4.17 UTILITIES AND SERVICE SYSTEMS

This chapter describes the regulatory framework and existing conditions of the City of San Mateo Environmental Impact Report (EIR) Study Area and evaluates the potential impacts from adopting and implementing the proposed General Plan 2040 and proposed Climate Action Plan (CAP) update, and from future development and activities that could occur under the proposed project. This includes impacts on utilities and service systems, including water supply and demand, wastewater (sewage) conveyance and treatment, solid waste collection and disposal systems, storm drainage systems, and other utilities. In each section of this chapter, a summary of the relevant regulatory framework and existing conditions is followed by a discussion of project impacts and cumulative impacts from implementation of the proposed project.

4.17.1 WATER

The EIR Study Area is served primarily by two water providers: California Water Service Mid-Peninsula District (Cal Water-MPS) and Estero Municipal Improvement District (EMID). Cal Water-MPS provides water service for most of the EIR Study Area, while EMID provides water to the Mariners Island portion of San Mateo. There are two small areas within the EIR Study Area at the end of West Poplar Avenue (approximately 15 acres) and at the end of Parrot Drive (approximately 7 acres) that are provided with potable water by the Town of Hillsborough. However, because these areas are already developed with residential properties and are not areas where future net new growth is anticipated with implementation of the proposed project, the analysis provided below focuses on Cal Water-MPS and EMID.

4.17.1.1 ENVIRONMENTAL SETTING

Regulatory Framework

Federal Regulations

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. The Safe Drinking Water Act authorizes the Unites 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) Division of Drinking Water regulates public drinking water systems. 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 the act.

State Regulations

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Act (Water Code Sections 13000 et seq.) was passed in 1969 and 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. San Mateo 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. It 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. The following projects that are subject to the California Environmental Quality Act (CEQA) are required at a minimum to prepare a Water Supply Assessment (WSA):

- Residential developments consisting of more than 500 dwelling units.
- Shopping centers or business establishments employing more than 1,000 persons or having more than 500,000 square feet of floor space.
- Commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space.
- Hotel or motel, or both, having more than 500 rooms.

[1] John Barasso, 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, accessed May 16, 2023.

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

- Industrial, manufacturing, or processing plant or industrial park planned to employ more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area.
- Mixed-use project that includes one or more of the projects specified above.
- Project that would demand an amount of water equivalent to, or greater than, the amount of water required for 500 dwelling units.

SB 221 requires written verification that there is sufficient water supply available for new residential subdivisions that include over 500 dwelling units. The verification must be provided before commencement of construction for the project.

Sustainable Groundwater Management Act of 2014

On September 16, 2014, a three-bill legislative package was signed into law collectively known as the Sustainable Groundwater Management Act (SGMA). The Governor's signing message states "a central feature of these bills is the recognition that groundwater management in California is best accomplished locally." Under the roadmap laid out by the legislation, local and regional authorities in medium and high priority groundwater basins must form groundwater sustainability agencies (GSAs) that oversee the preparation and implementation of groundwater sustainability plans (GSPs).

Most of the City of San Mateo is within the San Mateo Plain Subbasin of the Santa Clara Valley Groundwater Basin.[3] The southwestern portion of the City in the hills is not within a designated groundwater basin. The San Mateo Plain Subbasin is designated as a very low priority basin and therefore is not regulated under SGMA. This is because there is very little groundwater use in this basin (less than 2,700 acre-feet/year) and it is mostly due to private well pumping in the subbasin areas south of the City (Redwood City and Menlo Park).

Water Conservation Act of 2009 (Senate Bill X7 7)

New mandatory requirements for increasing water use efficiency, per State law (SB-X7 7), mandate the reduction of per capita water use and agricultural water use throughout the State by 20 percent by 2020. 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. Demonstration of compliance with this regulation is a required component of each water provider's 2020 UWMP. Both Cal Water MPS and EMID are in compliance with their target reductions.

[3] San Mateo County, 2023, San Mateo County GIS Open Data, San Mateo Plain Subbasin. https://data-smcmaps.opendata.arcgis.com/datasets/san-mateo-plain-subbasin/explore?location=37.529784%2C-122.220423%2C11.96 accessed on April 6, 2023.

2018 Water Conservation Legislation

In 2018, the California Legislature enacted two policy bills (SB 606 and Assembly Bill 1668) to establish long-term improvements in water conservation and drought planning to adapt to climate change and longer and more intense droughts in California.[4] The Department of Water Resources and the SWRCB will develop new standards for:

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

Urban water suppliers are 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. Based on recent legislation (SB 1157), the California Water Code defines a 55-gallon-per-person daily standard for indoor residential use until 2025, at which time it decreases to 47 gallons, and further decreases to 42 gallons by 2030.

The legislation also includes changes to UWMP preparation requirements. These changes include additional requirements for Water Shortage Contingency Plans (WSCPs), expansion of dry year supply reliability assessments to a five-year drought period, establishment of annual drought risk assessment procedures and reporting, and new conservation targets referred to "annual water use objectives," which require retailers to continue to reduce water use beyond the 2020 SB X7-7 targets.

Water Conservation in Landscaping Act of 2006

The Water Conservation in Landscaping Act (AB 1881) required the Department of Water Resources (DWR) to update the State of California's Model Water Efficient Landscape Ordinance (MWELO). Under AB 1881, cities and counties are required to adopt the State's MWELO or to adopt a different ordinance that is at least as effective in conserving water as the State's MWELO.[5]

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, and on-site stormwater capture and by limiting the portion of landscapes that can be covered in turf. Each city and county is required to submit annual reports to DWR that document how the agency is achieving compliance with the State MWELO and how many projects were subject to the ordinance during the annual reporting period.

The City has adopted a WELO that is more stringent that the State's MWELO and is specified in San Mateo Municipal Code (SMMC) Chapter 23.72, *Water Conservation in Landscaping*. The City requires completion

[4] California Department of Water Resources, 2021, 2018 Water Conservation Legislation, https://water.ca.gov/Programs/Water-Use-And-Efficiency/2018-Water-Conservation-Legislation, accessed May 16, 2023.

[5] California Legislative Information, 2006, Assembly Bill No. 1881, https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=200520060AB1881, accessed May 16, 2023.

of a water efficient landscape application for any new construction with 500 square feet or more of landscape, or rehabilitated landscape of 1,000 square feet or more that requires a building permit, plan check, or design review. Along with the application, the developer must include a water efficient landscape worksheet with water budget calculations, a soil management plan, landscape design plan, and irrigation design plan. The City's Building Division reviews all landscape plans to verify compliance with the code requirements.

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, also known as CALGreen. CALGreen applies to the planning, design, operation, construction, use, and occupancy of every newly constructed building or structure in California. The code establishes planning and design standards for sustainable site development, including water efficiency and water conservation measures that typically reduce water consumption by 20 percent. CALGreen is updated every three years to allow for consideration and possible incorporation of new low flow plumbing fixtures and water efficient appliances. The mandatory provisions of CALGreen became effective January 1, 2011, and the latest version, the 2022 California Green Building Standards Code, became effective on January 1, 2023.[6] The building efficiency standards are enforced through the local building permit process. The City has regularly adopted each new CALGreen update under SMMC, Chapter 23.70, *Green Building Code*.

California Plumbing Code

The latest version of the California Plumbing Code was issued in 2022 and became effective as of January 1, 2023. is updated on a three-year cycle. It specifies technical standards for the design, materials, workmanship, and maintenance of plumbing systems. One of the purposes of the plumbing code is to prevent conflicting plumbing codes within local jurisdictions. Among many topics covered in the code are water fixtures, potable and non-potable water systems, and recycled water systems. The City adopts the California Plumbing Code under SMMC Chapter 23.16, *Plumbing Code.*

California Water Code

The California Water Code states that the water resources of the State must be put to beneficial use and that waste or unreasonable use of water should be prevented. The code is divided into several sections that include provisions regarding water quality, formation of irrigation districts and water districts, safe drinking water, and water supply and infrastructure improvements.

[6] Department of General Services, 2021, CalGreen, https://www.dgs.ca.gov/BSC/CALGreen#codes, accessed May 17, 2023.

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.[7] These regulations, which went into effect on August 1, 2014, were intended to reduce outdoor urban water use and persuade all California households to 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, most recently requiring local water agencies to implement Level 2 drought contingency plans. In March 2023, Governor Newsom announced the lifting of some of the drought restrictions following a wet winter, including the Level 2 demand reduction actions.

However, there are portions of the water conservation emergency regulations that remain in effect. These include 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 washing of vehicles without an automatic 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 at least 0.25 inch of rainfall. In addition, watering decorative grass in commercial, industrial, and institutional areas, including common areas of homeowners' associations (HOAs) is currently prohibited but this restriction may be lifted in the future. Urban water suppliers are still required to submit monthly water monitoring reports to the SWRCB.

Regional Regulations

Cal Water-Mid-Peninsula District: Urban Water Management Plan (UWMP)

Cal Water-MPS serves the Cities of San Carlos and San Mateo and adjacent unincorporated areas of San Mateo County, including The Highlands and Palomar Park. Cal Water-MPS adopted its current 2020 UWMP in June 2021 in compliance with the Urban Water Management Planning Act, the Water Conservation Act of 2009, and Sections 10610 to 10656 of the California Water Code.[8] All urban water suppliers are required to prepare, adopt, and file a UWMP with DWR every five years.

The Water Conservation Act of 2009, also known as SBX7-7, requires that urban water suppliers reduce per capita water use by 20 percent by 2020. As reported in the UWMP, CWS-MPS met this goal in 2020 with a per capita water demand of 95 gallons per capita per day (gpcd) as compared to the target goal of 124 gpcd.[9]

[7] Water Resources Control Board, 2014, Resolution No. 2014-0038, https://www.waterboards.ca.gov/board_decisions/adopted_orders/resolutions/2014/rs2014_0038_regs.pdf, accessed May 17, 2023.

[8] California Water Service, June 2021, *2020 Urban Water Management Plan, Mid-Peninsula District*, https://www.calwater.com/docs/uwmp2020/MPS_2020_UWMP_FINAL.pdf, accessed May 17, 2023.

[9] California Water Service, June 2021, *2020 Urban Water Management Plan, Mid-Peninsula District*, https://www.calwater.com/docs/uwmp2020/MPS_2020_UWMP_FINAL.pdf, accessed August 7, 2023.

The 2020 UWMP describes water demands, water supply sources, and supply reliability for its service area in five-year increments for normal 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. The UWMP states that there will be sufficient supplies to meet existing and future demands through 2045 for normal years, but that there could be a shortage of water supplies in single-dry years and multiple-dry years under the worst-case scenario. Additional details are provided in the Existing Conditions setting.

Cal Water-Mid-Peninsula District: Water Supply Planning Documents

Cal Water-MPS uses a series of integrated planning processes and reports to support water resource and environmental sustainability efforts and updates them on a recurring basis to adjust to changing conditions and risks and ensure that there are sufficient water supplies for their customers. Pertinent plans and studies used by Cal Water-MPS are summarized below:

- Climate Change Study. This study consists of two parts: Phase 1, Water Resources Monitoring and Adaptation Plan, and Phase 2, Climate Change Risk Assessment and Adaptation Framework. These studies analyze climate-related vulnerabilities in Cal Water service areas, facilities, operations, and water supply portfolios. The results indicate how risks may change over time based on vulnerabilities, such as sea level rise and wildfires, and provide a framework for future mitigation and adaptation planning.
- Water Supply and Demand Assessment. This document is an annual report submitted to DWR that requires each urban water supplier to prepare an annual assessment and an annual shortage report that evaluates the near-term water supply reliability and describes actions that are taken to address potential shortages, including implementation of the Water Shortage Contingency Plan.
- Urban Water Management Plans. UWMPs are completed every five years and provide critical information for the Cal Water-MPS service area, including historical and projected water demands, water supplies, supply reliability, potential vulnerabilities, water shortage contingency planning, and demand management programs.
- Water Shortage Contingency Plans. The WSCP is included as an appendix to the UWMP and is updated every five years. The plan outlines appropriate responses during water supply shortages and interruptions to protect health and safety, minimize economic disruption, and present environmental and community assets. The Cal Water-MPS WSCP is discussed in further detail below.
- Conservation Master Plans. These plans are also included as an appendix to the UWMP and updated on a five-year cycle. The plans summarize the mix of conservation measures that Cal Water plans to implement, including the estimated water savings, costs, and effects on water demand, as well as progress toward reaching its conservation goals.
- Water Supply Reliability Plans/Studies. These plans and studies evaluate the reliability of existing regional water supplies and assess supply and demand options to enhance future reliability. The reports also contain water supply project recommendations for facilities planning processes.
- Water Supply and Facilities Master Plans. Based on the water supply strategies, these plans forecast potential infrastructure needs and support long-term operational reliability.

Cal Water -Mid-Peninsula District: Water Shortage Contingency Plan (WSCP)

The Cal Water-MPS 2020 UWMP includes the WSCP which outlines stages of response to water shortages caused by drought or supply interruptions.[10] The primary objective of the WSCP is to ensure that the District has in place the necessary resources and management responses to protect health, minimize economic disruption, and preserve environmental and community assets during water supply shortages and interruptions.

Water shortage levels range from 1 to 6, with goals to reduce water demand by 10 percent to over 50 percent, respectively. Stage 1 measures include: 1) limiting landscape irrigation to specific times, 2) prohibit the application of potable water to outdoor landscapes within 48 hours of measurable rainfall, 3) restaurants may only serve water upon request, and 4) prohibit the use of potable water for decorative water features that do not recirculate water. Stage 5, designated as an emergency shortage, requires net zero demand increase on new water service connections and prohibits single-pass cooling systems. Stage 6, which is classified as an extreme shortage, enacts a moratorium on new water service connections and prohibits all landscape irrigation.

Estero Municipal Improvement District: Urban Water Management Plan

EMID provides potable water to Foster City and an area of San Mateo known as Mariners Island. The 2020 UWMP prepared by EMID indicates that there will be sufficient water supplies available to meet demands during normal years through 2045. However, there will be shortage in single dry years and multiple dry years, as is the case with Cal Water.[11] The shortage is directly the result of implementation of the Bay Delta Plan Amendment (discussed below), which would limit Cal Water-MPS and EMID's surface water supplies. Both UWMPs conservatively assume that the Bay Delta Plan Amendment would be fully implemented for planning purposes.

Estero Municipal Improvement District: Water Shortage Contingency Plan

EMID has prepared a stand-alone WSCP document that would be implemented in the event of water shortages.[12] The WSCP provides the steps and water shortage response actions to be taken during water shortage conditions, whether as a result of a drought or supply interruptions. The WSCP also describes EMID's procedures for conducting an Annual Water Supply and Demand Assessment that is required by the California Water Code and is submitted to DWR on or before July 1 of each year.

Some of EMID's restrictions during Stage 5 shortage levels include 1) prohibition of watering of golf courses, parks, school grounds, and recreation fields; 2) irrigation limited to one day per week; and 3) prohibition of water for agricultural or commercial nursery purposes, except livestock watering. For Stage 6 shortage levels, EMID may prohibit all landscape irrigation and limit the installation of new landscaping except for landscapes that use recycled water. Water for commercial, manufacturing, or processing

[10] California Water Service, June 2021, *2020 Urban Water Management Plan, Mid-Peninsula District*, Appendix L: *Water Shortage Contingency Plan*, https://www.calwater.com/docs/uwmp2020/MPS_2020_UWMP_FINAL.pdf, accessed May 16, 2023.

[11] Estero Municipal Improvement District, 2021, 2020 Urban Water Management Plan.

[12] EMID, 2021, Water Shortage Contingency Plan, Appendix J of the UWMP. Prepared by Maddaus Water Management, Inc.

purposes would be reduced in volume by up to 50 percent and no new permits for pools would be issued. Water for air conditioning is also prohibited.

Estero Municipal Improvement District: Water Distribution System Master Plan

In April 2020, EMID completed a Water Distribution System Master Plan that includes a water demand analysis, hydraulic modeling to determine existing and future deficiencies in the water supply system, and a long-range, 20-year Capital Improvement Plan (CIP).[13] EMID's distribution system starts at a 24-inch transmission main turnout from SFPUC's 54-inch Crystal Springs Pipeline No. 2. The distribution system consists of two pressure-reducing stations, four water storage tanks, a booster pump station, and about 135 miles of distribution pipelines that deliver potable water to approximately 8,120 service connections. The system is typically able to meet 24 hours of maximum daily demand plus four hours of fire flow. There are a few isolated areas with fire flow deficiencies. The CIP addresses these issues, including a project to extend the pipeline along Detroit Drive and improve fire flow to San Mateo's Wastewater Treatment Plant.

2023 EMID Water Capacity Study

As part of the Foster City Housing Element Update, a WSA was prepared as part of the EIR process.[14] The WSA evaluated all of the current and proposed development projects within EMID's service area, including the Mariners Island portion of San Mateo. Net water demand was calculated accounting for existing water use that would be replaced by new development projects. Four planned redevelopment projects within the City of San Mateo were included in the evaluation.[15] The water demand associated with the Housing Element Update, plus existing and future water demands over a 20-year period, will be met during normal years. However, EMID's total water demand during single and multiple dry years is expected to exceed EMID's available water supplies from 2025 to 2045.

Bay Delta Plan Amendment

The reliability of water supplies for Cal Water-MPS and EMID is impacted if and when the Bay Delta Amendment is enacted, because the sole source of their water supplies is from the San Francisco Public Utilities Commission (SFPUC)'s Regional Water System (RWS). In December 2018, the SWRCB adopted amendments to the Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary, known as the Bay-Delta Plan Amendment, to establish water quality objectives to maintain the health of the Bay-Delta ecosystem and increasing salmonid populations. The Bay-Delta Amendments requires the release of 30 to 50 percent of "unimpaired flow" on three San Joaquin River tributaries (the Stanislaus, Merced, and Tuolumne Rivers) from February through June during normal years and drought conditions.

If the Bay-Delta Plan Amendment is implemented, the SFPUC would be able to meet projected water demands for their retail customers in normal years but would experience supply shortages in single dry

[13] HydroScience Engineers, Inc., 2020, Estero Municipal Improvement District Water Distribution System Master Plan Study.

[14] EMID, 2023, Foster City Housing and Safety Elements Update EIR, Appendix D, Water Capacity Study.

