and agencies designated as small MS4s. The City is mandated to comply with the NPDES Permit by State and federal laws, statutes, and regulations.

Energy Policy Act of 1992. The Federal Energy Regulatory Commission (FERC) regulates the transmission and sale of electricity in interstate commerce (including interstate gas pipelines that serve California), licensing of hydroelectric projects, and oversight of related environmental matters. As part of the license application process, environmental analysis pursuant to the National Environment Policy Act (NEPA) must be conducted. The FERC acts under the legal authority of the Federal Power Act of 1935, the Public Utility Regulatory Policies, and the Energy Act of 1992, in addition to several other federal acts. The Energy Act of 1992 addresses energy efficiency, energy conservation and energy management, natural gas imports and exports, and alternative fuels (including as used in motor vehicles). It amended parts of the Federal Power Act of 1935.

California State Regulations. The following describes State regulations concerning utilities, including Senate Bill (SB) 610 and SB 221, the Integrated Waste Management Act, the Solid Waste Reuse and Recycling Act, and the California Green Building Standards Code (CALGreen Code).

Senate Bills 610 and 221. SB 610, codified as Sections 10910–10915 of the California Public Resources Code (PRC), requires local water providers to conduct a Water Supply Assessment (WSA) for projects proposing over 500 housing units, 250,000 square feet of commercial office space (or more than 1,000 employees), a shopping center or business establishment with over 500,000 square feet (or more than 1,000 employees), or equivalent usage. Issuance of a WSA determination by the local water supplier for a proposed project verifies that the supplier has previously considered a proposed project in its Urban Water Management Plan (UWMP) and has adequate capacity to serve a project in addition to its existing service commitments, or alternatively, measures that would be required to adequately serve the proposed project. SB 221 establishes consultation and analysis requirements related to water supply planning for residential subdivisions including more than 500 dwelling units. Written verification by the water supplier that sufficient water is available for the project is required before construction begins.

Integrated Waste Management Act. In 1989, the California Legislature enacted the California Integrated Waste Management Act (AB 939), which requires the diversion of waste materials from landfills to preserve landfill capacity and natural resources. Cities and counties in California were required to divert 25 percent of solid waste by 1995, and 50 percent of solid waste by 2000. AB 939 further requires every city and county to prepare two documents demonstrating how the mandated rates of diversion will be achieved. The Source Reduction and Recycling Element must describe the chief source of the jurisdiction's waste, the existing diversion programs, and current rates of waste diversion and new or expanded diversion programs. The Household Hazardous Waste Element must describe each jurisdiction's responsibility in ensuring that household hazardous wastes are not mixed with non-hazardous solid wastes and subsequently deposited at a landfill.

Solid Waste Reuse and Recycling Access Act. The Solid Waste Reuse and Recycling Access Act requires areas in development projects to be set aside for collecting and loading recyclable materials. The Act required CalRecycle to develop a model ordinance for adoption by any local agency relating to adequate areas for 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 to govern adequate areas in development projects for collection and loading of recyclable materials.

California Green Building Standards Code. The CALGreen Code became effective for all projects beginning after January 1, 2011. Section 4.408, Construction Waste Reduction Disposal and Recycling, of the CALGreen Code mandates that in the absence of a more stringent local ordinance, a minimum of 50 percent of non-hazardous construction and demolition debris must be recycled or salvaged. The CALGreen Code requires applicants to submit a Waste Management Plan (WMP) for on-site sorting of construction debris to the City of San Rafael. The 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 collected material will 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. The following describes local regulation concerning utilities, including the General Plan and the Construction and Demolition Recycling Regulations.

San Rafael General Plan 2040. The General Plan contains the following goals, policies, and actions concerning utilities.

Goal LU-1: Well-Managed Growth and Change. Grow and change in a way that serves community needs, protects the environment, improves fiscal stability, and enhances the quality of life.

Policy LU-1.2: Development Timing. For health, safety, and general welfare reasons, new development should only occur when adequate infrastructure is available, consistent with the following findings:

- The project is consistent adopted Vehicle Miles Traveled (VMT) standards, as well as the requirements for Level of Service (LOS) specified in the Mobility Element.
- Planned circulation improvements necessary to meet City standards for the project have funding commitments and completed environmental review.
- Water, sanitary sewer, storm sewer, and other infrastructure improvements needed to serve the proposed development have been evaluated and confirmed to be in place or to be available to serve the development by the time it is constructed.
- The project has incorporated design and construction measures to adequately mitigate exposure to hazards, including flooding, sea level rise, and wildfire.