[15] Brdigepointe Redevelopment; 901/951 Mariner's Island Blvd Office to Life Science Building Conversion; 1400 Fashion Island Blvd; and 999 Baker Way.

years and multiple dry years. This impacts the water supplies of both Cal Water-MPS and EMID, as documented in their 2020 UWMPs for single dry years and multiple dry years. The SFPUC has initiated an Alternative Water Supply Planning Program (AQSP) to meet its retail and wholesale customer needs and limit rationing to a maximum 20 percent system wide.

Since adoption of the Bay-Delta Plan Amendment, over a dozen lawsuits have been filed, in both State and federal courts, challenging the SWRCB's adoption of the amendment. This litigation is in the early stages and there have been no court rulings as of this date. SFPUC is also in negotiations with the SWRCB to provide an "alternative" for a future amendment to the Bay-Delta Plan. Nevertheless, the Cal Water-MPS and EMID 2020 UWMPs conservatively assume that the Bay-Delta Plan would be implemented in quantifying future water supplies and reliability.

San Francisco Public Utilities Commission Water System Improvement Plan

The SFPUC's Water System Improvement Plan (WSIP) is expected to mitigate the impacts of the Bay Delta Plan Amendment by undertaking a number of water supply projects to meet dry year demands with no greater than 20 percent system-wide rationing. These projects include the following:

- Calaveras Dam Replacement Project. The SFPUC constructed a new dam of equal height downstream of the existing dam to address seismic vulnerabilities. The project was completed in 2019.
- Alameda Creek Recapture Project. As part of the regulatory requirements, the SFPUC must implement bypass and instream flow releases for Alameda Creek. This project will recapture a portion of the water yield lost by these restrictions and return this yield to the RWS through facilities in Sunol Valley. Water that infiltrates from Alameda Creek will be recaptures into an existing quarry pond and pumped to the Sunol Valley Water Treatment Plant or to San Antonio Reservoir.
- Lower Crystal Springs Dam Improvements. Improvements to Lower Crystal Springs Dam and the joint San Mateo/SFPUC Bridge Replacement Project have been completed so that the reservoir elevation can now be raised. However, the raising of the reservoir elevation is being delayed with the discovery of the endangered species, the Fountain Thistle. New plant populations must be restored before the reservoir elevation is raised.
- Regional Groundwater Storage and Recovery Project. SFPUC, Cal Water, Daly City, and San Bruno entered into a strategic partnership to conjunctively operate the south Westside Groundwater Basin. During years of normal or heavy rainfall, the project provides additional surface water to the partner agencies in San Mateo County in lieu of groundwater pumping. Reduced pumping results in water storage through natural recharge of up to 20 billion gallons of new supply that is available during dry years. Phase I, which consists of the construction of 13 wells, is complete. Phase 2, which involves three additional groundwater test wells and completion of the South San Francisco Main well and pipeline, is scheduled for completion in 2023.

San Francisco Public Utilities Commission Alternative Water Supply Program

The SFPUC is also exploring other projects that would increase overall water resilience through implementation of the Alternative Water Supply (AWS) program. Some of the projects include:

- Los Vaqueros Reservoir Expansion Project would enlarge the existing reservoir from 160,000 acre feet to 275,000 acre feet.
- Daly City Recycled Water Expansion would replace some of the groundwater pumping, enhancing the reliability of the groundwater basin.
- Alameda County Water District and Union Sanitary District joint project with SFPUC to produce purified water for groundwater recharge or put to other use in ACWD's service area. With additional water supply to ACWD, more water would be left in the RWS for use by SFPUC.
- Crystal Springs Purified Water Project – treated wastewater from Silicon Valley Clean Water and/or the City of San Mateo would go through advanced treatment and delivered to Crystal Springs Reservoir.
- Bay Area regional Reliability Shared Water Access Program is a consortium of eight Bay area water utilities that are exploring opportunities to move water across the region through various conveyance pathways and better prepare for sharing water during drought conditions or supply emergencies.
- Groundwater Banking in the Modesto Irrigation District and Turlock Irrigation District service areas could be used to provide additional water supply to meet instream releases in dry year.

Water Neutrality Ordinances

Foster City and EMID have recently adopted a "Water Neutrality Ordinance" to offset new water demand with water efficiency measures to create a neutral (or net zero) impact on the water use demand in the EMID service area. The policy requires new development, redevelopment, or land use changes within the EMID service area (which includes a portion of San Mateo) that will increase water demand above the existing water demand level to offset the demand with water efficiency/conservation/retrofit measures to create a net neutral impact.

For new development or redevelopment, the property's baseline water demand (provided by EMID staff) is compared to the applicant's calculated projected water demand to demonstrate a zero-water use increase in the proposed development. The baseline is the average water use for the property over the previous five years. Where no water data is available, the baseline water demand is the five-year average of properties in the same customer class with the same meter size. The applicant provides a projected water demand and calculates a new water demand. The applicant is also required to implement on-site water efficiency measures to offset the new water demand, which might include:

- Using alternative water sources, such as graywater or rainwater
- Instant hot water heaters
- Pressure reducing valves to prevent higher pressures from rupturing valves or pipes
- Installing ultra-high efficiency plumbing fixtures and appliances that exceed current regulatory flow rates
- Covers for swimming pools and spas

Additionally, automatic fill valves for water features, such as swimming pools and ponds, would not be allowed.

If the new development with all practical on-site water efficiency measures still exceeds the new water demand, then the applicant is required to identify off-site measures that would achieve water neutrality.

This may include direct installation of ultra-high-efficiency toilets and other plumbing fixtures in older homes; turf replacement; and commercial, institutional, industrial appliance upgrades within the EMID service area. Any new development within San Mateo that is in EMID's service area would be subject to these requirements.

Cal Water is also implementing a Development Offset Program for the three Peninsula Districts which rely on SFPUC supplies, which includes Cal Water-MPS that serves San Mateo. The program requires any new residential, commercial, or industrial development that is projected to increase demand by more than 50 AFY to pay a special facilities fee, referred to as a developer offset fee, consisting of $15,400 per AF of net demand increase. The net demand increase is defined as the project's projected water demand minus the existing water demand averaged over the previous 5-year period. Cal Water-MPS will verify compliance with the program at the time of construction and that all offset fees and/or conservation measures have been completed prior to establishing a water connection. The fees collected from the Development Offset Program will fund water supply projects and expanded conservation programs, thus improving overall sustainability and resiliency.

Local Regulations

San Mateo General Plan 2030

The City of San Mateo General Plan 2030 goals, policies, and actions that are relevant to water are primarily in the Public Services and Facilities Element. As part of the proposed project, some existing General Plan goals, policies, and actions would be amended, substantially changed, or new policies would be added. Applicable goals, policies, and actions are identified and assessed for their effectiveness and potential to mitigate adverse impacts to water infrastructure and supplies later in this chapter under Section 4.17.1.3, *Impact Discussion.*

City of San Mateo Municipal Code

The SMMC includes various directives pertaining to water. The SMMC is organized by title, chapter, and section, and in some cases, articles. Most provisions related to water impacts are included in Title 23, *Buildings and Construction.*

- Chapter 23.16, *Plumbing Code*, adopts the 2022 California Plumbing Code, California Code of Regulations, Title 25, Part 5.
- Chapter 23.70, *Green Building Code*, adopts the California Green Building Standards Code, 2022 Edition, Title 24, Part 11 of the California Code of Regulations.
- Chapter 23.72, *Water Conservation in Landscaping*, complies with California's MWELO and has more stringent requirements. New construction projects with a landscape area equal to or greater than 500 square feet or rehabilitated landscape projects with a landscape area equal to or greater than 1,000 square feet must comply with this ordinance. Project applicants must submit a landscape documentation package which includes water budget calculations, soil management report, landscape design plans, irrigation system design plans, and grading design plan. Upon completion of the work, the applicant must submit a Certificate of Completion to the City. All owners of existing

landscapes over one acre in size are subject to irrigation audits, surveys, and water use analyses, as administered by the local water purveyor.

- Chapter 26.16.020, *Water Supply,* states that the proposed water supply for a project and the locations of all fire hydrants shall meet the requirements of the City's design standards, as determined by the Director of Public Works and the Fire Chief.

Existing Conditions

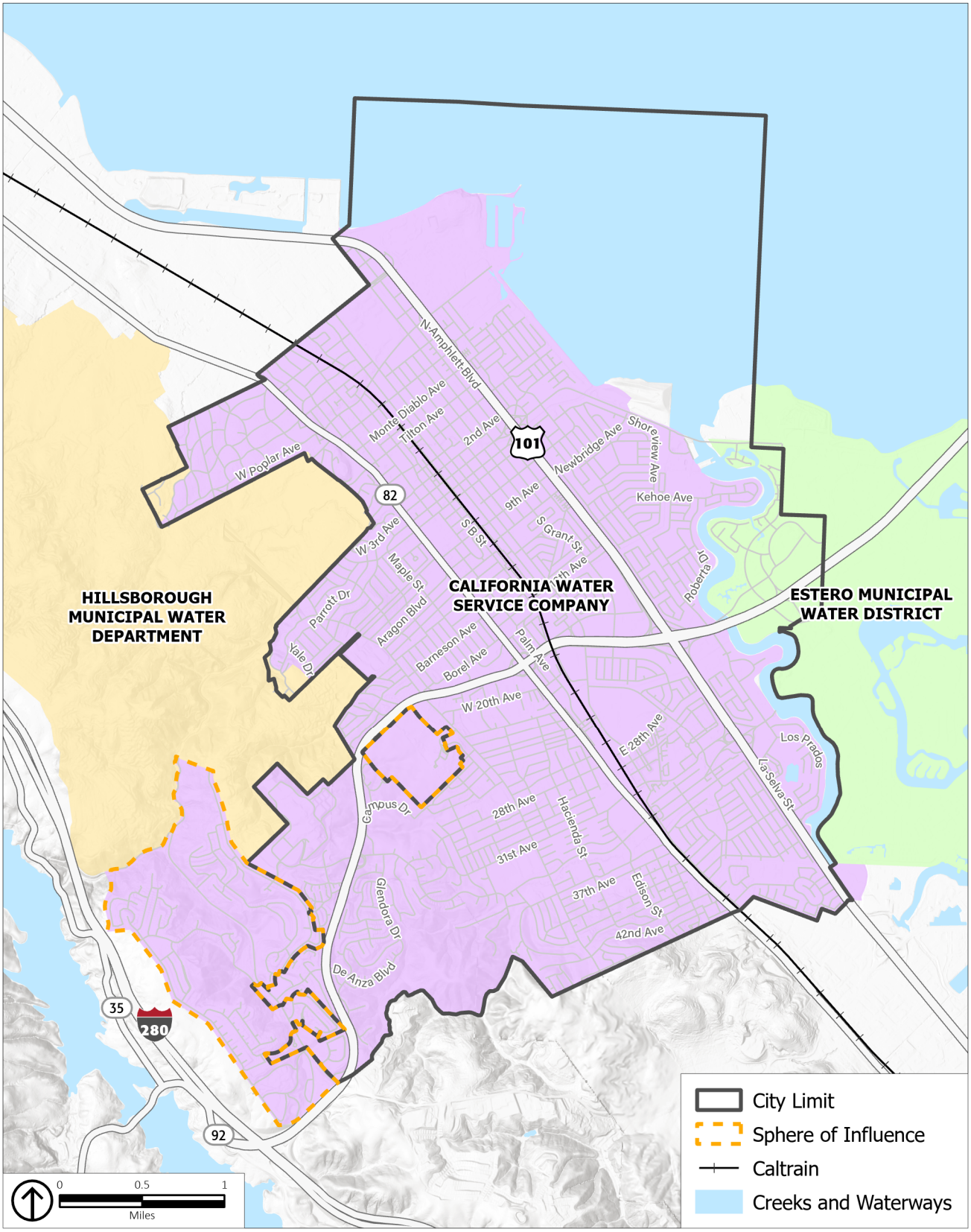
There are two primary water purveyors that serve the City of San Mateo: Cal Water-MPS and EMID. Cal Water-MPS serves most of the EIR Study Area and EMID serves Foster City and the Mariners Island area of San Mateo. Figure 4.17-1, *Water Suppliers*, depicts the boundaries of water districts and service areas of the San Mateo water suppliers. Both Cal Water-MPS and EMID purchase all of their water supplies from SFPUC's Regional Water System, which consists entirely of surface water.

Cal Water Mid-Peninsula District

Cal Water-MPS provides potable water to the Cities of San Mateo and San Carlos and adjacent unincorporated portions of San Mateo County, including The Highlands, which is within the City of San Mateo's Sphere of Influence, and Palomar Park. The City of Belmont separates the two cities and divides Cal Water-MPS into two separate Public Water Systems (PWSs). These systems include 35 storage tanks, 54 booster pumps, and 383 miles of pipeline that deliver roughly 12 million gallons of water per day to more than 35,000 service connections.[16]

The water supply consists entirely of surface water purchased from the SFPUC via the Regional Water System (RWS). Approximately 85 percent of the water supply to the SFPUC RWS originates in the Hetch Hetchy watershed and flows down the Tuolumne River into the Hetch Hetchy Reservoir. The remaining 15 percent of the water supply originates locally in the Alameda and Peninsula watersheds and is stored in six reservoirs in Alameda and San Mateo Counties. Crystal Springs, San Andreas, and Pilarcitos Reservoirs, located in San Mateo County, capture local runoff in the Peninsula watershed. The purchased water is treated by SFPUC prior to delivery to Cal Water-MPS.[17]

[16] California Water Service, June 2021, 2020 Urban Water Management Plan, Mid-Peninsula District.
[17] California Water Service, June 2021, 2020 Urban Water Management Plan, Mid-Peninsula District.



Source: County of San Mateo, 2016; PlaceWorks, 2023.

Figure 4.17-1
Water Suppliers

The amount of water available to the SFPUC's wholesale and retail customers is constrained by hydrologic conditions, physical facilities, and institutional parameters that allocate the water supply of the Tuolumne River. Because of these constraints, the SFPUC is dependent on reservoir storage to augment its water supplies.

Cal Water has a Water Supply Agreement with SFPUC which specifies an Individual Supply Guarantee of 35.68 million gallons in normal hydrologic years, which is shared among three Cal Water Districts: Bear Gulch, Mid-Peninsula, and South San Francisco. The amount of water available to Cal Water-MPS in any given year varies and depends on the availability of local supplies in Bear Gulch and South San Francisco Districts. Cal Water-MPS does not currently use groundwater or recycled water as part of its water supplies.

The water demand for Cal Water-MPS from 2020 through 2040 is shown in Table 4.17-1, *Cal Water-MPS Water Demands – 2020 to 2040 (AFY)*. Residential customers account for approximately 72 percent of the total water demand. This water demand in Table 4.17-1 includes both the Cities of San Mateo and San Carlos. San Mateo accounts for approximately 77 percent of the total water demand. The increase in water demand over a 20-year period is minimal, because Cal Water-MPS accounts for both active and passive water conservation measures in their future projections. By the year 2040, water conservation measures are expected to save 1,247 AF annually.

TABLE 4.17-1 CAL WATER-MPS WATER DEMANDS – 2020 TO 2040 (AFY)

	2020	2025	2030	2035	2040
Single Family	8,263	8,146	8,094	8,108	7,997
Multi-Family	2,155	2,204	2,370	2,499	2,720
Commercial	2,467	2,345	2,301	2,368	2,409
Institutional	724	718	722	755	787
Industrial	31	31	31	31	31
Other Potable	103	121	121	121	121
Losses	820	853	891	904	912
Total	**14,563**	**14,418**	**14,530**	**14,786**	**14,977**

Source: Cal Water-MPS, 2021, 2020 Urban Water Management Plan, Table 4-2.

The Cal Water-MPS 2020 UWMP also includes a water supply reliability assessment for normal, single dry years, and multiple dry years. The results are provided in Table 4.17-2, *Cal Water-MPS Supply and Demand Comparison – 2025 to 2040 (AFY).*

TABLE 4.17-2 CAL WATER-MPS SUPPLY AND DEMAND COMPARISON – 2025 TO 2040 (AFY)

	2025	2030	2035	2040
Normal Year				
Supply Totals	14,418	14,530	14,786	14,977
Demand Totals	14,418	14,530	14,786	14,977
Difference	0	0	0	0
Single Dry Year				
Supply Totals	9,470	9,541	9,708	9,676
Demand Totals	14,797	14,908	15,168	15,359
Difference	(5,327)	(5,367)	(5,460)	(5,683)
Multiple Dry Years				
First Year				
Supply Totals	9,170	9,146	9,186	9,296
Demand Totals	15,031	15,143	15,405	15,595
Difference	(5,862)	(5,996)	(6,219)	(6,299)
Second Year				
Supply Totals	7,863	7,847	7,871	7,975
Demand Totals	15,031	15,143	15,405	15,595
Difference	(7,168)	(7,295)	(7,534)	(7,620)
Third Year				
Supply Totals	7,863	7,847	7,871	7,975
Demand Totals	15,031	15,143	15,405	15,595
Difference	(7,168)	(7,295)	(7,534)	(7,620)
Fourth Year				
Supply Totals	7,863	7,847	7,871	7,036
Demand Totals	15,031	15,143	15,405	15,595
Difference	(7,168)	(7,295)	(7,534)	(8,559)
Fifth Year				
Supply Totals	7,863	7,847	7,216	7,036
Demand Totals	15,031	15,143	15,405	15,595
Difference	(7,168)	(7,295)	(8,189)	(8,559)

Source: Cal Water-MPS, 2021, 2020 Urban Water Management Plan, Tables 7.3, 7-4, and 7.5.

As can be seen in Table 4.17-2, Cal Water-MPS predicts that there will be sufficient water supplies to meet demands through year 2040 during normal years. However, there could be a shortage of water supplies in single dry and multiple dry years, if the Bay Delta Plan Amendment is implemented, leading to a reduction in allocations of water from SFPUC. There are numerous uncertainties regarding implementation of the Bay Delta Plan Amendment and these water supply projections are a worst-case scenario. It assumes that the SFPUC and SWRCB do not reach a voluntary agreement and that the SFPUC's Alternative Water Supply Program is not implemented. As stated in the 2020 UWMP, if the Bay Delta Plan Amendment is not

implemented, SFPUC would be able to supply 100 percent of the projected RWS demands through 2040 during normal, single dry, and multiple dry years.[18]

Cal Water-MPS has developed a WSCP, as described previously, that outlines policies and actions that will be implemented at various shortage levels ranging from up to 10 percent to greater than 50 percent. In addition, as per California Water Code Section 10632.1, all urban water suppliers must submit to DWR by July 1st of each year an annual Water Supply and Demand Assessment. The assessment determines if the water supplier is likely to face water shortage and what actions the supplier will take to address any water shortages. Cal Water-MPS submitted the 2022 Annual Water Supply and Demand Assessment on June 30, 2022 and an updated report on September 9, 2022.[19] Cal Water-MPS is working independently and with local and regional stakeholders to identify alternative water supply projects that can be implemented, including groundwater development, brackish desalination, recycled water, water transfers, and expanded conservation programs.

Estero Municipal Improvement District

EMID's service area mainly consists of Foster City with a small portion provided to San Mateo in the Mariners Island area, as shown on Figure 4.17-1. EMID also has two separate 12-inch emergency supply connections with Cal Water-MPS and Mid-Peninsula Water Agency, which serves the City of Belmont, San Carlos, and part of Redwood City, to use these connections during emergency situations. Foster City's Public Works Department manages and operates EMID. Similar to Cal Water-MPS, EMID receives its entire water supply from SFPUC and also holds an Individual Supply Guarantee with that entity. According to the agreement, EMID is guaranteed 5.9 million gallons per day (MGD), or approximately 6,610 AFY of water from SFPUC.[20] EMID does not use groundwater or recycled water as part of its water supplies.

The water demand for EMID customers from 2020 through 2040 is shown in Table 4.17-3, *EMID Water Demands – 2020 to 2040 (AFY)*. Residential customers account for approximately 54 percent of the total water demand in 2020 and landscape irrigation accounted for approximately 26 percent of the total. The water demand in Table 4.17-3 is primarily for the Foster City service area with a small portion of the water use for the Mariners Island area of San Mateo. EMID accounts for both active and passive water conservation measures in their future projections so the water savings by the year 2040 would be 785 AFY.

[18] California Water Service, June 2021, *2020 Urban Water Management Plan, Mid-Peninsula District.*,
[19] EKI Environment & Water, 2022, Updated 2022 Annual Water Supply and Demand Assessment - Mid-Peninsula District.
[20] City of Foster City, July 2021, 2020 Urban Water Management Plan for Estero Municipal Improvement District.

TABLE 4.17-3 EMID WATER DEMANDS – 2020 TO 2040 (AFY)

	2020	2025	2030	2035	2040
Single Family	1,092	1,071	1,056	1,062	1,074
Multi-Family	1,558	1,528	1,482	1,467	1,464
Commercial [a]	469	574	629	654	678
Industrial	64	80	89	92	98
Irrigation	1,273	1,292	1,375	1,445	1,522
Other Potable	3	3	3	3	3
Losses	439	411	420	433	445
TOTAL	**4,896**	**4,956**	**5,051**	**5,159**	**5,288**

Notes: Units from EMID 2020 UWMP converted from MGY to AFY for consistency.
a. The commercial land use category includes institutional and governmental land uses.
Source: EMID, 2021. 2020 Urban Water Management Plan.

The EMID 2020 UWMP also evaluates water supply compared to demand for normal, single dry years, and multiple dry years. The results are provided in Table 4.17-4, *EMID Supply and Demand Comparison – 2025 to 2040 (AFY).*

TABLE 4.17-4 EMID SUPPLY AND DEMAND COMPARISON – 2025 TO 2040 (AFY)

	2025	2030	2035	2040
Normal Year				
Supply Totals	6,608	6,608	6,608	6,608
Demand Totals	4,954	5,050	5,157	5,286
Difference	1,654	1,558	1,451	1,322
Single Dry Year				
Supply Totals	3,169	3,218	3,273	3,019
Demand Totals	4,954	5,050	5,157	5,537
Difference	(1,785)	(1,831)	(1,881)	(2,519)
Multiple Dry Years				
First Year				
Supply Totals	3,169	3,218	3,273	3,019
Demand Totals	4,954	5,050	5,157	5,537
Difference	(1,785)	(1,831)	(1,881)	(2,519)
Second Year				
Supply Totals	2,715	2,761	2,807	2,878
Demand Totals	4,954	5,050	5,157	5,286
Difference	(2,239)	(2,289)	(2,350)	(2,408)
Third Year				
Supply Totals	2,715	2,761	2,807	2,878
Demand Totals	4,954	5,050	5,157	5,286

TABLE 4.17-4 EMID SUPPLY AND DEMAND COMPARISON – 2025 TO 2040 (AFY)

	2025	2030	2035	2040
Difference	(2,239)	(2,289)	(2,350)	(2,408)
Fourth Year				
Supply Totals	2,715	2,761	2,807	2,537
Demand Totals	4,954	5,050	5,157	5,286
Difference	(2,239)	(2,289)	(2,350)	(2,749)
Fifth Year				
Supply Totals	2,715	2,761	2,571	2,537
Demand Totals	4,954	5,050	5,157	5,286
Difference	(2,239)	(2,289)	(2,586)	(2,749)

Note: Supply and demand values converted from MGY to AFY for consistency.
Source: Estero Municipal Improvement District, 2021, 2020 Urban Water Management Plan.

As can be seen in Table 4.17-4, EMID predicts that there will be sufficient water supplies to meet demands through year 2040 during normal years. However, there will be a shortage of water supplies in single dry and multiple dry years, due to the assumption that the Bay Delta Plan Amendment would be implemented and there would be a reduction in allocations of water from SFPUC ranging from 36 percent to 52 percent during single and multiple dry years through 2040.

These water supply projections are conservative (i.e., they represent a "worst case" scenario) for the following reasons:

- Implementation of the Bay Delta Plan Amendment is under negotiation and a voluntary substitute agreement is being proposed by SFPUC and its water wholesale customers.
- The benefits of SFPUC's Alternative Water Supply Program have not been accounted for in the current supply projections.
- The methodology for wholesale drought allocations has not been established for wholesale shortages greater than 20 percent.
- The SFPUC's Regional Water System demand projections may change in the future based on future housing needs, increased conservation, and development of additional supplies, which will be reflected in future UWMPs.
- The frequency and duration of water supply reductions is uncertain.

EMID plans to address the insufficiency of water supplies during single and multiple dry years with a combination of the following actions:

- EMID plans to acquire and develop additional water supplies through SFPUC's Water System Improvement Program.
- Prior to the issuance of future development project entitlements, project developers shall perform a utility analysis to determine whether existing transmission/distribution infrastructure has adequate capacity to deliver the water needed for the project.

- EMID will coordinate with the City of San Mateo, SFPUC, and BAWSCA to assess options for using recycled water in the future to offset new potable water demands.
- EMID is in the process of developing a water neutral growth policy for new development.
- EMID has completed a Recycled Water Facilities Plan (2017) with the City of San Mateo that discusses ways to provide recycled water to both service areas and/or use recycled water produced at the San Mateo Wastewater Treatment Plant (WWTP) for regional potable reuse opportunities (e.g., installing a pipeline from the WWTP to SFPUC's Lower Crysal Springs Reservoir).

While these measures are in various stages of enactment, EMID will continue to implement its WSCP that defines specific policies and actions for various shortage level scenarios, identifies a suite of demand reduction measures to be implemented at each level, and identifies procedures for EMID to annually assess whether or not a water shortage is likely to occur in the coming year, as documented in the Annual Water Supply and Demand Assessment reports submitted to DWR.[21]

4.17.1.2 STANDARDS OF SIGNIFICANCE

The proposed project would result in a significant impact related to water supply if it would:

- Have insufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple-dry years.
- 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.
- In combination with past, present, and reasonably foreseeable projects, result in significant cumulative impacts with respect to water supply.

4.17.1.3 IMPACT DISCUSSION

UTIL-1	**The project would have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple-dry years.**

The current and projected water demands from Cal Water-MPS and EMID's 2020 UWMPs are provided in Tables 4.17-1 through 4.17-4. Because both water purveyors have service areas that extend beyond San Mateo, the projections in those tables include the water demand for San Carlos, Foster City, and unincorporated areas of San Mateo County. However, to provide a detailed analysis, the discussion below evaluates the increase in water demand associated with buildout of the proposed project and compares it to future development the EIR Study Area within each of the water purveyors' service areas.

[21] EMID, 2022. 2022 Annual Water Supply and Demand Assessment. https://wuedata.water.ca.gov/public/wsda_attachments/7934949576/TM%20AWSDA%20%28Estero%20Municipal%20Improvement%20District%29%2Epdf accessed on May 22, 2023.

As discussed in detail in Chapter 3, *Project Description*, of this Draft EIR, the buildout of the proposed project is expected to result in approximately 21,410 new dwelling units and approximately 4,325,200 square feet of new office and public/institutional land uses. New construction would comply with the more stringent requirements of CALGreen, California Plumbing Code, and the City's WELO. Only 3.2 percent of the current residences were built after 2010,[22] when the CALGreen Building Code was first implemented and the installation of water-conserving plumbing fixtures and fittings were mandated. Although new construction of both residential and commercial land uses typically achieve a reduction in water usage rates of 20 percent through compliance with these regulations, this analysis conservatively assumes that water usage would be similar to the rates provided in the Cal Water-MPS and EMID UWMPs.

Water Demand Analysis – Cal Water-MPS

Based on mapping analysis conducted by the EIR preparers, buildout of the proposed project within Cal Water-MPS service area is estimated to be 18,400 new dwelling units (17,301 multi-family residences and 1,099 accessory dwelling units [ADUs]) and 2,879,500 of non-residential space, including office, research and development (R&D), life sciences, and public/institutional land uses. The water demand factors for multi-family residential and commercial land use were provided by Cal Water Bayshore MPD. Cal Water-MPS does not currently have water demand factors for ADUs; therefore, values of 48 gpcd and 1.5 people per ADU from the EMID Water Capacity Study were used. The calculations for the water demand increase with buildout of the proposed project are provided in Table 4.17-5, *Increase in Water Demand in Cal Water-MPS Service Area with 2040 Buildout.*

TABLE 4.17-5 INCREASE IN WATER DEMAND IN CAL WATER-MPS SERVICE AREA WITH 2040 BUILDOUT

Category	Number (DUs or SF)	Water Use Factor	Increase in Water Demand (gpd)[b]	Increase in Water Demand (AFY)
Multi-Family Residential	17,301	65 gpd/DU	1,712,799	1918.6
ADUs	1,099	48 gpcd [a]	71,215	78.9
Non-Residential	2,879,500	0.068 gpd/sf	279,312	312.9
Total			**2,063,326**	**2,311.2**

Notes: DUs = dwelling units; SF = square feet; gpd = gallons per day; AFY = acre feet per year; gpcd = gallons per capita per day
a. Assumes 1.5 people per ADU and a reduction of 10 percent of the demand for removal of existing landscaping. (Source: Estero Municipal Improvement District, 2023, Water Capacity Study)
b. Demand calculations do not account for water conservation efforts and the effect of reduced water demand for new construction due to compliance with the CALGreen Building Code and the latest California Plumbing Code.
Source: PlaceWorks, 2023

Because Cal Water-MPS serves both San Carlos and San Mateo and a small portion of unincorporated San Mateo County, the proportion of the 2040 water demand that would be attributed to San Mateo was determined based on the service populations of these three areas in 2020. Statistics from the California Department of Finance indicate that in 2020 the San Mateo population was 105,751 and San Carlos population was 30,748, and 987 people are estimated to be served in unincorporated San Mateo County

[22] Cal Water Service, 2021, 2020 Urban Water Management Plan, page 31.

(Highlands and Palomar Park).[23] Therefore, it is assumed that San Mateo comprises 77 percent of the Cal Water-MPS water demand.[24] A supply and demand analysis is provided in Table 4.17-6, *Cal Water-MPS Water Supply and Demand with 2040 Buildout.*

TABLE 4.17-6 CAL WATER-MPS WATER DEMAND AND SUPPLY WITH 2040 BUILDOUT

Normal Year	2020 Existing Demand (AFY)	2020 to 2040 Projected Demand Increase (AFY)	2040 Total Water Demand (AFY)	2040 Projected Water Supply (AFY)	2040 Demand Exceeds Supply?
Total Service Area, from UWMP	14,563	414	14,977	14,977	No
San Mateo Service Area, with 2040 Buildout	11,214 [a]	2,311 [b]	13,525	11,532 [c]	**Yes**

Notes: AFY = acre feet per year
a. Assumed to be 77 percent of total water demand as reported in Cal Wate-MPS 2020 UWMP.
b. Based on projected buildout under the proposed project, as shown in Table 4.17-5, *Increase in Water Demand in Cal Water Bayshore MPD Service Area with 2040 Buildout*.
c. Assumed to be 77 percent of total water supply as reported in Cal Water-MPS's UWMP.
Source: Cal Water MPS, 2021, 2020 Urban Water Management Plan; PlaceWorks, 2023.

As shown in Table 4.17-2, Cal Water-MPS shows that the water supplies will exactly meet the demand anticipated in the 2020 UWMP in normal years through year 2040. This is not an indication that additional supply is not available as the Cal Water-MPS 2020 UWMP does not list excess supply that may be available. The 2020 UWMP projects a very small increase in water demand in the 20-year period between 2020 and 2040. This is due to a smaller projected increase in the service population between 2020 and 2040 (10,316 people) as compared to Plan Bay Area 2040 projections for San Carlos and San Mateo, which estimates an increase of 25,380 people.[25] Also, the 2020 UWMP assumes that water conservation efforts would result in a decrease in per capita water demand, even with population increases. The calculations provided in Table 4.17-5 that show an increase in water demand of 2,311 AFY with buildout of the proposed project do not account for water conservation efforts, the Development Offset Program, and the effect of reduced water demand for new construction due to compliance with the CALGreen Building Code and the latest California Plumbing Code. Nevertheless, based on these water supply projections, there is a projected shortage of water supplies to meet the demand with the proposed project buildout for normal years and single and multiple dry years.

One way to offset the shortage of water supplies during normal and multiple dry years would be to continue implementing water conservation measures. Cal Water-MPS enforces water waste prevention and water use restrictions, as authorized by the California Public Utilities Commission (CPUC) and coordinates its efforts with local governments. Cal Water-MPS meters all service connections and bills

[23] San Mateo and San Carlos population source: Department of Finance, 2023, Table 2: E-5 City/County Population and Housing Estimates, 4/1/2020. Unincorporated San Mateo County population calculated as the difference between Cal Water's total service population (as reported in Cal Water's UWMP) and the population estimates for San Mateo and San Carlos. 137,486 total service population – 136,499 population in San Mateo and San Carlos = 987 population in unincorporated San Mateo County.

[24] 105,751 / 137,486 = 77 percent.

[25] Association of Bay Area Governments, 2018, Plan Bay Area Projections 2040.

customers for water use on a monthly basis. Cal Water Bayshore MPD uses conservation pricing with a three-tier increasing block rate for residential water use. The water agency has a comprehensive public education and outreach program and conducts an annual distribution system audit to reduce water system losses.[26]

In addition, Cal Water-MPS operates rebate, give-away, and direct installation programs aimed at plumbing fixture replacement, irrigation equipment, and landscape efficiency. Cal Water-MPS has a rebate program for high-efficiency toilet replacement, high-efficiency urinal replacement, and high-efficiency clothes washer replacement. Cal Water-MPS also has residential conservation kits that are free, with high-efficiency showerheads, bathroom and kitchen faucet aerators, toilet leak tables, and an outside full-stop hose nozzle. For outdoor water use, Cal Water-MPS provides rebates for smart irrigation controllers, high-efficiency sprinkler nozzles, large rotary nozzle replacement, spray bodies with pressure regulation and check valves, and turf replacement. Cal Water-MPS also provides landscape audits and sprinkler adjustments at no charge, technical assistance through the residential customer portal, and commercial water surveys. Because over 90 percent of the housing in the Cal Water-MPS service area was built prior to 2000, there are ample opportunities for retrofitting and replacement of inefficient water fixtures to reduce existing and future water demand. Implementation of these programs over the last five years have resulted in water savings of approximately 772 AF.[27]

The City of San Mateo is almost entirely built out and new development would primarily be infill projects, which would replace older existing water users with high efficiency plumbing fixtures and landscape irrigation. The calculations provided in Table 4.17-5 do not take credit for the existing water demand that would be eliminated with infill projects.

Also, Cal Water-MPS has created a Development Offset Program that requires any new residential, commercial, or industrial development that is projected to increase demand by more than 50 AFY to pay a special facilities fee, referred to as a developer offset fee, or conduct off-site conservation measures. The net demand increase is defined as the project's projected water demand minus the existing water demand averaged over the previous 5-year period. The 50-AFY threshold is equivalent to approximately 450 single-family dwelling units or approximately 460,000 square feet of commercial land use. Cal Water-MPS will verify compliance with the program prior to the start of construction and that all offset fees and/or conservation measures have been completed prior to establishing a water connection. In addition, large projects that meet the criteria under SB 610 would need to prepare a WSA to ensure that there are sufficient water supplies for the project, and all project applicants would be required to obtain a will-serve letter from Cal Water-MPS prior to the issuance of building permits.

Cal Water-MPS would also implement the WSCP during single- and multiple-dry years, with water restrictions ranging from 10 to >50 percent. If the water shortage is at a Stage 5 level (requiring a demand reduction of up to 50 percent), new water connections must have a net zero demand increase. At a Stage 6 level (demand reduction greater than 50 percent), Cal Water-MPS has a moratorium on new water service connections.

[26] California Water Service, 2021, 2020 Urban Water Management Plan.
[27] California Water Service, 2021, 2020 Urban Water Management Plan.