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. Encourage water conservation and increased use of recycled water in businesses, homes, and institutions. Local development and building standards shall require 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.

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.

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.

Policy C-3.9: Water-Efficient Landscaping. Encourage-and where appropriate require-the use of vegetation and water-efficient landscaping that is naturalized to the San Francisco Bay region and compatible with water conservation, fire prevention and climate resilience goals.

Goal C-4: Sustainable Energy Management. Use energy in a way that protects the environment, addresses climate change, and conserves natural resources.

Policy C-4.1: Renewable Energy. Support increased use of renewable energy and remove obstacles to its use.

Program C-4.1C: Regulatory Barriers. Continue efforts to remove regulatory barriers and provide creative incentives for solar energy installations, such as rooftop solar systems and parking lot canopies. The installation of renewable energy systems that are consistent with the Climate Change Action Plan should be encouraged and accelerated.

Program C-4.1D: Reducing Natural Gas Use. Pending further financial analysis and community input, implement electrification of building systems and appliances in new buildings and those that currently use natural gas. This should be achieved by requiring new or replacement furnaces and appliances to be electric and utilize fossil free energy.

Policy C-4.2: Energy Conservation. Support construction methods, building materials, and home improvements that improve energy efficiency in existing and new construction.

Program C-4.2B: Green Building Standards. Implement State green building and energy efficiency standards for remodeling projects and new construction. Consider additional measures to incentivize green building practices, low carbon concrete, and sustainable design.

Program C-4.2C: Energy Efficiency Incentives. Provide financial incentives, technical assistance, streamlined permitting processes, and partnerships to encourage energy-efficiency upgrades in new and existing buildings. Typical improvements include the use of energy-efficient windows, lighting, and appliances, induction and convection cooking, insulation of roofs and exterior walls, higher-efficiency heating and air conditioning (including electrical heat pump systems), and other projects that lower electricity and natural gas consumption.

Program C-4.2E: Cool Roofs and Pavement. Encourage the use of materials that minimize heat gain on outdoor surfaces such as parking lots, roadways, roofs and sidewalks.

Policy C-4.5: Resource Efficiency in Site Development. Encourage site planning and development practices that reduce energy demand and incorporate resource- and energy-efficient infrastructure.

Program C-4.5A: Solar Site Planning. Use the development review process to:

- Encourage opportunities for passive solar building design and the use of photo-voltaic materials and devices
- Review proposed site design for energy efficiency, such as shading of parking lots and summertime shading of south-facing windows

Policy C-4.5: Resource Efficiency in Site Development. Encourage site planning and development practices that reduce energy demand and incorporate resource- and energy-efficient infrastructure.

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

Policy CSI-4.2: Adequacy of City Infrastructure and Services. As part of the development review process, require applicants to demonstrate that their projects can be adequately served by the City's infrastructure. All new infrastructure shall be planned and designed to meet the engineering and safety standards of the City as well as various local service and utility providers.

Program CSI-4.2B: Engineering Standards. Require new development to comply with 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.

Policy CSI-4.4: Sustainable Design. Plan, design, and operate infrastructure to minimize non-renewable energy and resource consumption, improve environmental quality, promote social equity, and reduce greenhouse gas emissions. An evaluation of costs and benefits must be a factor in all improvements. This includes the potential costs of inaction and potential for "avoided costs" particularly with respect to climate change.

Program CSI-4.4A: Public Space and Infrastructure. Seek opportunities to improve environmental quality in the design of streets, infrastructure, and public spaces.

Program CSI-4.4B: Reducing Impervious Surfaces. Pursue porous pavement, rain catchment areas, and similar elements that reduce runoff.

Policy CSI-4.8: Potable Water Supply and Delivery. Work with Marin Municipal Water District (MMWD) to meet projected water demand, encourage water conservation, and ensure the reliability and safety of the water supply and distribution system.

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.

Policy CSI-4.16: Telecommunication Improvements. Ensure that residents, schools, businesses, and organizations have access to reliable, modern, and cost-effective telecommunications. A variety of network options, including fiber optics and wireless, should be encouraged and expanded throughout the city.