Cal Water-MPS coordinates on an ongoing basis with SFPUC, BAWSCA, City of San Mateo, City of San Carlos, San Mateo County, and other public and private entities to optimize the use of regional water supplies. Cal Water-MPS and the other Cal Water Districts are currently in the process of developing multiple regional water supply reliability studies using integrated resource planning to create a long-term supply reliability strategy through 2050. The studies will create long-term strategies to address water supply challenges including climate change, new regulatory requirements such as the Bay Delta Plan Amendment, and potential growth in demands due to new development. Cal Water-MPS is also included in the Bay Area Water Supply Reliability Analysis.[28]

Water Demand Analysis - EMID

Based on mapping analysis conducted by the EIR preparers, buildout under the proposed project within EMID's service area is estimated to be 3,010 new dwelling units (10 new single-family residences and 3,000 multi-family residences) and 1,445,700 square feet of office space, including R&D and life sciences land uses. The water demand factors were obtained from EMID's Water Capacity Study. Four planned redevelopment projects in the San Mateo portion of EMID's service area were included in the Water Capacity Study: Bridgepointe Redevelopment, 901-951 Mariners Island Blvd, 1400 Fashion Island Blvd, and 999 Baker Way. As these four projects were already included in the EMID Water Capacity Study, the net increase in water demand for these projects was calculated separately. The remainder of the net water demand increase not already accounted for in EMID's analysis includes 1,822 housing units (10 single-family and 1,812 multi-family) and 985,282 square feet of office and R&D/life science land uses within the EMID service area.

The water demand factors from the EMID Water Capacity Study assume 65 gpcd for single-family residences and 48 gpcd for multi-family residences. This analysis assumes a household size of 2.59 people per household, consistent with the buildout projection assumptions for the proposed project. Office space is assumed to use 13 gallons per year per square foot (GPY/SF) and R&D land uses are assumed to use 25 GPY/SF, consistent with assumptions in EMID's Water Capacity Study. It was conservatively assumed that all new construction would be R&D land uses since this is the higher water usage rate and there is a current trend in converting existing office space to R&D uses. The calculations are provided in Table 4.17-7, *Increase in Water Demand in EMID Service Area at 2040 Buildout.*

[28] California Water Service, 2021, 2020 Urban Water Management Plan.

TABLE 4.17-7 INCREASE IN WATER DEMAND IN EMID SERVICE AREA AT 2040 BUILDOUT

Category	Number (DUs or SF)	Water Use Factor (gpcd [a] or gpd/SF)	Increase in Water Demand (gpd)	Increase in Water Demand (AFY)
Single-Family Residential	10	65	1,583.5	1.9
Multi-Family Residential	1,812	48	225,268	252
Commercial/R&D	985,282	0.068	67,485	75.5
TOTAL			**294,436**	**330**

Notes: DUs = dwelling units; SF = square feet; gpcd = gallons per capita per day; gpd/SF = gallons per day per square foot; gpd = gallons per day; AFY = acre feet per year; R&D = research and development
a. Assumes 2.59 people per dwelling unit
Source: EMID, 2023, Water Capacity Study; PlaceWorks, 2023.

The calculations in Table 4.17-7 indicate a net new water demand within the EMID service area of 330 AFY with buildout of the proposed project. The Water Capacity Study included a net increase in water demand of 94 AFY for planned projects within San Mateo in the EMID service area. This results in a total net increase in water demand of 424 AFY in the EMID service area by 2040 with buildout of the proposed project. Table 4.17-8, *EMID Supply and Demand at 2040 Buildout,* provides an analysis of the EMID water supply and demand under normal conditions with the proposed project's 2040 buildout.

TABLE 4.17-8 EMID SUPPLY AND DEMAND AT 2040 BUILDOUT

Normal Year	(AFY)
2020 Existing Demand with Passive and Active Conservation	4,100
Net Demand from New Development in EMID Service Area (including San Mateo projects)	543
Additional San Mateo Water Demand from 2040 Buildout Not Previously Accounted for by EMID	330
Total System Demand	**4,973**
SFPUC Supply	**6,610**
Excess Water Supply	1,637
Sufficient Water Supply with Proposed 2040 Buildout Under Normal Conditions?	Yes

Source: EMID, 2023, Water Capacity Study; PlaceWorks, 2023.

The calculations in Table 4.17-8 indicate that EMID has sufficient water supplies to accommodate the growth associated with the future development under the proposed project within the EMID service area under normal conditions. However, there will not be sufficient water supplies under single- and multiple-dry year conditions, assuming implementation of the Bay Delta Plan Amendment and SFPUC supply restrictions. This would be true even without the additional 330 AFY of water demand from the proposed project buildout. However, SFPUC indicates that if the Bay Delta Plan Amendment is not implemented, there would be sufficient water supplies for all of its wholesale customers through 2040 with no restrictions. For year 2045 during the 4th or 5th year of consecutive drought, there may be cutbacks of about 9.2 percent.[29]

In addition, as discussed above, EMID would implement the WSCP during single- and multiple-dry years, with water restrictions ranging from 10 to 50 percent. However, even with these restrictions, there still

[29] EMID, 2021, 2020 Urban Water Management Plan, Appendix H, Regional Water Supply Reliability and BAWSCA Tier 2 Drought Implementation Scenarios.

would be a shortage in water supplies with implementation of the Bay Delta Plan Amendment. Therefore, EMID and Foster City have implemented a Water Neutrality Ordinance that requires new development, redevelopment, or changes in land use within the EMID service area that will need new water service or that will increase water demand in excess of existing conditions to offset the projected new water demand with water efficiency/conservation/retrofit measures to create a neutral (or net zero) impact. This ordinance would also apply to all new development in San Mateo that is within EMID's service area.[30] In conjunction with implementation of the WSCP during drought conditions, this ordinance should minimize increases in water demand with future development and alleviate concerns regarding water shortages if and when the Bay Delta Plan Amendment is implemented.

There also is the potential for water right transfers within the SFPUC Regional Water System. The Water Shortage Allocation Plan adopted by all BAWSCA agencies and the SFPUC provides the basis for voluntary transfers of water among BAWSCA agencies during periods when mandatory rationing is in place. Also, EMID has two emergency interconnections: with Cal Water-MPS and Mid-Peninsula Water District that would enable the short-term transfer of water due to disruptions in normal supply resulting from an earthquake or other emergency.[31]

Summary

As described above, in the Cal Water-MPS service area, there is expected to be a shortage of water supplies to meet the demand with the proposed buildout for normal years and single and multiple dry years, assuming implementation of the Bay Delta Plan Amendment and SFPUC supply restrictions. Also, the water demand analysis presented above is conservative because no credit was taken for future active and passive conservation efforts because the Conservation Tracking Tool used in Cal Water-BPS UWMP is a proprietary model.

In the EMID service area, there is expected to be sufficient water supplies to meet demand under normal conditions but not under single- and multiple-dry year conditions, assuming implementation of the Bay Delta Plan and SFPUC supply restrictions.

The Public Services and Facilities (PSF) Element of the proposed General Plan contains goals, policies, and actions that require planning and development decisions to consider impacts to water supplies and resources. The following proposed General Plan 2040 goals, policies, and actions would serve to minimize potential adverse impacts to water supplies with future development:

- Goal PSF-2: Support access to a safe, sustainable, and resilient supply of water for San Mateo.
  - Policy PSF 2.1: Supplemental Water Sources. Support efforts by California Water Service, Estero Municipal Improvement District, and adjacent jurisdictions to develop supplemental and resilient water sources.

[30] City of Foster City, 2023. Resolution No. _____, Estero Municipal Improvement District, Water Neutrality Growth Policy.
[31] Estero Municipal Improvement District, 2021. 2020 Urban Water Management Plan.

- Policy PSF 2.2: Water Supply Planning. Coordinate with Cal Water and Estero Municipal Improvement District upon each update of their respective Urban Water Management Plans to ensure there is an adequate and sustainable water supply for current and future development.
- Policy PSF 2.3: Water Conservation. Work with California Water Service, Estero Municipal Improvement District, Bay Area Water Supply Conservation Agency, and other mid-peninsula cities to support local, regional, and statewide water conservation efforts. Encourage all properties to convert to water-efficient landscaping.
- Policy PSF 2.4: Water Supply for New Development. Require applicants to provide will-serve letters from water purveyors prior to issuing building permits for new development to demonstrate that water supply is available.
- Policy PSF 2.5: Water-Conserving Fixture Retrofits. Require that all residences and commercial properties that apply for a building permit for alternations or renovations provide proof of water-conserving plumbing fixtures.
- Policy PSF 2.6: Water Offset Requirements. Require all new development or redevelopment projects to comply with the water conservation and offset policies and requirements imposed by California Water Service or Estero Municipal Improvement District, depending on the water service area in which the project is located.
- Policy PSF 2.7: Water Shortage Plans. Coordinate with California Water Service and Estero Municipal Improvement District to conduct community outreach and take other steps to ensure compliance with their Water Shortage Contingency Plans during water shortages, such as a drought or supply interruption.
- Policy PSF 2.8: Water Efficiency. Support increased water efficiency in all new development and existing building stock.
- Action PSF 2.9: Recycled Water. Continue working with California Water Service, the San Francisco Public Utilities Commission, the Bay Area Water Supply & Conservation Agency, the City of Redwood City, and Silicon Valley Clean Water to develop an advanced water purification facility that treats wastewater from the San Mateo wastewater treatment plant to tertiary treatment standards.
- Action PSF 2.10: Water-Reduction Strategies. Work with California Water Service, Estero Municipal Improvement District, Bay Area Water Supply & Conservation Agency, and other mid-peninsula cities to promote water-reduction strategies and to create an outreach program that will help inform residents and businesses of increased costs, the need for conservation efforts, and available incentives and rebates.
- Action PSF 2.11: Water Purification Facility. Continue working with California Water Service, the San Francisco Public Utilities Commission, the Bay Area Water Supply & Conservation Agency, the City of Redwood City, and Silicon Valley Clean Water to develop an advanced water purification facility that treats wastewater from the San Mateo wastewater treatment plan to tertiary treatment standards.
- Action PSF 2.12: Water Usage. Work with California Water Service to collect and track water use by land use type and make this information available to the community.

The City would continue to coordinate with Cal Water-MPS and EMID regarding conservation efforts, demand management measures promoted by the water districts, and implementation of water use restrictions as per the WSCPs. Additionally, future development under to the proposed project would be required to implement the water-efficient requirements specified in the CALGreen and California Plumbing Codes and the WELO requirements for water efficient landscaping. Future projects under the proposed project that meet the criteria under California Water Code Section 10912 would be required to prepare a WSA that demonstrates that project water demands would not exceed water supplies. In addition, existing residential, commercial, and industrial land uses can be expected to decrease their water demands in the future as a result of the implementation of water conservation practices.

Compliance with implementation of Cal Water-MPS and EMID's WSCPs, compliance with the proposed General Plan goals, policies, and actions, compliance with WSA requirements, a requirement for will-serve letters for all new development projects, and compliance with existing water conservation regulations would reduce water demand with respect to water supplies. In addition, Cal Water, EMID, and SFPUC plan to have implemented alternative water supply programs by 2040. The Bay Delta Plan Amendment may not be enacted in its current structure, making more water available than anticipated in the most recent UWMPs.[32] The SFPUC has indicated that there will be sufficient supplies available to meet all demands of their water purveyors in both normal and drought conditions through the year 2040 if the Bay-Delta Plan is not implemented. The next iteration of Cal Water-MPS and EMID UWMPs, due in 2026, will reflect the population projections of the proposed General Plan and plan accordingly for future water supplies. Finally, compliance with the Cal Water-MPS Development Offset Program and EMID's Water Neutrality Ordinance would provide additional assurance that impacts to water supply would be less than significant. As the City of San Mateo is not a water provider for the EIR Study Area and has limited capacity to directly control water use and water supply planning, the measures described above represent the best water conservation and water supply measures available and the impact is *less than significant*.

Significance without Mitigation: Less than significant.

UTIL-2 The project would not 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.

As noted in impact discussion UTIL-1, both Cal Water-MPS and EMID have sufficient water supplies available under normal years and would implement their WSCPs under single-year and multiple-year dry conditions. The WSCPs contain water demand mitigation measures that would be implemented at each of the six water shortage levels and each water agency is required to submit an annual report to DWR to assess whether there will be a water shortage in the coming year and what water demand reduction measures will be adopted to address the shortages. It also should be noted that the 2020 UWMPs assume full implementation of the Bay Delta Plan Amendment, which is in a state of flux and most likely would not result in the severe water restrictions that are currently projected. In addition, Cal Water-MPS, EMID, BAWSCA and SFPUC are working on alternative water supplies to address potential future water

[32] San Francisco Public Utilities Commission, 2021. 2020 Urban Water Management Plan.

shortages. Both water agencies that serve San Mateo and the SFPUC have an existing water distribution infrastructure that can supply the City without the need to expand their infrastructure facilities. Implementation of EMID's Water Neutrality Ordinance and the Cal Water-MPS Development Offset Program would provide assurance that future water demand would be offset by additional water supplies and expanded conservation programs.

In addition, each future proposed project under the proposed project would be required to demonstrate the availability of water to serve the development in the form of will-serve letters from the water purveyors or for larger projects, preparation of a WSA as required by Section 10910 of the California Water Code. As the City is almost entirely built out, most of the new development would be infill projects that are replacing buildings with an existing water demand and water distribution system. Therefore, implementation of the proposed project would not result in the need to construct additional water supply or distribution systems.

Cal Water-MPS and EMID purchase all of their water from SFPUC. The Harry Tracy Water Treatment Plant (HTWTP), which is owned and operated by SFPUC, filters and disinfects the water supplied from Crystal Springs Reservoir and San Andreas Reservoir before delivery to its wholesale customers on the Peninsula and its retail customers in the City of San Francisco. The Harry Tracy Water Treatment Plant was recently upgraded and features five new filters, three new ozone generators, and a new seismically resistant 11.5-million-gallon treated water reservoir. The facility now has the capacity to provide 140 MGD for 60 days within 24 hours of a major earthquake. This was part of SFPUC's WSIP to repair, replace, and seismically upgrade the Hetch Hetchy Regional Water System. As part of the upgrades, a new 78-inch treated water pipeline was installed to connect the HTWTP reservoir with the San Andreas Pipeline for delivery to SFPUC's customers.[33] Therefore, the SFPUC has the capability of supplying treated water to all of its wholesale and retail customers under existing and future conditions and no new water treatment facilities are required.

In summary, no new water treatment or distribution facilities would be needed with implementation of the proposed project and Cal Water-MPS and EMID has capital improvement projects to monitor and upgrade their water distribution systems to accommodate future development. In addition, compliance with the City's requirements for new construction, water-efficient landscaping, and compliance with the proposed General Plan goals, policies, and actions listed in impact discussion UTIL-1 would result in *less-than-significant* impacts with respect to the need for new and/or expanded water facilities.

Significance without Mitigation: Less than significant.

[33] SFPUC, undated, The Harry Tracy Water Treatment Plant, https://baywork.org/wp-content/uploads/2017/08/Harry-Tracy-Water-Treatment-Plant-fact-sheet-020817.pdf, accessed May 25, 2023.

UTIL-3	**The project would not, in combination with past, present, and reasonably foreseeable projects, result in significant cumulative impacts with respect to water supply.**

The area considered for cumulative water supply impacts is the service areas of Cal Water-MPS MPD and EMID. Other future projects within these service areas would result in increases in water demand. However, cumulative water demands are not anticipated to require building new water treatment facilities or expansion of existing facilities beyond what is currently planned. All new development projects would be required to obtain will-serve letters from Cal Water-MPS and EMID and projects that meet the SB 610 criteria, such as residential projects with more than 500 dwelling units, would be required to prepare WSAs. The City and the water purveyors would review such projects for adequacy of water supply and the water purveyors would update the UWMP every five years to ensure that there are adequate water supplies and contingency plans for future residents and customers. All new development under the proposed project would require implementing water efficiency and water conservation measures, as per the CALGreen Building Code and the WELO irrigation requirements. Water supply deficits in dry years would be met by implementing the WSCPs and other water conservation efforts.

All cumulative projects would require compliance with City ordinances and proposed General Plan goals, policies, and actions, as well as local, State, and federal regulatory requirements. These regulations, and enactment of the pending water neutrality ordinances, would result in a reduction in per capita water use over time, which would ensure that cumulative impacts with respect to water supply would be *less than significant.*

Significance without Mitigation: Less than significant.

4.17.2 WASTEWATER

4.17.2.1 ENVIRONMENTAL SETTING

Regulatory Setting

Federal Regulations

Clean Water Act

The Clean Water Act regulates the discharge of pollutants into watersheds throughout the nation. Under the CWA, the USEPA implements pollution control programs, 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 in 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 concentrations and/or mass emissions of pollutants contained in the discharge; set prohibitions on discharges not specifically allowed under the permit; and establish 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 sewage treatment plant.

State Regulations

On May 2, 2006, the SWRCB adopted a General Waste Discharge Requirement (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 (SSOs) by requiring public sewer system operators to take all feasible steps to control the volume of waste discharged into the system, to prevent sanitary sewer waste from entering the storm sewer system, and to develop a Sewer System Management Plan (SSMP). The General Waste Discharge Requirement also requires that SSOs be reported to the SWRCB using an online reporting system. The SWRCB has delegated authority to the nine RWQCBs to enforce these requirements within their regions.

The SSMP evaluates existing sewer collection systems and provides a framework for minimizing the frequency and impact of SSOs. The SSMP includes an overflow emergency response plan; a fats, oil, and grease control program; scheduled inspections and condition assessment; design and construction standards; capacity assessment and management; and a monitoring program.

Regional Regulations

The San Francisco Bay RWQCB (Region 2) was created as a result of the California Porter-Cologne Act. The RWQCB issues and enforces NPDES permits within the EIR Study Area, which includes permits for wastewater treatment plants (WWTPs) and industrial waste discharges. 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.

Local Regulations

San Mateo General Plan 2030

The City of San Mateo General Plan 2030 goals, policies, and actions that are relevant to wastewater are primarily in the Public Services and Facilities Element. As part of the proposed project, some existing General Plan goals, policies, and actions would be amended, substantially changed, or new policies would be added. Applicable goals, policies, and actions are identified and assessed for their effectiveness and potential to mitigate adverse impacts to wastewater later in this chapter under Section 4.17.2.3, *Impact Discussion*.

City of San Mateo Municipal Code

The SMMC includes various directives pertaining to wastewater. The SMMC is organized by title, chapter, and section, and in some cases, articles. Most provisions related to wastewater impacts are included in Title 3, *Taxation and Finance*, Title 7, *Health, Sanitation, and Public Nuisances*, and Title 23, *Buildings and Construction.*

- Chapter 3.54, *Sewer Service Charges and Connection Fees.* These fees are imposed upon the owners of every parcel of land within the city that is served by the City's sanitary sewer system and wastewater treatment plant. The fees are part of the annual property tax bill, which funds costs associated with providing sanitary sewer and wastewater treatment services, including required new or expanded construction projects, maintenance, and operation.
- Chapter 7.38, *Sanitary Sewer Use*, incorporates the City of San Mateo Sanitary Sewer Use Ordinance. The chapter sets requirements for users of wastewater collection, treatment, and disposal facilities operated and administered by the City and EMID. Compliance would prevent the discharge of any pollutant into the sanitary sewer system, which would: (1) obstruct or damage the collection system; (2) interfere with, inhibit or disrupt wastewater treatment processes or operations, or limit sludge reuse or disposal options; (3) pass through the treatment system and contribute to violations of the regulatory requirements placed upon the City of San Mateo Wastewater Treatment Plant (WWTP); or (4) result in or threaten harm to human health or the environment.

  A wastewater capacity charge is imposed on all new development to recover a proportionate share of costs for existing and future wastewater system facilities and new or expanded connections to the City's wastewater systems. The applicable charges are determined by land use, wastewater flow rates, and wastewater strength loadings.

  Section 7.32.432 provides requirements for compliance with the Private Sewer Lateral Ordinance, which was passed in 2020. Upon the sale of real property, property improvements greater than $90,000, sewer class change, or sewer later backup or blockage, a sewer lateral inspection is required.

  Industrial waste may require pretreatment prior to discharge to the City's sewer system, as determined by the Public Works Department. Pretreatment may include gravity separation interceptors, grease removal for food service facilities, closed-loop recycling systems for steam cleaning and radiator flushing, electrolytic recovery units for photo process waste and devices to capture amalgam for dental clinics. Applicants must submit an application to the Public Works Department to obtain a permit to discharge industrial waste. Permit applications for construction dewatering are also required.
- Chapter 23.16, *Plumbing Code*, adopts the 2022 California Plumbing Code, California Code of Regulations, Title 25, Part 5, which includes a chapter on sanitary drainage connections and standards of construction.

City of San Mateo NPDES Permit for Wastewater Treatment Plant

The San Francisco Bay RWQCB issued a NPDES permit and waste discharge requirements in 2018 for San Mateo's Wastewater Treatment Plant (WWTP) and its collection system (Order No. R2-2018-0016). The dischargers are listed as the City of San Mateo and the City of Foster City EMID. EMID also discharges its

collected wastewater to San Mateo's WWTP as well as four satellite collection systems: the City of Belmont, Crystal Springs Community Sanitation District (CSCSD), the Town of Hillsborough, and County of San Mateo Tower Road Complex. The order contains discharge limitations on specific pollutants discharged to Lower San Francisco Bay as well as monitoring and reporting requirements. The WWTP is permitted for an average daily dry weather flow of 15.7 MGD.[34] The current NPDES permit expires on June 30, 2023.

City of San Mateo Sewer System Management Plan

The latest Sewer System Management Plan is dated 2020.[35] The goal of the SSMP is to provide a plan and schedule to properly manage, operate, and maintain all parts of the sanitary sewer system in order to minimize the number of SSOs and mitigate any SSOs that do occur. As required by law, the SSMP must be updated every five years and must be developed in compliance with the requirements of the SWRCB Waste Discharge Requirements Order No. 2006-003-DWQ, Amended Monitoring and Reporting Program (MRP) Order No. WQ 2008-002-EXEC, and Order No. WQ 2013-0058-EXEC.

San Mateo Clean Water Program

The Clean Water Program is a comprehensive plan to upgrade the aging wastewater collection and treatment system with advanced infrastructure that will provide reliable service for years to come. The Final Programmatic Environmental Impact Report was certified and adopted by City Council in May 2016.[36] The $1 billion Clean Water Program was launched in 2015 in response to a Cease-and-Desist Order from the RWQCB issued jointly to the City of San Mateo, the Town of Hillsborough, and the CSCSD to eliminate SSOs in the respective collection systems and requiring specific corrective actions. Primary objectives of the Clean Water Program are to replace aging infrastructure and facilities that are reaching their lifespan of 50 to 60 years; meet current and future regulatory requirements regarding SSOs and infiltration/inflow reductions; increase the peak wet weather capacity of the WWTP; and meet the City's sustainability goals regarding more efficient use of energy and recycled water.

San Mateo Integrated Wastewater Master Plan

The 2014 Integrated Wastewater Master Plan was developed in response to the reissuance of the NPDES permit for the WWTP in 2013 requiring a more integrated approach for addressing the City's collection system and WWTP. The permit called for development of WWTP and Collection System Master Plans, Capital Improvement Programs (CIPs), and a Wet Weather Improvement Program. The Integrated Wastewater Master Plan was developed in response to those requirements and addresses the needs

[34] San Francisco RWQCB, 2018, Order No. R2-2018-0016, Waste Discharge Requirements for City of San Mateo Wastewater Treatment Plan and its collection system.

[35] City of San Mateo, updated December 2020, *Sewer System Management Plan*, https://www.cityofsanmateo.org/DocumentCenter/View/83281/Final-City-of-San-Mateo-2021-SSMP-122920-w-Appendices, accessed May 25, 2023.

[36] City of San Mateo, Public Works Department, and City of Foster City, 2019, Environmental Impact/Permitting – Final PEIR, https://cleanwaterprogramsanmateo.org/peir/, accessed May 24, 2023.

through 2035 for the City's collection system and WWTP to deal with wet and dry weather flows. The Integrated Wastewater Master Plan considers the following elements:

- Provide adequate capacity to convey and treat the projected flows in the system.
- Resolve existing conditions and treatment concerns.
- Meet current regulatory requirements regarding SSOs and infiltration and inflow (I/I) reduction.
- Meet anticipated future regulatory requirements.
- Meet the City's sustainability objectives including more efficient use of energy and recycled water.
- Plan for expansion of the WWTP considering space limitations of the site.
- Balance improvements between collection/conveyance, treatment, and storage to find the most efficient method to handle wet weather flows.

San Mateo Sewer Design Standards

The construction of sewer collection systems within the City's service area shall conform to the City's requirements per Appendix 5.1 of the SSMP, Element 5, Design and Performance Provisions.[37] The design standards require calculations for design flows and pipe capacities, minimum slopes of collector lines, laterals, and manhole spacings. The City also has standard sewer details and drawings issued by the Public Works Department.[38]

Existing Conditions

Wastewater Treatment

The San Mateo WWTP is owned by the City of San Mateo (approximately 75 percent ownership) and the City of Foster City/EMID (approximately 25 percent ownership) and has been in operation since 1935.[39] A 2017 Joint Powers Agreement (JPA) between the City of San Mateo and City of Foster City/EMID establishes the capacity, ownership, and cost distribution to the parties. As the administering agency of the JPA, the City of San Mateo operates the WWTP. The WWTP is located at 2050 Detroit Drive in San Mateo and provides secondary treatment of domestic, commercial, and industrial wastewater for the cities of San Mateo and Foster City, Crystal Springs County Sanitation District, and portions of the Town of Hillsborough, the City of Belmont, and unincorporated San Mateo County.

The City of San Mateo and Foster City/EMID maintain their own sewer collection systems. The neighboring agencies are responsible for the ownership and maintenance of their sanitary collection systems and pay for the sanitary flows that are discharged into the City's collection system for conveyance and treatment at the WWTP. The current population within the entire WWTP service area is estimated to

[37] City of San Mateo, 2020, Sewer System Management Plan, Appendix 5.1, Element 5, Design and Performance Provisions.

[38] City of San Mateo, 2023, *Sanitary Sewer Details and Appurtenances,* https://www.cityofsanmateo.org/2081/Standard-Drawings, accessed May 24, 2023.

[39] City of San Mateo, updated December 2020, *Sewer System Management Plan*, https://www.cityofsanmateo.org/DocumentCenter/View/83281/Final-City-of-San-Mateo-2021-SSMP-122920-w-Appendices, accessed May 26, 2023.

be approximately 170,000.[40] The sanitary sewer collection systems that contribute wastewater to the WWTP and the location of the WWTP are shown on Figure 4.17-2, *Sanitary Sewer Service Area Boundaries and WWTP Location*.

The WWTP was built in 1935 and is presently in the process of a major modernization, expansion, and upgrade project. The facility is currently permitted for a discharge of 15.7 MGD as an average daily dry weather flow. The amount of wastewater discharged to the WWTP was approximately 10 MGD in 2020.[41] The current treatment process consists of primary clarification, activated sludge aeration, secondary clarification, and sodium hypochlorite disinfection. During wet weather conditions, the primary treatment capacity is 60 MGD and the secondary treatment capacity is 40 MGD. Currently, when influent exceeds the WWTP's wet weather design capacity of 40 MGD, a portion of the wastewater from the primary clarifier is routed directly to the chlorine disinfection tank (bypassing secondary treatment) and blended with secondary treated wastewater prior to discharge. The expansion and upgrade of the WWTP will eliminate this blending process, as per RWQCB requirements.

The WWTP Upgrade and Expansion Project involves the construction of new liquid treatment facilities, including headworks, primary treatment, five-stage biological nutrient removal/membrane bioreactor process, biological and chemically enhanced treatment process, and odor control facilities. Once the expansion project is completed, the WWTP will be able to provide secondary treatment for all wet weather flows and eliminate blending. The new facilities will be able to treat flows of up to 21 MGD for dry weather conditions and up to 78 MGD for peak wet weather flows, with the ability to store wastewater in an onsite equalization basin.[42]

Wastewater Collection

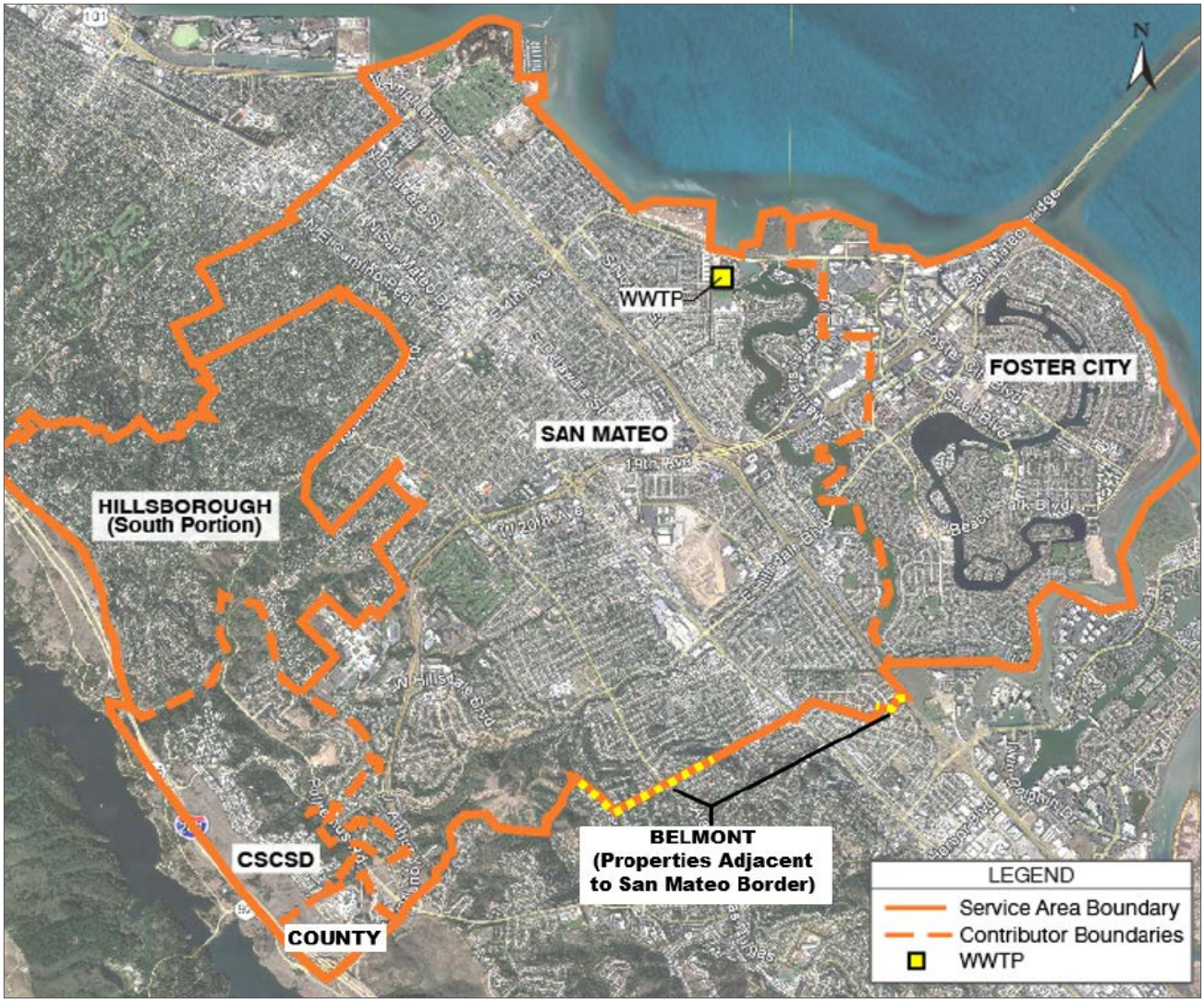
The City of San Mateo's sewer collection system consists of 230 miles of sewer pipes, ranging in diameter from 4 inches to 48 inches, and approximately 5,800 manholes. Approximately 74 percent of the sewer pipes were installed prior to 1960 and are predominantly vitrified clay pipe (VCP). There also are 27 pump stations and 11 miles of force mains, which are located primarily in the eastern (flatter) half of the City to assist in the conveyance of wastewater to the WWTP.[43] This system is maintained by the City's Public Works Department, Environmental Services Division. Wastewater is conveyed to the City's WWTP, where the effluent is treated and eventually discharged via a 54-inch outfall into Lower San Francisco Bay. Figure 4.17-3, *City of San Mateo Sewer Collection System*, shows the location of the sewer pipelines and pump stations.

[40] City of San Mateo, updated December 2020, *Sewer System Management Plan*, https://www.cityofsanmateo.org/DocumentCenter/View/83281/Final-City-of-San-Mateo-2021-SSMP-122920-w-Appendices, accessed May 24, 2023.

[41] Correspondence with Azalea Mitch, 2023, Director of Public Works.

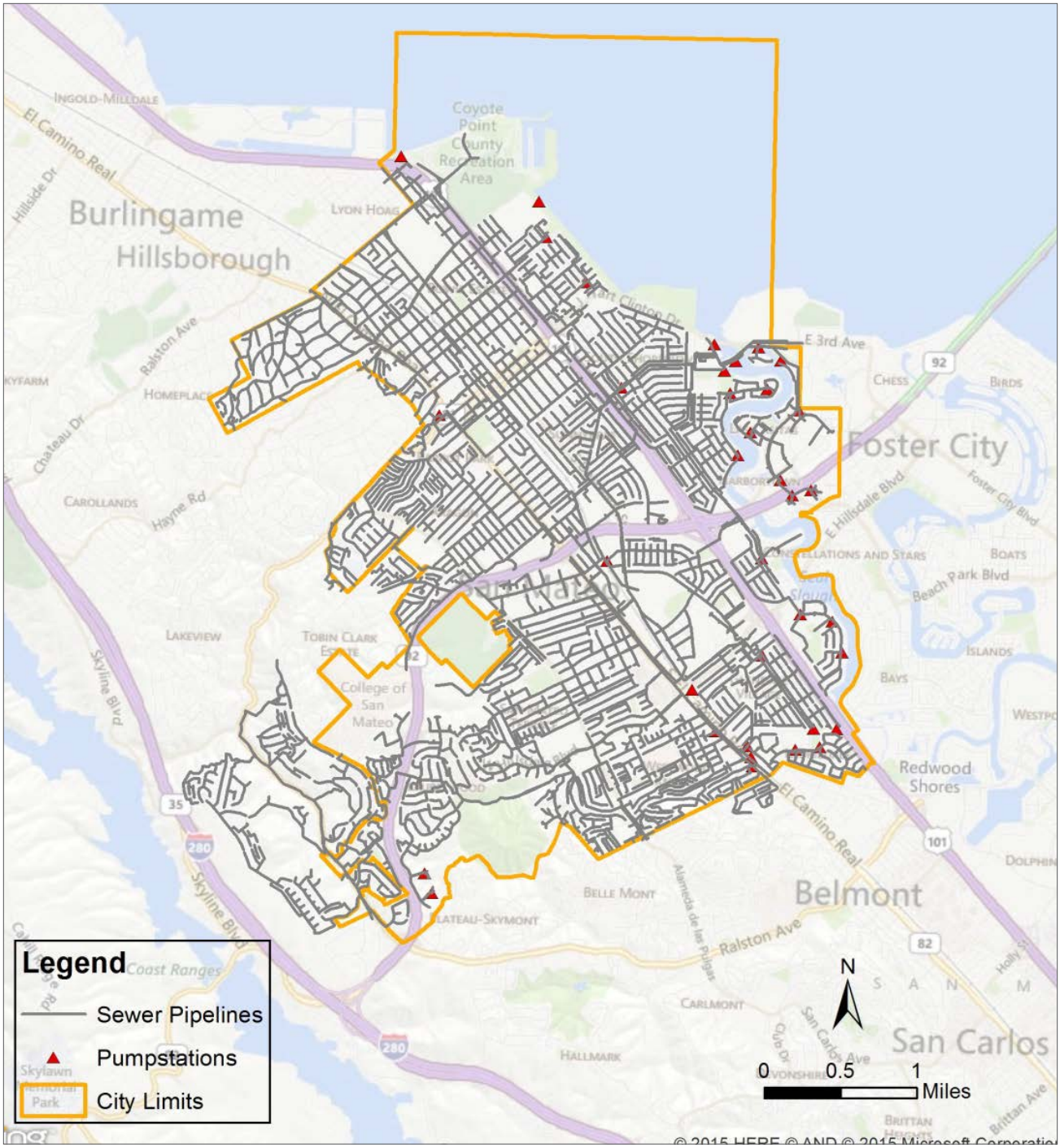
[42] San Mateo/EMID WWTP, 2017. Special Use Permit Formal Application. Nutrient Removal and Wet Weather Flow Management Upgrade and Expansion Project.

[43] City of San Mateo, updated December 2020, *Sewer System Management Plan*, https://www.cityofsanmateo.org/DocumentCenter/View/83281/Final-City-of-San-Mateo-2021-SSMP-122920-w-Appendices, accessed May 26, 2023.