Policy CSI-4.17: Reducing Landfilled Waste Disposal. Reduce 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-4.17C: 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.

Policy CSI-5.6: Public-Private Partnerships. Explore public-private partnerships as a way to develop community facilities or achieve other community benefits (for example, public parking, affordable housing, pedestrian paths, and childcare in new development projects.

Construction and Demolition Recycling Regulations. The CALGreen Code requires that a minimum of 65 percent of waste generated from most construction, remodeling, and demolition projects be diverted by deconstruction or reuse of materials. These materials may be hauled to a Zero Waste Marin-Certified Facility for recycling, or a site-specific Construction Waste Management Plan may be developed that details how construction and demolition debris will be source separated, reused, recycled, or otherwise diverted from a landfill.

4.14.2 Impacts and Mitigation Measures

The following describes the project's potential impacts on utilities and service systems, consisting of water, wastewater, stormwater, solid waste, and electrical systems. This section begins with the criteria of significance, which establish the thresholds used to determine whether an impact is significant. The latter part of this section presents the impacts associated with the proposed project and identifies mitigation measures, as appropriate. Where necessary, impacts of phasing are discussed under separate sections for Phase 1 and 2. Impacts would be the same under the development of Phases 1 and 2 where they are not differentiated.

4.14.2.1 Significance Criteria

Implementation of the proposed project would have a significant impact related to utilities and service systems if it would:

Threshold 4.14.1: Require or result in the relocation or construction of new or expanded water, wastewater treatment, stormwater drainage, electric power, natural

gas, or telecommunications facilities, the construction of which could cause significant environmental effects;

Threshold 4.14.2: Exceed the City of San Rafael's currently available water supplies and result in insufficient water supplies to serve the proposed project in addition to existing and planned future development within San Rafael during normal, dry, and multiple dry years over the next 20 years, including buildout of the project;

Threshold 4.14.3: Result in insufficient wastewater treatment capacity to serve the project and reasonably foreseeable development over the next 20 years, including buildout of the project;

Threshold 4.14.4: Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals; or

Threshold 4.14.5: Conflict with federal, State, and local management and reduction statutes and regulations related to solid waste, including:

- The California Integrated Waste Management Act,
- SB 1374, Model Construction and Demolition Diversion Ordinance,
- AB 1826, Mandatory Commercial Organics Recycling,
- SB 1016, Per Capita Disposal and Goal Measurement,
- San Rafael General Plan Sustainability and Conservation Elements, and
- San Rafael Municipal Code, Chapters 9.19 and 12.235.

4.14.2.2 Project Impacts

The following section discussed potential impacts related to utilities and service systems associated with development of the proposed project.

Threshold 4.14.1: Utility Infrastructure. The following section describes potential impacts that could occur with the construction, relocation, or improvement of new or expanded water, wastewater treatment, stormwater drainage, electric power, natural gas, or telecommunications facilities infrastructure that would be required to serve the proposed project.

Water. Water service on the project site is provided by 8-inch-diameter water mains within Northgate Drive, Los Ranchitos Road, and Las Gallinas Avenue. Additionally, 8-inch-diameter water lines also run through the project site to serve the existing buildings. The proposed project would include new 8-inch-diameter water mains on the project site that would connect to existing mains within the project site, Northgate Drive, and Las Gallinas Avenue. All water infrastructure improvements, including new connections, would be required to be constructed

in compliance with the applicable regulations in Title 11 of the Marin Water Code.[36] Title 11 includes requirements governing the application for water service, installation of new service connections, cross-connections, water main extensions, and fire taps.

The three Marin Water water treatment plants have a total capacity of 71 mgd, which equates to approximately 79,530 AFY. This substantially exceeds the anticipated water demand for the Marin Water service area as shown in Table 4.14.A. Therefore, no new water facilities or expansion of existing facilities would be required, and this impact would be **less than significant.**

Wastewater. Wastewater at the project site is currently divided between the Terra Linda trunk sewer to the north (discharging into the John Duckett Pump Station) and the Merrywood trunk sewer to the south (discharging to the San Rafael Meadows and Civic Center Pump Stations). The existing flow rate from the project site is approximately 0.03 mgd. The LGVSD sewer design standards typically require using 400 gallons per day per capita and the national average occupancy for multi-family apartments is 2.6 occupants per unit. Therefore, it is estimated that full buildout of the proposed project would generate 1.47 mgd of sewer flow, an increase of approximately 1.44 mgd compared to existing conditions.