Source: City of San Mateo Sewer System Management Plan, 2020.

Figure 4.17-2
Sanitary Sewer Service Area Boundaries and WWTP Location



Source: City of San Mateo Sewer System Management Plan, 2020.

0 1
Scale (Miles)

Figure 4.17-3
City of San Mateo Sewer Collection System

The City plans to upgrade the aging infrastructure as outlined in the Sewer System Management Plan[44], Integrated Wastewater Master Plan,[45] and San Mateo's Clean Water Program.[46] The existing collection system constructed with aging vitrified clay pipes allows the inflow and infiltration of groundwater and stormwater into the system during wet weather events. When the collection system's capacity is exceeded due to these inflows, the wastewater surfaces and flows out of manholes, resulting in SSOs. Upgrades at the WWTP and the collection system's pipes and pump stations will provide additional capacity to reduce the occurrence of SSOs. Completed projects include the following:[47]

- Basin 2&3 Pipe Capacity Improvements – Pacific Boulevard Force Main Project
- 42nd Avenue Pump Station Improvements
- Glendora/Shasta Pipe Capacity Improvements
- Basin 1a Pipe Capacity Improvements
- Basin 1b Pipe Capacity Improvements
- Laurie Meadows and Woodbridge Pump Station Improvements
- 38th Avenue and 41st Avenue Pump Station Improvements
- El Camino Real Sewer Rehabilitation

Near-term sewer improvements include the following:[48]

- Dale Avenue Pump Station Improvements
- Basin 2&3 Pipe Capacity Improvements – Delaware Street Relief Sewer Project
- El Camino Real Sewer Conveyance System Improvements
- A Basin (North Basin) Sewer Rehabilitation
- B Basin (West Basin) Sewer Rehabilitation
- C Basin (East Basin) Sewer Rehabilitation
- D Basin (Central Basin) Sewer Rehabilitation
- E Basin (South Basin) Sewer Rehabilitation
- Kehoe-Kelly and Los Prados (1,2, and 3) Pump Station Improvements.

Once upgrades to the WWTP have been completed, there will be an option of producing disinfected tertiary-treated recycled water for landscape irrigation and/or for regional potable reuse opportunities (e.g., installing a pipeline from the WWTP to SFPUC's Lower Crysal Springs Reservoir).

The southern portion of the Town of Hillsborough, CSCSD, and San Mateo County's Tower Road complex also discharge wastewater into San Mateo's sewer collection system. The wastewater flows from the Town

[44] City of San Mateo, updated December 2020, *Sewer System Management Plan*, https://www.cityofsanmateo.org/DocumentCenter/View/83281/Final-City-of-San-Mateo-2021-SSMP-122920-w-Appendices, accessed May 26, 2023.

[45] City of San Mateo, Estero Municipal Improvement District, October 2014, *Integrated Wastewater 20-Year Master Plan*, https://www.cityofsanmateo.org/DocumentCenter/View/47508/Appendix-83-System-Evaluation-and-Capacity-Assurance-Plan---Integrated-WW-MP-Exec-Sum?bidId=, accessed May 26, 2023.

[46] City of San Mateo, Public Works Department, and City of Foster City, 2019, Clean Water Program San Mateo, https://cleanwaterprogramsanmateo.org/, accessed May 26, 2023.

[47] City of San Mateo, 2023, Sewer Improvement Projects, https://cleanwaterprogramsanmateo.org/construction-projects/ accessed May 26, 2023.

[48] City of San Mateo, 2023, Sewer Improvement Projects, https://cleanwaterprogramsanmateo.org/construction-projects/ accessed May 26, 2023.

of Hillsborough is conveyed by the Crystal Springs/El Cerrito trunk sewer and enters San Mateo's sewer collection system at El Cerrito Avenue, where it is conveyed to the Dale Avenue Pump Station and then into the San Mateo WWTP.[49] The wastewater collected by CSCSD flows through the Polhemus Trunk Sewer and eventually is discharged into the Dale Avenue Pump Station. The San Mateo County Tower Road complex also discharges wastewater into the Polhemus Trunk Sewer. The Town of Hillsborough and CSCSD, as well as San Mateo, are part of the Cease-and-Desist Order from the RWQCB as a result of SSOs and have been required to perform sewer system flow monitoring, completed sewer capacity assessments, and develop capacity assurance plans.

4.17.2.2 STANDARDS OF SIGNIFICANCE

The proposed project would have a significant impact related to wastewater service if it would:

- Require or result in the relocation or construction of new or expanded wastewater treatment facilities, the construction or relocation of which could cause significant environmental effects.
- Result in a determination by the wastewater treatment provider which serves or may serve the proposed project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.
- In combination with past, present, and reasonably foreseeable projects, result in significant cumulative impacts with respect to wastewater.

4.17.2.3 IMPACT DISCUSSION

UTIL-4 The project would not require or result in the relocation or construction of new or expanded wastewater treatment facilities, the construction or relocation of which could cause significant environmental effects.

Buildout of the proposed project would result in an increase in wastewater with the addition of 21,410 new housing units and 4,325,200 new square feet of non-residential land use. However, as discussed below, future demands from the increased population and land use changes from implementation of the proposed project would not exceed the permitted capacity of the City's WWTP. Other sanitation districts that discharge to the WWTP are also considered in this analysis.

For areas within the City Limits, wastewater generated by the proposed project would be collected by the City's sanitary sewer system and conveyed to the WWTP. EMID maintains its own sewer collection system, which sends wastewater directly to the WWTP. In addition, wastewater from portions of the Town of Hillsborough, CSCSD, and the San Mateo County Tower Road complex connect to San Mateo's sewer collection system and eventually are treated at the WWTP.

[49] Town of Hillsborough, 2011. Wastewater Collection System Master Plan for San Mateo (South) Sewershed. https://www.hillsborough.net/DocumentCenter/View/4704/1-Wastewater-Collection-System-Master-Plan-for-San-Mateo-South-Sewershed_September-2011?bidId= accessed on May 26, 2023.

An estimate of the amount of additional wastewater generated by the proposed project was determined, as shown in Table 4.17-9, *Wastewater Demand Increase: Proposed Project.* The wastewater demand factors were derived assuming that 90 percent of the total water demand consisted of indoor water use and that 95 percent of the indoor water use resulted in wastewater. These wastewater demand factors differ from the factors presented in the City's 2014 Wastewater Master Plan due to updated information on water demands provided by Cal Water-MPS and EMID.

TABLE 4.17-9 WASTEWATER DEMAND INCREASE: PROPOSED PROJECT

Category	Increase in Water Demand (AFY)	Increase in Water Demand (GPD)	Increase in Wastewater Demand (GPD) [a]
EMID Service Area	330	294,604	251,887
Cal Water-MPS Service Area	2,311	2,063,122	1,763,969
Total			**2,015,856**

Notes:
a. Assumes 90 percent of total water demand is indoor water and that 95 percent of indoor water becomes wastewater.
Sources: Estero Municipal Improvement District, 2021, 2020 UWMP; Cal Water MPS, 2021, 2020 UWMP; PlaceWorks, 2023.

The increase in wastewater demand with buildout of the proposed project is estimated to be approximately 2.0 MGD. Combined with the existing average daily flow of 10 MGD, the estimated total wastewater discharge from the City of San Mateo in 2040 is estimated to be 12 MGD. This calculation is conservative because it assumes that 90 percent of the total water demand is indoor water of which 95 percent becomes wastewater, although indoor water demand is typically only 75 percent of the total water demand.[50]

In addition to the City, there are other agencies that discharge wastewater to the San Mateo WWTP, including Foster City, CSCSD, and Hillsborough. Wastewater from unincorporated San Mateo County and Belmont are small and insignificant proportions of the wastewater flows to the WWTP.[51] The San Mateo Tower Road complex that discharges to the WWTP consists primarily of County offices and facilities (library, garden, juvenile court, fire station, etc.) and it is not anticipated that there would be any increase in population in this area. For the increase in wastewater from Foster City, the net increase in water demand of 504 AFY by 2040 from the Foster City/EMID Water Capacity study was used and converted to an equivalent wastewater flow, conservatively assuming that 90 percent of the total water demand is indoor water of which 95 percent becomes wastewater.

For the increase in wastewater flows from the Town of Hillsborough, a one percent increase in flow rates was assumed. Only the southern portion of the Town of Hillsborough conveys wastewater to San Mateo's WWTP and the ABAG projections from 2020 to 2040 assume an increase in population of only 105 people. This would be approximately a one percent increase in population. CSCSD serves the Highlands area of San Mateo County. There has been a 9 percent decrease in population in this area since 2000 and the CSCSD is requiring new construction to have "no net increase" in wastewater flows and the payment of impact fees for inflow and infiltration improvements to the existing sewer system to ensure a net zero

[50] EMID, 2021. 2020 Urban Water Management Plan.
[51] Correspondence with Azalea Mitch, Director of Public Works, City of San Mateo on May 26, 2023.

increase during wet weather events.[52] Nevertheless, it also was assumed that there would be a one percent increase in wastewater flows from CSCSD. The existing and projected wastewater flows to the San Mateo WWTP are provided in Table 4.17-10, *Wastewater Flows to San Mateo WWTP in 2040*.

TABLE 4.17-10 WASTEWATER FLOWS TO SAN MATEO WWTP IN 2040

Discharger	2020 Existing Wastewater Flows (MGD)	Increase in Wastewater Flows (MGD)	2040 Total Wastewater Flows (MGD)
City of San Mateo	10	2	12
Foster City/EMID	2.2	0.4[a]	2.6
CSCSD	0.3	0.003[b]	0.3
Hillsborough	1.4	0.014[b]	1.4
Total	**13.9**	**2.4**	**16.3**

Notes:
a. From Foster City/EMID Water Capacity Study, assumes an increase in water demand of 504 AFY converted to 449,941 gpd of which 90% is indoor water and 95% of the indoor water becomes wastewater for a total wastewater flow of 384,700 gpd.
b. For CSCSD and Hillsborough, assume a 1% increase in wastewater flows between 2020 and 2040.
Sources: EMID, 2021, 2020 UWMP: Cal Water MPS, 2021, 2020 UWMP; PlaceWorks, 2023.

The average daily wastewater flows to the WWTP in 2040 are estimated to be 16.3 MGD. Currently, the WWTP is permitted for an average daily flow rate of 15.7 MGD. However, the WWTP is in the process of undergoing a major expansion that is estimated to be completed in 2025. Upon completion, the WWTP will be designed for average daily flow rates of 21 MGD and wet weather storm inflows of up to 78 MGD. Therefore, the WWTP will be able to accommodate the future wastewater flows from San Mateo and the other sewer districts that discharge to the WWTP. In addition, the assumptions used in calculating future wastewater flow are conservative (i.e., they represent a "worst case scenario"), as wastewater flows to WWTPs continue to decline with water conservation efforts.[53]

In conjunction with the upgrade and expansion of the WWTP, the City of San Mateo is also implementing sewer collection improvement projects as part of the Clean Water Program. The goal is to upgrade the aging sewer infrastructure, improve wet weather capacity, and reduce inflow and infiltration (I/I) by replacing existing sewers with larger pipes and rehabilitation/lining of existing sewer lines. A list of the planned and completed sewer improvement projects is provided in the *Wastewater Collection* section above. The Clean Water Program was launched in 2015 to modernize the WWTP and sewer collection system with expenditures of $1 billion over a 10-year period. Completion of the WWTP and sewer system upgrades should minimize the potential for future SSOs and would be able to accommodate the increases in wastewater flows with buildout under the proposed project.

In addition, a wastewater capacity charge is imposed on all new development to recover a proportionate share of costs for existing and future wastewater system facilities and new or expanded connections to the City's wastewater systems. Also, property owners are required to pay an annual sewer service charge

[52] SWCA Environmental Consultants, 2021, Highland Estates Subdivision Project, Addendum to the Highland Estates Final Environmental Impact Report. Dated May 2021.

[53] California Water Environment Association, 2023, Dealing with Declining Wastewater Flows, https://www.cwea.org/news/dealing-with-declining-flows/ accessed on July 6, 2023.

as part of the annual property tax bill. These collected fees are used to fund wastewater collection and treatment system improvements designated in the CIP and Clean Water Program.

The Public Services and Facilities (PSF) Element of the proposed General Plan contains goals, policies, and actions that require local planning and development decisions to consider impacts to wastewater collection systems and treatment facilities. The following General Plan 2040 goal, policies, and action would serve to minimize potential adverse impacts to wastewater infrastructure with future development:

- Goal PSF-3: Maintain sewer, storm drainage, and flood-control facilities adequate to serve existing needs, projected population, and employment growth and that provide protection from climate change risk.
  - Policy PSF 3.1: Sewer System. Provide a sewer system that safely and efficiently conveys sewage to the wastewater treatment plant. Implement the Sewer System Management Plan to ensure proper maintenance, operations, and management of all parts of the wastewater collection system.
  - Policy PSF 3.2: Sewer Requirements for New Development. Require new multifamily and commercial developments to evaluate the main sewer lines in the project vicinity, which will be used by the new development and make any improvements necessary to convey the additional sewage flows.
  - Policy PSF 3.3: Sewer Overflow Reduction. Eliminate sanitary sewer overflows, which create a public health hazard for residents and compromises the water quality of the city's creeks, Marina Lagoon, and San Francisco Bay.
  - Policy PSF 3.4: Wastewater Treatment Plant. Operate, upgrade, and maintain the Wastewater Treatment Plant to ensure ongoing wastewater treatment in compliance with regulatory requirements.
  - Policy PSF 3.5: Inter-Agency Coordination for Wastewater Planning. Coordinate future planning of the sewer collection and wastewater treatment plant with the other users of the systems, including the Estero Municipal Improvement District (City of Foster City), the Crystal Springs County Sanitation District, Town of Hillsborough, and City of Belmont.
  - Action PSF 3.13: City Infrastructure Studies and Master Plans. Develop and coordinate studies and master plans to assess infrastructure and to develop a Capital Improvement Program for necessary improvements. Incorporate climate change risks, such as the impacts of droughts, increasing storm events, sea level rise, and groundwater changes in the planning process.

Implementation of the proposed project would not require the construction or expansion of the San Mateo WWTP or sewer collection system beyond what is already planned or under construction. Adherence to the City's municipal code requirements as well as the proposed General Plan goal, policies, and action would reduce wastewater generation rates over time, and therefore impacts associated with the sewer collection and treatment systems would be *less than significant.*

Significance without Mitigation: Less than significant.

UTIL-5	**The project would not result in a determination by the wastewater treatment provider which serves or may serve the proposed 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 in impact discussion UTIL-4, the City's WWTP is currently permitted to treat up to 15.7 MGD and upon completion of the upgrade and expansion project, which is scheduled for completion in 2025, will be able to treat up to 21 MGD. The increase in wastewater demand from 2020 to 2040 is estimated to be 2.4 MGD, as shown in Table 4.17-10, which would result in a total treatment capacity of 16.3 MGD in 2040.

The estimated increase in wastewater flows is conservative because the City has observed declining average flow rates over time. Also, the wastewater demand factors are conservative and assume that 90 percent of the total water demand is indoor water and 95 percent of the indoor water becomes wastewater. New projects within the EIR Study Area would also be required to comply with the latest CALGreen and California Plumbing codes and implement active and passive water conservation measures. This would reduce wastewater discharge rates below that which was calculated in Table 4.17-10. Furthermore, potential future development pursuant to the proposed project would undergo City review and be required to comply with the proposed General Plan goal, policies, and action 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 City's WWTP once the expansion project is completed. Also, the proposed General Plan goal, policies, and action 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 provider that there is not adequate capacity to serve the EIR Study Area's projected demand in addition to the demands of other wastewater dischargers. Therefore, the impacts would be *less than significant*.

Significance without Mitigation: Less than significant.

UTIL-6	**The project would not, in combination with past, present, and reasonably foreseeable projects, result in significant cumulative impacts with respect to wastewater.**

The context used for the cumulative assessment is the service area of San Mateo's WWTP. In addition to wastewater discharged to the WWTP by the City, there are other dischargers, including Foster City, CSCSD, the Town of Hillsborough, and a small area of unincorporated San Mateo County.

As discussed in impact discussion UTIL-4, the existing and future wastewater flows to the City's WWTP were calculated for all dischargers, as shown in Table 4.17-10. With completion of the WWTP expansion project in 2025, the WWTP would have the capacity to treat 21 MGD and would still have a residual average annual dry weather capacity of 4.7 MGD.

Also, under the Clean Water Program, the City has committed to spend $1 billion for improvements to the WWTP and sewer collection system. The other dischargers to the WWTP also have sewer collection system improvement programs. Future development within the city would require compliance with all applicable regulations and ordinances. Project applicants would have to pay wastewater capacity charges and property owners are required to pay an annual sewer service charge, which funds continued improvements to the wastewater collection and treatment system. The other dischargers to the WWTP have similar sewer collection system improvement programs.

Therefore, with continued compliance with applicable regulations and future reductions in wastewater demands with water conservative efforts, cumulative development would not exceed wastewater collection or treatment capacities. Accordingly, 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 SOLID WASTE

4.17.3.1 ENVIRONMENTAL SETTING

Regulatory Framework

Federal Regulations

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

Integrated Waste Management Act

California's Integrated Waste Management Act of 1989 (AB 939) requires that cities and counties divert 50 percent of all solid waste from landfills as of January 1, 2000 through source reduction, recycling, and composting. This 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), a department within the California Natural Resources Agency. AB 939 also establishes 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 calculated as a jurisdiction's reported total disposal of solid waste divided by a jurisdiction's population. CalRecycle sets a target per capita disposal rate 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.

Mandatory Commercial Recycling Act (AB 341)

Assembly Bill 341 (Chapter 476) increases the statewide waste diversion goal to 75 percent by 2020, and 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. AB 341 is designed to reduce greenhouse gas (GHG) emissions in the state by 5 million metric tons of carbon dioxide equivalents. In San Mateo County, businesses and property owners can subscribe to composting and recycling services provided by Recology San Mateo County.