Flows from a portion of the project site are discharged along Las Gallinas Avenue/Los Ranchitos Road to the San Rafael Meadows Pump Station followed by the Civic Center Pump Station. The San Rafael Meadows Pump Station has a capacity of 1.3 mgd and the Civic Center Pump Station has a capacity of 2.3 mgd. The remaining flows from the project site are discharged to the John Duckett Pump Station, which has a capacity of 10.7 mgd. Therefore, there appears to be sufficient capacity at the John Duckett Pump Station to accommodate the proposed project through 2040. However, based on the model result for the Terra Linda Trunk Sewer, there is not sufficient capacity in the sewer between the project site and the John Duckett Pump Station to accommodate flows from the project site. The estimated available capacity in the 12-inch-diameter sewer line downstream of the project site is 1.3 mgd, which is insufficient to accommodate the full flow from the project site of 1.47 mgd in 2040. This is a **potentially significant** impact.

Impact UTL-1 The proposed project would generate wastewater that would exceed the capacity of the existing sewer infrastructure that serves the project site. (S)

The existing 12-inch-diameter sewer line could accommodate approximately 384 units, approximately 27 percent of full buildout, with no modifications. However, this is not sufficient to accommodate implementation of Phase 1 of the proposed project, which includes development of up to 922 residential units. To address the capacity deficiency in this portion of the Terra Linda Trunk Sewer and allow for additional development, the 12-inch-diameter sewer line would need to be up-sized. Therefore, implementation of Mitigation Measure UTL-1 would be required.

[36] Marin Water. 2023. Marin, California Municipal Water District Code, Title 11, Water Service Rules and Regulations. May.

Mitigation Measure UTL-1 Prior to the issuance of a certificate of occupancy for any of the residential units on the project site, the existing 12-inch-diameter Terra Linda Trunk Sewer line downstream of the project site shall be upsized to 15 inches in diameter in coordination with the Las Gallinas Valley Sanitation District. (LTS)

Model results indicate that increasing the pipe size to a 15-inch diameter would reduce projected surcharging to within allowable limits. The new 15-inch-diameter line is anticipated to have a capacity of 2.55 mgd. The proposed project would account for approximately 58 percent of the capacity of the new sewer line. Therefore, with implementation of Mitigation Measure UTL-1, this impact would be **less than significant with mitigation.** Installation of this line would occur within existing developed rights-of-way and within existing utility trenches. The new line would replace an existing line within the same location; therefore, implementation of this improvement would not result in secondary effects or off-site impacts that are not addressed in this EIR.

Stormwater. As described in Section 4.7, Hydrology and Water Quality, the proposed project would replace more than 5,000 square feet of impervious surfaces and therefore would be required to implement post-construction stormwater management and treatment measures to reduce pollutant loads in runoff in accordance with Section E.12 of the Small MS4 Permit. The project must prepare a Stormwater Control Plan that describes how runoff would be routed to Low Impact Development (LID) stormwater treatment facilities that are sized and designed using either volumetric or flow-based criteria specified in the Small MS4 Permit, and the Stormwater Control Plan must be approved by the City.

As discussed in Section 4.7, Hydrology and Water Quality, Mitigation Measure HYD-3 would require hydraulic modeling to confirm that stormwater from the project site would not result in on-site flooding or contribute to off-site flooding. If the evaluation demonstrates that the 100-year storm event could result in on-site flooding above the minimum of 1 foot of freeboard from the finished floor elevations on the project site or that runoff from the project site could contribute to increased flooding in off-site areas (including roadways), the project shall incorporate additional stormwater retention systems (e.g., swales, retention ponds, or cisterns with metered outlets) and/or additional stormwater conveyance systems into the project design. Mitigation Measure HYD-3 would ensure that stormwater runoff would be addressed through on-site control measures and that runoff from the site would not result in adverse environmental effects related to flooding. The construction and operation of such additional facilities, if required, would not result in additional environmental effects beyond those described in this EIR; therefore, this impact would be **less than significant**.

Electricity, Gas, Telecommunications. Development of the proposed project would take place in a location that currently has electricity, gas, telephone, cable, and internet services, and these services would continue to be provided to the project site to serve the proposed development. As such, the proposed project would have a **less than significant impact** on electricity, gas, telecommunications, cable, and internet services.

Threshold 4.14.2: Water Supply. The proposed project would include construction of 1,422 residential units and 217,520 net new square feet of commercial space on the project site as described in Chapter 3.0, Project Description. The proposed project meets the definition of a "project" as defined by SB 610 and SB 221; therefore, a WSA was prepared by Marin Water as the water supplier to the project site.[37] (The WSA is included in Appendix K of this EIR.) The WSA was approved by the Marin Water Board of Supervisors on December 13, 2022. As previously noted, the proposed project would include 922 residential units in Phase 1 (2025), and an additional 500 units in Phase 2, as well as new commercial and landscaping space. The projected demand for potable and raw water associated with the proposed project is 167 AFY in 2025 through 2035 with the buildout of Phase 1, with an increase to 228 AFY in 2040 through 2045 with the buildout of Phase 2. The projected demand for recycled water associated with the proposed project is 34 AFY in 2025 through 2035 with the buildout of Phase 1, with an increase to 51 AFY in 2040 through 2045 with the buildout of Phase 2. The proposed project was not included in the 2020 UWMP because it was prepared prior to the 2040 General Plan. However, the WSA completed for the proposed project includes the water demand associated with the proposed project in its analysis of Marin Water's projected supply and demand and potential shortfalls as further discussed below.

Table 6 of the WSA shows Marin Water's projected demand, with the inclusion of the proposed project, and the total available normal year supply through 2045. As shown in Table 6 of the WSA, the planned future potable and raw water supply of 83,926 AFY within Marin Water's service area for normal hydrologic years is expected to meet all projected demands, inclusive of the proposed project, which are estimated to be 37,686 AFY by 2045. As shown in Table 7 of the WSA, during single dry years, the annual potable and raw water supply within the Marin Water service area under this scenario will be reduced to 51,223 AFY by 2045. Despite this reduction, Marin Water's potable and raw demand inclusive of the proposed project will be met by the single dry year supply. Table 8 of the WSA shows that during multiple dry years, Marin Water's 2020 UWMP estimates that an annual potable and raw supply within Marin Water's service area will be reduced to 78,635 AFY in 2025 during the first year of a drought, and down to 68,402 AFY in 2045 during the fifth year of a drought. Notwithstanding these supply reductions and considering the proposed project demands, no supply shortfalls are projected for Marin Water in the multiple dry year scenario.

It should be noted that the dry year and multiple dry year scenarios are based on historical water supply patterns, which may or may not be representative of future conditions due to climate change. To account for potential future conditions, an additional "worst case" scenario was evaluated in the UWMP and is considered. If the "worst-case" supply scenario is realized, in which total available supply (purchases from the Sonoma County Water Agency [SCWA], local surface water, and recycled water) is reduced to below 14,000 AFY by 2025, shortfalls of up to 65 percent are projected (see Table 4.14.A, above, and Table 9 of the WSA). As shown in the multiple dry year extreme drought scenario in Table 4.14.A above and Table 9 of the WSA, there are no supply shortfalls anticipated in 2025 for the first and second years of extreme drought. However, by the third year of extreme drought, a 7.5 percent shortfall is expected, by the fourth year of extreme drought a 36 percent shortfall is expected, and by the fifth year of extreme drought a 65 percent shortfall is expected. However, as shown in Table 9 of the WSA, these shortfalls are not materially

[37] Marin Water. 2022. *Water Supply Assessment for Northgate Town Square*. November.

different from the shortfalls that would be experienced without the project according to the adopted and District-approved UWMP, which were within half a percentage point of the shortfalls listed above.

To address these shortfalls in an extreme drought scenario, Marin Water plans to enact its WSCP, which includes Mandatory Staged Restrictions of Water Use. The WSCP systematically identifies ways in which Marin Water can reduce water demands during dry years. The overall reduction goals in the WSCP are established for six drought stages and address water demand reductions over 50 percent. Marin Water is also currently preparing a Strategic Water Supply Assessment, which will identify ways in which its water supply portfolio can be augmented to serve all users in such an extreme drought scenario.