Mandatory Organics Recycling Act (AB 1826)

AB 1826, which was enacted in 2014, mandates organic waste recycling for businesses and multifamily dwellings with five or more units. Starting January 1, 2020, all generators of 2 cubic yards or more of garbage, recycling, and compost combined per week must recycle organic waste. Organic waste includes food scraps, food-soiled paper waste, yard trimmings, and landscape materials. Organic waste can be recycled through composting, mulching, and anaerobic digestion which produces renewable energy and fuel. In addition to recycling food scraps, donating surplus food to local food banks can be part of the AB 1826 compliance effort. Multi-family dwellings do not need to have food-waste recycling on-site but must recycle yard and landscape materials. Recology San Mateo County offers these services to businesses and residences to comply with the requirements of AB 1826.

California Short-Lived Climate Pollutants Act (Senate Bill 1383)

SB 1383 focuses on the elimination of methane gas created by organic materials in landfills and set targets to achieve a 50 percent reduction in the statewide disposal of organic waste by 2020 and a 75 percent reduction by 2025. Organic waste makes up half of what Californians send to landfills. SB 1383 requires all businesses and residents to divert organic materials (including food waste, yard waste, and soiled paper products) from the landfill. The regulation took effect on January 1, 2022 and will require that organics collection service be provided to all residents and businesses. Also, an edible food recovery program must be established by 2025 with the goal of recovering edible food for human consumption.[54]

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. 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, governing adequate areas in development projects for collection and loading of recyclable materials.

[54] CalRecycle, 2021, SB 1383 Education and Outreach Resources, https://www.calrecycle.ca.gov/organics/slcp/education, accessed May 30, 2023.

CALGreen Building Code

The latest 2022 California Green Building Standards Code (CALGreen Code) became effective on January 1, 2023. Section 5.408, *Construction Waste Reduction Disposal and Recycling*, mandates that, in the absence of a more stringent local ordinance, a minimum of 65 percent of non-hazardous construction and demolition debris must be recycled or salvaged. The Code requires applicants to prepare and submit a Construction and Demolition Recycling & Waste Reduction Plan, which is submitted to the City for approval. for on-site sorting of construction debris, which is submitted to the City for approval. 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 material collected will be taken.
- Supply weight tags for the entire period of the project for compliance review.

Regional Agencies

San Mateo County Environmental Health Division

San Mateo County Environmental Health Division (SMCEHD) is the State-certified Local Enforcement Agency for solid waste in San Mateo County. The Solid Waste Program under the SMCEHD ensures that businesses, garbage collection and disposal companies, and residents follow the federal, State, and local standards and permitting requirements for solid waste. Inspectors from the Solid Waste Program issue permits and inspect four transfer/material recovery facilities and one anaerobic digestion facility, as well as one active landfill, Ox Mountain, in Half Moon Bay.[55] These facilities are monitored for compliance with State standards for the proper handling and disposal of solid waste. Seventeen closed landfills in different locations throughout the County are also monitored.

San Mateo County Office of Sustainability: Solid Waste Management

San Mateo County Office of Sustainability: Solid Waste Management administers and implements the solid waste management and resource conservation programs and policies throughout the County. The Waste Reduction Program's mission is to advance environmental sustainability by working with residents, businesses, and institutions throughout San Mateo County to encourage environmental stewardship, implement resource conservation programs and policies, and ensure compliance with the California solid waste regulations.[56]

RethinkWaste (South Bayside Waste Management Authority)

RethinkWaste, also known as the South Bayside Waste Management Authority, is a joint powers authority formed by eleven local jurisdictions (Member Agencies) within San Mateo County, including the City of

[55] San Mateo County Health, 2023, Solid Waste Program, https://www.smchealth.org/solidwaste, accessed May 30, 2023.

[56] San Mateo County Office of Sustainability, 2023. Solid Waste Management, https://performance.smcgov.org/stories/s/Office-of-Sustainability-Solid-Waste-Management-40/nm65-ibfd/ accessed May 30, 2023.

San Mateo. RethinkWaste owns and manages the Shoreway Environmental Center in San Carlos, which receives all the recyclables, green waste, and garbage collected from the Member Agencies. RethinkWaste also provides oversight and management of service providers that collect, process, recycle, and dispose of materials and educates residents and businesses through waste reduction, recycling, and solid waste programs. South Bay Recycling operates the Shoreway Environmental Center on behalf of RethinkWaste. Recology San Mateo County provides recycle, compost, and garbage collection services for residents and businesses in San Mateo County.

Local Regulations

San Mateo General Plan 2030

The City of San Mateo General Plan 2030 goals, policies, and actions that are relevant to solid waste are primarily in the Public Services and Facilities Element. As part of the proposed project, some existing General Plan goals, policies, and actions would be amended, substantially changed, or new policies would be added. Applicable goals, policies, and actions 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*.

City of San Mateo Municipal Code

The SMMC includes various directives pertaining to solid waste. The SMMC is organized by title, chapter, and section, and in some cases, articles. Most provisions related to solid waste impacts are included in Title 7, *Health, Sanitation, and Public Nuisances.*

- Chapter 7.32, *Garbage*, establishes prohibitions on dumping, receptacle requirements, collection rates, and requirements to submit a solid waste plan for wet waste retail businesses.
- Chapter 7.33, *Recycling and Salvaging of Construction and Demolition Debris*, requires recycling of construction and demolition debris from all new residential or commercial development and remodel projects valued at more than $50,000. It is also required that a Construction and Demolition Recycling and Waste Reduction Plan and a security deposit be submitted as a condition of the building permit.

City of San Mateo Reusable Bag Ordinance and Polystyrene Ban

Implementation of the Reusable Bag Ordinance began in June 2013 in the City of San Mateo. The ordinance states that no retail establishment shall provide a single-use carry-out bag to a customer at the check stand or point of sale. As of January 1, 2015, the retail established may make available to customers a recycled paper bag or reusable bag for a minimum charge of 25 cents. Every retail establishment must keep complete and accurate records or documents of the purchase and sale of any recycled paper bag or reusable bag for a minimum of three years. San Mateo County Environmental Health Division has the authority to enforce this ordinance and impose fees for non-compliance.[57]

[57] City of San Mateo, 2023. Reusable Bag Ordinance, https://www.cityofsanmateo.org/2539/Reusable-Bag-Ordinance accessed May 31, 2023.

In conjunction with San Mateo County and eighteen other municipalities in the Bay Area, the City also implemented a polystyrene ban ordinance in May 2013. The ordinance requires that no vendor shall use polystyrene-based disposable food service ware when providing prepared food. San Mateo County Environmental Health Division is also responsible for enforcing this ordinance and imposing fees for non-compliance.[58]

Existing Conditions

Solid Waste Collection

Recology San Mateo County (Recology) is the franchise waste hauler for the City of San Mateo and provides residential and commercial solid waste collection, composting, and recycling services. Recology provides the following services to residents and businesses in the city:

- Weekly curbside collection of waste in three containers: landfill waste in a black container, recyclables in a blue container, and organics (including yard and food waste) in a green container.
- Free compost for pickup at the Shoreway Environmental Center, up to two bags of three cubic feet. Limit two bags per visit and up to two visits per week.
- Recycling of construction and demolition debris at the Shoreway Environmental Center.
- Disposal of used motor oil and filters, antifreeze, paint, electronics, fluorescent lighting tubes, batteries, medicines and pharmaceuticals, mattresses, automobile batteries, and small appliances at the Shoreway Environmental Center.

All waste collected from residents and businesses is transferred to Shoreway Environmental Center in San Carlos, which is a materials transfer and processing facility. Recyclable materials are separated from landfill waste and shipped to various markets for processing. Organic waste is sent to Newby Island and Grover composting facilities; the finished product is shipped back to the Shoreway Environmental Center where residents and businesses can pick it up at no cost. Construction and demolition waste and other types of construction materials are sent to Zanker Road recycling facility in San Jose. The Shoreway Environmental Center has a permitted daily capacity of 3,000 tons.[59]

Landfills

In 2019, solid waste generated by San Mateo was delivered to 20 facilities and landfills in the Bay Area for a total disposal rate of 86,512 tons. However, 83 percent of the solid waste was delivered to Corinda Los Trancos (Ox Mountain) Landfill.[60]

[58] City of San Mateo, 2023, Polystyrene Ban, https://www.cityofsanmateo.org/2540/Polystyrene-Ban accessed May 31, 2023.

[59] CalRecylcle, 2023, SWIS Facility/Site Activity Details: Shoreway Environmental Center (41-AA-0016), https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/1575?siteID=3236, accessed May 30, 2023.

[60] CalRecycle, 2023, Jurisdictional Disposal and Alternative Daily Cover (ADC) Tons by Facility. https://www2.calrecycle.ca.gov/LGCentral/DisposalReporting/Destination/DisposalByFacility accessed May 31, 2023.

The Ox Mountain Landfill is located in Half Moon Bay and is owned and operated by Browning Ferris Industries of CA, Inc. The Ox Mountain landfill is permitted to receive up to 3,598 tons of waste per day, has a remaining capacity of 22 million cubic yards, and is estimated to close by 2034.[61] The landfill has a remaining capacity of more than 15 years as required by AB 939.

After solid waste is collected and sorted at the San Carlos Transfer Station, it is transported to the Los Trancos Canyon (Ox Mountain) landfill in Half Moon Bay. Table 4.17-11, *Landfill Capacity*, provides more information on the landfill capacity and closing date for the primary landfill that receives solid waste from the City of San Mateo.

TABLE 4.17-11 LANDFILL CAPACITY

Landfill Name and Location	Maximum Permitted Throughput, tons/day	Average Disposal, tons/day	Residual Disposal Capacity, tons/day	Remaining Capacity, cubic yards	Estimated Closing Year
Ox Mountain Landfill (Corinda Los Trancos) Half Moon Bay, CA 94019	3,598	1,949	1,649	22,180,000	2034

Source: CalRecycle 2023, SWIS Facility Details and Jurisdiction Disposal by Facility.

Solid Waste Diversion and Recycling

Compliance with AB 939 is measured by comparing the CalRecycle target disposal rates for residents and employees to actual disposal rates. The CalRecycle target disposal rates for San Mateo were 5.8 pounds per day (ppd) for residents and 13.3 ppd for employees. The actual disposal rates in 2021 were 3.7 ppd for residents and 6.9 ppd for employees.[62] Therefore, the solid waste diversion goals for San Mateo have been met.

4.17.3.2 STANDARDS OF SIGNIFICANCE

The proposed project would result in a significant impact related to solid waste if it would:

- 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.
- Be out of compliance with federal, State, and local management and reduction statutes and regulations related to solid waste.
- In combination with past, present, and reasonably foreseeable projects, result in significant cumulative impacts with respect to solid waste.

[61] CalRecylcle, 2023, SWIS Facility/Site Activity Details: Corinda Los Trancos Landfill (Ox Mtn)(41-AA-0002), https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/1561?siteID=3223, accessed May 31, 2023.

[62] CalRecycle, 2023, *Jurisdiction Diversion/Disposal Rate Summary,* https://www2.calrecycle.ca.gov/LGCentral/DiversionProgram/JurisdictionDiversionPost2006, accessed May 31, 2023.

4.17.3.3 IMPACT DISCUSSION

UTIL-7 The 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.

Under the proposed project, the population is anticipated to increase by 52,020 residents and 16,920 jobs. As shown in Table 4.17-12, *Increase in Solid Waste Generation at 2040 Buildout,* this level of growth would result in an increase in solid waste of approximately 154 tons per day, or 56,434 tons per year. These numbers are conservative because, with continued recycling and waste reduction programs implemented by the City and ReThinkWaste, the waste generation rates would be reduced over time.

TABLE 4.17-12 INCREASE IN SOLID WASTE GENERATION RATES AT 2040 BUILDOUT

Category	Increase in Residents or Jobs	Solid Waste Generation Rate (ppd)	Increase in Solid Waste (tons/day)	Increase in Solid Waste (tons/year)
Residents	52,020	3.7	96	35,127
Jobs	16,920	6.9	58	21,307
Total			**154**	**56,434**

Source: CalRecycle, 2023; PlaceWorks, 2023.

As shown in Table 4.17-12, an increase of 154 tons/day with buildout of the project would be about 9 percent of the current residual capacity of 1,649 tons/day at Ox Mountain Landfill. In addition, some of the solid waste from the City of San Mateo is transported to other landfills in the Bay Area and the majority of the waste generated in the city is diverted from landfill disposal through recycling and composting. This estimate conservatively assumes that all of the generated waste is landfilled. The results in Table 4.17-12 show that the proposed project would not generate solid waste in excess of the capacity of the landfills that serve the City.

Furthermore, all new development pursuant to the proposed project would require compliance with Division 4.4 of the 2022 CALGreen Building Code, which requires that at least 65 percent of nonhazardous construction and demolition waste from residential and nonresidential construction operations be recycled and/or salvaged for reuse. New development and redevelopment would also need to comply with the requirements of AB 341 that mandates recycling for commercial and multifamily residential land uses. Therefore, solid waste facilities would be able to accommodate project-generated solid waste, and impacts would be less than significant.

The Public Services and Facilities (PSF) Element of the proposed General Plan contains goals, policies, and actions that require local planning and development decisions to reduce solid waste generation and increase recycling efforts. The following General Plan 2040 goal, policies, and action would serve to minimize potential adverse impacts on the solid waste infrastructure and landfill capacities:

- Goal PSF-8: Reduce the generation of solid waste and increase the diversion of waste from landfills.
  - Policy PSF 8.1: Solid Waste Disposal. Support waste reduction and diversion programs to reduce solid waste materials in landfill areas in accordance with State requirements.

- Policy PSF 8.2: Recycling. Support programs to recycle solid waste and require provisions for on-site recycling in new development, in compliance with state requirements.
- Policy PSF 8.3: Composting. Maintain the curbside composting program and expand composting of organics in accordance with state requirements.
- Action PSF 8.4: Waste Reduction. Reduce waste sent to landfills by San Mateo's residents, businesses, and visitors, as required by state law and San Mateo Municipal Code, by mandating recycling and compost programs, setting aggressive waste-reduction goals for all development, and implementing appropriate solid waste rates to recover cost of services provided. Supportive actions for waste reduction are detailed in the Climate Action Plan.

With continued compliance with the applicable regulations, leading to increased recycling and waste diversion, and adherence to the proposed General Plan goal, policies, and action listed above, anticipated rates of solid waste disposal from the proposed project would be less than significant with respect to permitted landfill capacity. In addition, the City is well below the CalRecycle target disposal rates and meets the regulatory requirements of AB 939. Therefore, implementation of the proposed project would not generate solid waste in excess of State and local standards, or in excess of the capacity of the landfills, or otherwise impair the attainment of solid waste reduction goals and the impact is *less than significant.*

Significance without Mitigation: Less than significant.

UTIL-8	**The project would not be out of compliance with federal, State, and local management and reduction statutes and regulations related to solid waste.**

As discussed under impact discussion UTIL-7, Recology San Mateo County, which serves the EIR Study Area, complies with all State requirements to reduce the volume of solid waste through recycling and organic waste diversion. The City's per capita disposal rates of 3.7 ppd per resident and 6.9 ppd per employee are well below the CalRecycle targets of 5.8 pounds per day (ppd) for residents and 13.3 ppd for employees. In addition, all potential future development pursuant to the proposed project would comply with Division 4.4, *Material Conservation and Resource Efficiency,* of the CALGreen Building Code, which requires that at least 65 percent of nonhazardous construction and demolition waste from nonresidential construction operations be recycled and/or salvaged for reuse.

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 project 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 Recology 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-9	**The project would not, in combination with past, present, and reasonably foreseeable projects, result in significant cumulative impacts with respect to solid waste.**

The area considered for cumulative impacts to solid waste disposal facilities is San Mateo County, which is serviced by Recology San Mateo County. As reported by ABAG, the total population of San Mateo County is expected to increase from 796,925 to 916,590 by 2040.[63] Assuming that solid waste generation increases at the same rate as the population (15 percent), the increase in the amount of waste generated in the County by 2040 would be about 221 tons per day. Conservatively assuming that all of this waste is landfilled, although the current diversion rate by Recology San Mateo County is about 68 percent, the additional waste generated by San Mateo County, including the waste generated by San Mateo with the proposed project buildout, would still be only about 23 percent of the daily residual capacity of Ox Mountain Landfill.

In addition, new development within San Mateo County would comply with Division 4.4 of the 2022 CALGreen, which requires that at least 65 percent of nonhazardous construction and demolition waste from residential and nonresidential construction operations be recycled and/or salvaged for reuse. This would also reduce the volume of solid waste transported to the landfills. Recology San Mateo County also reports an increasing diversion rate in the last four years, with 60 percent of all solid waste diverted from landfilling. This trend is expected to increase in the future. Continued compliance with the applicable regulations and an increase in recycling and landfill diversion rates would ensure that solid waste cumulative impacts would be *less than significant.*

Significance without Mitigation: Less than significant.

4.17.4 STORMWATER INFASTRUCTURE

4.17.4.1 ENVIRONMENTAL SETTING

Regulatory Framework

The regulatory framework for stormwater is described in detail in Chapter 4.9, *Hydrology and Water Quality*, of this Draft EIR. The regulatory requirements that pertain solely to storm drain systems are repeated below.

Federal Regulations

National Pollutant Discharge Elimination System

The NPDES permit program was established by the Clean Water Act to regulate municipal and industrial discharges to surface waters of the United States from their municipal separate storm water systems (MS4s). Under the NPDES program, all facilities that discharge pollutants into waters of the United States

[63] ABAG, 2018. *Plan Bay Area Projections 2040.*

are required to obtain an NPDES permit. Requirements for stormwater discharges are also regulated under this program. The City is within the jurisdiction of the San Francisco Bay RWQCB (Region 2) and is subject to the waste discharge requirements of the Municipal Separate Storm Sewer System (MS4) Permit (Order No. R2-2022-0018), which became effective on July 1, 2022.[64]

Under Provision C.3 of the MS4 Permit, the permittees use their planning authorities to include appropriate source control, site design, and stormwater treatment measures in new development and redevelopment projects to address stormwater runoff pollutant discharges and prevent increases in runoff flows. This goal is accomplished primarily through the implementation of low impact development techniques.

State Regulations

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.[65]

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.[66]

Regional Regulations

San Mateo Countywide Water Pollution Prevention Program

The San Mateo Countywide Water Pollution Prevention Program (SMCWPPP) is a partnership of the City/County Association of Governments (C/CAG), 20 incorporated Cities within the County, and the County of San Mateo, which share a common MS4 permit. This partnership also relies on each of the municipalities to implement local stormwater pollution prevention and control activities for its own local storm drain systems.