Marin Water's projected recycled water demand inclusive of the proposed project is approximately 801 AFY by 2045. Because there is excess capacity in the recycled water system, for the normal, single dry, and multiple dry year hydrologic conditions, the currently projected recycled water supply of 750 AFY will be able to increase by 51 AFY to meet Marin Water's demands; therefore, no recycled water supply shortfall is anticipated. As shown in Table 9 of the WSA, and similar to the other hydrologic year conditions mentioned above, the projected recycled water supply is currently estimated to be 750 AFY in the extreme drought scenario by 2045, and the projected Marin Water demand inclusive of the project is estimated to be 801 AFY. Because there is excess capacity in the recycled water system, the recycled water supply will be able to increase by 51 AFY; therefore, no recycled water supply shortfall is anticipated.

The proposed project would represent an increase in water demand within the anticipated supply range for San Rafael. However, this increase would be incremental and would not lead to insufficient water supplies in existing entitlements and resources or require new or expanded entitlements. No new water entitlements would be required to serve the proposed project. Therefore, the project would result in a **less than significant impact** on potable and recycled water supply.

Threshold 4.14.3: Wastewater Treatment Capacity. As described under Threshold 4.14.1, the wastewater pump stations that serve the project site would have adequate capacity to serve the project. In addition, with implementation of Mitigation Measure UTL-1, the wastewater pipes that serve the project site would also have adequate capacity. The LGVSD WWTP has a dry weather capacity of 8 mgd and a wet weather capacity of 18 mgd, and currently treats an average flow of 2.36 mgd. As described under Threshold 4.14.1, the proposed project would generate 1.47 mgd of wastewater, an increase of 1.44 mgd compared to existing conditions. Therefore, with implementation of the proposed project, the LGVSD would be estimated to have an average flow of 3.83 mgd, which is well below the dry weather capacity of 8 mgd. Therefore, this impact would be **less than significant with mitigation**.

Threshold 4.14.4: Solid Waste Generation. The project would be served by landfills with the capacity to handle solid waste generated by the operational phases of the proposed project. As required by AB 939, the California Integrated Waste Management Act, a minimum of 50 percent of the San Rafael's waste must be recycled. General Plan Program CSI-4.17A requires construction contractors to take their construction and demolition debris to a facility that processes construction

and demolition materials for recycling. Most of these facilities yield recycling rates in excess of 80 percent. The typical remaining refuse sent to the landfill is 10 to 15 percent of the debris. This would not substantially decrease the available capacity at the Redwood or Potrero Hills Landfills.

As discussed in Section 4.2, Population and Housing, the proposed project would result in 3,541 new residents and 621 employees (1,569 fewer employees on the site compared to existing conditions). Based on Zero Waste Marin's disposal rates, residential uses would generate approximately 18,413 lbs/day of solid waste, and commercial uses (employees) would generate 7,328 lbs/day, for a total of 25,740 lbs/day, or approximately 12.87 tons per day (tpd). The Redwood Landfill has a maximum permitted throughput of 2,300 tpd and Potrero Hills Landfill has a maximum permitted throughput of 4,330 tpd. The proposed project would represent approximately 0.6 and 0.3 percent of the total daily permitted throughput, respectively. The amount of solid waste generated by operation of the proposed project would not exceed the landfill capacity. In addition, Zero Waste Marin has a goal diversion rate from landfills of 94 percent by 2025, which would reduce the project's solid waste disposal volume. To be conservative, this analysis does not assume any increase in the current diversion rate of 66 percent. Therefore, the landfills that serve the project site would have adequate capacity, and this impact would be **less than significant.**

Threshold 4.14.5: Solid Waste Regulations. As discussed above, Zero Waste Marin, which serves the project site, 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 lbs/day per resident and 11.8 lbs/day per employee are well below the CalRecycle targets of 7.6 lbs/day per resident and 17.3 lbs/day per employee. In addition, the proposed project would be required to comply with the CALGreen Code, which requires that at least 65 percent of non-hazardous construction and demolition waste from non-residential construction operations be recycled and/or salvaged for reuse (Section 4.408 of the 2022 CALGreen Code). Therefore, the proposed project would comply with the California Integrated Waste Management Act, SB 1016, and SB 1374 as a minimum of 65 percent of construction and demolition waste would be diverted from landfills and the project would comply with the San Rafael Municipal Code Chapter 12.235 as it would be required to comply with the CALGreen Code. The proposed project would also comply with AB 341 by providing recycling for both commercial and multi-family residential uses and AB 1826 by providing composting and recycling.

The San Rafael General Plan includes Policy CSI-4.17: Waste Reduction, requires the reduction of landfilled waste disposal and related greenhouse gas (GHG) 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. Chapter 9.19 of the San Rafael Municipal Code, Refuse and Recycled Materials Collections and Disposal, intends to prevent public health hazards and/or nuisance 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. As discussed above, the proposed project would recycle at least 65 percent of non-hazardous construction and demolition waste and would provide recycling and composting for future commercial and multi-family residential uses. Therefore, the proposed project would comply with the applicable solid waste regulations, and this impact would be **less than significant.**

4.14.2.3 Cumulative Impacts

A significant impact would occur if demands of cumulative development assumed under buildout of the General Plan exceeds the supply or capacity of existing utility and service systems or results in the construction of new or expansion of existing public utility facilities. As previously discussed under Threshold 4.14.1, all water infrastructure improvements, including new connections required for cumulative development, would be required to be constructed in compliance with the applicable regulations in Title 11 of the Marin Water Code. Additionally, the three Marin Water water treatment plants (Bon Tempe, San Geronimo, and Ignacio) have a total capacity of 71 mgd, which equates to approximately 79,530 AFY. Additionally, as shown in Table 6 of the WSA, the planned future potable and raw water supply of 83,926 AFY within the Marin Water service area for normal hydrologic years is expected to meet all projected demands, inclusive of the proposed project, which are estimated to be 37,686 AFY by 2045. The WSA takes into account buildout of the 2040 General Plan, as well as the proposed project, and therefore indicates that cumulative development would not result in the need for new or upgraded water supply infrastructure. As with the proposed project, developments on all other projects in San Rafael would be required to pay fees to support the water and wastewater system improvements necessary to serve their individual demands. With payment of such fees and tax assessments, the project's contribution to public services impacts is not cumulatively considerable. Further, because the payment of such fees is required for the cumulative development projects, cumulative impacts would not be significant.

As described under Threshold 4.14.2 above, the WSA determined that Marin Water would have sufficient water supplies to serve the proposed project and projected development for normal years through 2040. Marin Water would experience shortfalls during a multi-year extreme drought. These shortfalls would not be materially different with implementation of the proposed project. In the event of a multi-year extreme drought, Marin Water would implement the WSCP, which would require reduction mandatory measures for all users, including the proposed project. Implementation of the proposed project would not prohibit implementation of the WSCP, nor would it, in combination with future cumulative development, require additional entitlements to be secured in the event of a multi-year extreme drought. Additionally, future cumulative projects would be required to undergo future environmental review through the CEQA process and account for sufficient water supplies to serve them. Therefore, cumulative impacts related to water supply would not be significant.

As discussed in Section 4.2, Population and Housing, it is estimated that the City's 2040 population would be 68,710 and employment would be 48,650. Zero Waste Marin's disposal rate in 2018 was 5.2 lbs/day of waste per resident and 11.8 lbs/day per employee. Therefore, cumulative development within San Rafael could generate up to 357,292 pounds (178 tons) of residential waste and 574,070 pounds (287 tons) of commercial waste, for a total of 931,362 lbs/day (465 tpd). Remaining permitted capacity at the receiving landfills totals 91.8 million tons. Cumulative solid waste generated citywide in 2040 represents approximately 3.13 percent of permitted capacity at

receiving landfills.[38] Therefore, the cumulative contribution of solid waste from San Rafael would not have a cumulatively significant effect on landfill capacity.

Based on the information in this section and for the reasons summarized above, development of the proposed project would not contribute to any significant adverse cumulative utility impacts when considered together with other cumulative development, and this impact would be **less than significant**.

[38] 465 tons per day x 365 days = 169,725 tons per year x 17 years = 2.88 million tons cumulative solid waste citywide through 2040. This calculation assumes existing generation rates. Future decreases in per capita waste generation would proportionally reduce 2040 solid waste totals.

This page intentionally left blank