[64] California Regional Water Quality Control Board, San Francisco Bay Region, May 2022, *Municipal Regional Stormwater NPDES Permit, Order No. R2-2022-0018, NPDES Permit No. CAS612008,* https://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/stormwater/MRP/mrp5-22/R2-2022-0018.pdf, accessed May 26, 2023.

[65] 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.

[66] State Water Resources Control Board, 2023, *Storm Water Program - Trash Implementation Program.* https://www.waterboards.ca.gov/water_issues/programs/stormwater/trash_implementation.html, accessed May 26, 2023.

Post-construction stormwater quality requirements pursuant to the SMCWPPP are described in the C.3 Regulated Projects Guide (Version 1.0) issued in January 2020.[67] The C.3 Regulated Projects Guide includes instructions for implementing site design measures, source controls, stormwater treatment measures, construction site controls, and low-impact development measures.

San Mateo County Stormwater Resource Plan

The San Mateo County Stormwater Resource Plan (SRP) is a comprehensive document that addresses specific stormwater runoff issues in the County with a watershed-based approach. The main goals of the SRP are to identify and prioritize opportunities to better utilize stormwater as a resource in San Mateo County through a detailed analysis of watershed processes, surface and groundwater resources, input from stakeholders and the public, and analysis of multiple benefits that can be achieved through strategically planned stormwater management projects.[68] These projects aim to capture and manage stormwater more sustainably, reduce flooding and pollution associated with runoff, improve biological functioning of plants, soils, and other natural infrastructure, and provide many community benefits, including cleaner air and water and enhanced aesthetic value of local streets and neighborhoods. SB 985 (Pavley, 2014) requires SRPs to be developed to be eligible for funding from future State bond measures for stormwater and dry weather capture projects.[69]

Local Regulations

San Mateo General Plan 2030

The City of San Mateo General Plan 2030 goals, policies, and actions that are relevant to stormwater infrastructure are primarily in the Public Services and Facilities Element. As part of the proposed project, some existing General Plan goals, policies, and actions would be amended, substantially changed, or new policies would be added. Applicable goals, policies, and actions 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*.

City of San Mateo Municipal Code

The SMMC includes various directives pertaining to stormwater infrastructure. The SMMC is organized by title, chapter, and section, and in some cases, articles. Most provisions related to stormwater infrastructure impacts are included in Title 3, *Taxation and Finance*, Title 7, *Health, Sanitation, and Public Nuisances*, and Title 23, *Buildings and Construction.*

[67] San Mateo Countywide Water Pollution Prevention Program, January 2020, *C.3 Regulated Projects Guide*, https://www.flowstobay.org/wp-content/uploads/2020/03/SMCWPPP-C.3-Regulated-Project-Guide-High-Res_021220_0.pdf, accessed May 25, 2023.

[68] City/County Association of Governments of San Mateo, February 2017, *Stormwater Resource Plan for San Mateo County*, https://ccag.ca.gov/wp-content/uploads/2017/02/SMC-SRP-Report-FINAL-1.pdf, accessed April 4, 2023.

[69] City/County Association of Governments of San Mateo, 2022, San Mateo Storm Water Resources Plan, https://ccag.ca.gov/srp/, accessed April 4, 2023.

- Chapter 3.64, *Fees,* provides the authority to issue fees subject to change for each fiscal year, as per the budget submitted by the City Manager to the City Council. Fees related to stormwater include fees to obtain a Stormwater Pollution Prevention Program (STOPP) Construction Permit from the City, an Erosion Control Compliance Fee (refundable deposit) for projects of one acre or more, and a Stormwater Management Permit Annual Fee.
- Chapter 7.39, *Stormwater Management and Discharge Control*, aims to protect and enhance the water quality of the watercourses, water bodies, and wetlands within the city by eliminating non-stormwater discharges to the municipal separate storm drain, controlling the discharge to municipal separate storm drains from spills, dumping or disposal of materials other than stormwater, and reducing pollutants in stormwater discharges to the maximum extent practicable. As stated in Section 7.39.090, *Discharge of Pollutants*, all discharges of material other than stormwater must comply with an NPDES permit issued for the discharge. Construction projects must obtain a Stormwater Pollution Prevention Program construction permit form the Director of Public Works prior to site development planning application approval, as required by Section 7.29.170, *Stormwater Pollution Prevention Construction Permit*. Section 7.39.210, *Stormwater Treatment Facilities*, allows the Director to require permanent stormwater treatment facilities be designed into projects and Section 7.29.235, *Stormwater Management Permit*, requires a Stormwater Management permit from the Director prior to approval. Section 7.39.245, *Threatened Discharge*, prohibits the discharge of any domestic waste or industrial waste into storm drains, gutters, creeks, or San Francisco Bay.
- Chapter 23.72.150, *Stormwater Management and Rainwater Retention*, requires project applicants to implement stormwater best management practices into the landscape and grading design plans to minimize runoff and increase onsite rainwater retention and infiltration, as consistent with City stormwater management requirements.

San Mateo Storm Drain Master Plan

The San Mateo Storm Drain Master Plan is dated June 2004 and is currently in the process of being updated. The 2004 Storm Drain Master Plan evaluated the capacity of the existing storm drain facilities, identified areas with deficiencies, and presented a Capital Improvement Program to implement upgrades to the system.[70] The document indicated that most of the storm drain problems occur between Alameda de las Pulgas and Highway 101 with many of the pipes being undersized and causing local flooding. Also, improvements to the channels that convey stormwater runoff to San Francisco Bay would greatly improve drainage throughout the City. The historic problem areas and required improvements are detailed in the plan.

San Mateo Storm Drain Design Standards

The design criterion for storm drains in the city is that stormwater runoff from the 10-year storm event is carried in the street no deeper than the top of the curb and stormwater runoff from the 100-year storm event is carried within the street right-of-way without adjacent property damage.[71] Pump stations should

[70] Schaaf & Wheeler, 2004, Storm Drain Master Plan, San Mateo, California. Dated April 2004.
[71] Schaaf & Wheeler, 2004, Storm Drain Master Plan, San Mateo, California. Chapter 4, Drainage Standards.

be designed to discharge the 100-year design flow without endangering property. The City also has standard storm drain details and drawings issued by the Public Works Department.[72]

San Mateo Green Infrastructure Plan

The 2019 Green Infrastructure Plan is a guide to siting, implementation, tracking and reporting of green infrastructure (GI) projects on City-owned land through 2040.[73] Green infrastructure uses vegetation, soil, and other elements to capture, treat, infiltrate and slow urban runoff. GI facilities can also be designed to capture stormwater for uses such as irrigation and toilet flushing. GI integrates building and roadway design, complete streets, drainage infrastructure, urban forestry, soil conservation, and sustainable landscaping practices to achieve multiple benefits. Types of GI measures that can be constructed in public and private spaces include: 1) bioretention, 2) stormwater tree well filters, 3) pervious pavement, 4) infiltration facilities, 5) green roofs, and 6) rainwater harvesting and use facilities.

San Mateo Community Flood & Storm Protection Initiative

This initiative proposes to establish a user fee for stormwater management that is charged to property owners for the purpose of rehabilitating and strengthening the City's stormwater system to adequately protect property owners from flooding and pollution.[74] The existing stormwater infrastructure is aging and is unable to accommodate extreme storm events that are likely to increase in the future with climate change. It is estimated that $9 million per year is needed for improving and operating the stormwater system and there currently is no dedicated funding source for these efforts. The funds would be used to maintain, repair, and upgrade over 100 miles of storm drains and channels and nine major pump stations, protect properties from local flooding, and restore the Marina Lagoon for year-round stormwater conveyance.

Existing Conditions

The City's stormwater infrastructure consists of 130 miles of storm drains, 20 miles of open creeks and drainage channels, one flood control lagoon (Marina Lagoon), ten pump stations, and three miles of Bayfront levees.[75] Storm drains within the city are constructed of reinforced concrete pipe (RCP) with diameters ranging from 8 inches to 120 inches. Reinforced concrete pipes have an extended life span and can be expected to last indefinitely. However, periodic pipe repair and replacement, as needed, is recommended.

The City's drainage system is divided into seven watersheds, with the first three draining directly to San Francisco Bay, either by gravity or pumping, and the other four draining to the Marina Lagoon and then pumped into San Francisco Bay. On the north end of San Mateo, pumping systems provide flood

[72] City of San Mateo, 2023, *Storm Drain Structures and Appurtenances,* https://www.cityofsanmateo.org/2081/Standard-Drawings, accessed May 24, 2023.

[73] City of San Mateo, 2019, City of San Mateo Green Infrastructure Plan.

[74] City of San Mateo, 2023, Community Flood & Storm Protection Initiative. https://www.cityofsanmateo.org/4708/Community-Flood-Storm-Protection-Initiat accessed on May 30, 2023.

[75] City of San Mateo, 2023, Community Flood & Storm Protection Initiative. https://www.cityofsanmateo.org/2288/Community-Flood-Storm-Protection-Initiat accessed on May 30, 2023.

protection to low-lying areas in the North Shoreview neighborhood and the South Shoreview drainage system. These areas are protected by a levee system and pump stations are required to discharge runoff that collected behind the levee.

The two main channels that convey stormwater to the Bay are San Mateo Creek in the northern half of the City and Laurel Creek to the south. The 16th Avenue Drainage Channel and the 19th Avenue Drainage Channel are excavated channels that collect local runoff from storm drains and convey it to the Marina Lagoon. Water levels in Marina Lagoon are regulated by controlling inflows through the O'Neill Slough intake gates and discharges through the Marina Lagoon pump station. Stormwater runoff is delivered to these creeks and channels via a system of street gutters, pipes, ditches, and pump stations. The storm drainage system is maintained by the City Department of Public Works, as are the levees that provide flood protection from creek flooding and tidal flow from San Francisco Bay.

Some of the storm water deficiencies noted in the 2004 Storm Drain Master Plan have subsequently been addressed. For example, the pumping capacity at the Coyote Point and Poplar Avenue Pump Stations was increased to alleviate stormwater flooding concerns in the North Shoreview area.

Currently, there is no separate funding in the City's Capital Improvement Program for storm drain infrastructure, although a stormwater user fee is being considered to be levied on property owners to fund future infrastructure improvements. Limited funds are obtained from sewer service charges for projects where the goal is to reduce stormwater inflow and infiltration to minimize SSOs. This may include catch basin cleaning prior to storm events and routine storm drain cleaning and maintenance. Some funding is also transferred from the Department of Public Works General Fund. Current projects involving stormwater in the City's CIP include bayfront levee improvements, levee repairs, storm system dredging, and storm drain upgrades and replacement. Planned projects with passage of the Community Flood & Storm Protection Initiative include: 1) storm drain condition and capacity assessments, 2) updated Storm Water Master Plan, 3) San Mateo Creek and Marina Lagoon dredging and maintenance, 4) Pacific Blvd drainage channel rehabilitation, and 5) storm water capacity and flood prevention improvement projects, including drainage area projects, pump station upgrades, levee improvements, and green infrastructure projects.

The SWRCB, as the implementing agency for the Trash Amendments, mandates that all MS4 permittees, which includes the City of San Mateo, must install certified trash treatment control systems on all catch basins no later than December 2, 2030.

4.17.4.2 STANDARDS OF SIGNIFICANCE

The proposed project would result in a significant impact related to stormwater infrastructure if it would:

- Require or result in the relocation or construction of new or expanded stormwater drainage facilities, the construction or relocation of which could cause significant environmental effects.
- In combination with past, present, and reasonably foreseeable projects, result in significant cumulative impacts with respect to stormwater infrastructure.

4.17.4.3 IMPACT DISCUSSION

UTIL-10 The project would not require or result in the relocation or construction of new or expanded stormwater drainage facilities, the construction or relocation of which could cause significant environmental effects.

New development and/or redevelopment as part of the proposed project would result in an increase in impervious surfaces, which in turn could result in an increase in stormwater runoff, higher peak discharges to drainage channels, and the potential to cause nuisance flooding in areas without adequate drainage facilities. However, most of the City is already built out and future development sites are in infill areas that are already developed and paved. Therefore, new development on these sites should not create a significant increase in impervious surfaces.

Also, regulated projects that create or replace 5,000 square feet or more of impervious surface would be required to implement site design, source control, and stormwater treatment and runoff measures using specific numeric sizing criteria based on the volume and flow rate of stormwater that is generated. Each project undergoes review by City personnel to ensure 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 future development, there should not be significant increases in stormwater runoff to the City's storm drain system. The construction of new stormwater facilities through the CIP, implementation of best management practices and on-site stormwater control measures, and preparation of the required documents and review by the City would serve to minimize any potential impacts associated with stormwater.

However, the City's Storm Drainage Master Plan describes the improvements that are planned to accommodate future growth within the EIR Study Area, and the plan accounted for a larger population increase than is currently anticipated for the proposed project. Existing storm drains would need to be upgraded and new detention basins would need to be built with future development. However, the construction of these facilities would not cause significant environmental effects.

The Public Services and Facilities (PSF) Element of the proposed General Plan contains goals, policies, and actions that require local planning and development decisions to consider impacts to storm drain infrastructure. The following General Plan 2040 goal and policies would serve to minimize potential adverse impacts on stormwater discharge:

- Goal PSF-3: Maintain sewer, storm drainage, and flood-control facilities adequate to serve existing needs, projected population, and employment growth and that provide protection from climate change risk.
    - Policy PSF 3.6: Stormwater System. Operate, upgrade, and maintain a stormwater drainage and flood-control system that safely and efficiently conveys runoff to prevent flooding and protect life and property; minimizes pollutants discharging to creeks and San Francisco Bay; manages stormwater as a resource and not a waste; and protects against the impacts of climate changes.

- Policy PSF 3.8: Stormwater Pollution Prevention. In accordance with requirements in the Municipal Regional Stormwater Permit, implement programs, plans, and policies to ensure pollutants are minimized in stormwater runoff.
- Policy PSF 3.9: Low Impact Development. Minimize stormwater runoff and pollution by encouraging low-impact design (LID) features, such as pervious parking surfaces, bioswales, and filter strips in new development.
- Policy PSF 3.10: New Creekside Development Requirements. Require that new creekside development protects and improves setbacks, banks, and waterways adjacent to the development projects to increase flood protection and enhance riparian vegetation and water quality. Prevent erosion of creek banks.
- Policy PSF 3.11: Hydrologic Impacts of Creek Alteration. Ensure that improvements to creeks and other waterways do not cause adverse hydrologic impacts, adversely affect adjacent properties, or significantly increase the volume or velocity of flow of the subject creek.
- Policy PSF 3.12: Levee System. Continue to assess, maintain, and upgrade the City's levee system. Collaborate with the Federal Emergency Management Agency, OneShoreline, and neighboring agencies to ensure adequate flood control and sea level rise protection.
- Action PSF 3.13: City Infrastructure Studies and Master Plans. Develop and coordinate studies and master plans to assess infrastructure and to develop a Capital Improvement Program for necessary improvements. Incorporate climate change risks, such as the impacts of droughts, increasing storm events, sea level rise, and groundwater changes in the planning process.
- Action PSF 3.15: Green Infrastructure. Implement the City's Green Infrastructure Plan to gradually shift from a traditional stormwater conveyance system ("gray") to a more natural system that incorporates plants and soils to mimic watershed processes, capture and clean stormwater, reduce runoff and increase infiltration, and create healthier environments ("green").
- Action PSF 3.17: Stormwater Requirements for Development. In accordance with State regulatory mandates, require applicable new and redevelopment projects to incorporate site design, source control, treatment, and hydromodification management measures to minimize stormwater runoff volumes and associated pollutants. Stormwater management via green infrastructure systems shall be prioritized.
- Action PSF 3.18: Incentives for Low-Impact Development. Develop and implement incentives to encourage applicants to include low-impact design features in new development.

Compliance with these proposed General Plan goal and policies and the regulatory provisions in the MS4 permit that limit runoff from new development would ensure that the implementation of the proposed project would not result in significant increases in runoff and would not contribute to the construction of new storm drain facilities or expansion of existing facilities that would cause significant environmental impacts. In addition, the City would continue to repair, rehabilitate, and upgrade the storm drain system through implementation of the CIP program. Therefore, impacts with respect to stormwater infrastructure would be *less than significant.*

Significance without Mitigation: Less than significant.

UTIL-11 The project would not, in combination with past, present, and reasonably foreseeable projects, result in significant cumulative impacts with respect to stormwater infrastructure.

The analysis of cumulative storm drainage impacts considers future development within the seven watersheds that encompass the EIR Study Area. Cumulative projects could result in an incremental increase in impervious surfaces that could increase stormwater runoff and impact existing storm drain facilities. However, all cumulative projects would be required to comply with City and County ordinances and General Plan goals, policies, and actions, as well as the MS4 permit, which would minimize stormwater runoff.

Development within the EIR Study Area would require conformance with State and City policies that would reduce hydrology and infrastructure construction impacts to less than significant levels. Any new development in the city would be subject to the proposed General Plan goal and policies listed in impact discussion UTIL-10 and City 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 unincorporated County land 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 MS4 Permit also applies to San Mateo County 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 combination with past, present, and reasonably foreseeable projects, proposed development and redevelopment within the EIR Study Area would not result in a cumulatively considerable impact to stormwater infrastructure and cumulative impacts would be *less than significant.*

Significance without Mitigation: Less than significant.

4.17.5 ENERGY INFRASTRUCTURE

4.17.5.1 ENVIRONMENTAL SETTING

Regulatory Framework

Federal Regulations

National Energy Policy

Established in 2001 by the National Energy Policy Development Group, the National Energy Policy is designed to help the private sector and state and local governments promote dependable, affordable, and environmentally sound production and distribution of energy for the future. Key issues addressed by the energy policy are energy conservation, repair and expansion of energy infrastructure, and ways of increasing energy supplies while protecting the environment.

Energy Policy Act of 2005

Passed by Congress in July 2005, the Energy Policy Act includes a comprehensive set of provisions to address energy issues. This Act includes tax incentives for energy conservation improvements in commercial and residential buildings, fossil fuel production and clean coal facilities, and construction and operation of nuclear power plants, among other things. Subsidies are also included for geothermal, wind energy, and other alternative energy producers.

Energy Independence and Security Act of 2007

Signed into law in December 2007, the Energy Independence and Security Act contains provisions designed to increase energy efficiency and the availability of renewable energy. The Act contains provisions for increasing fuel economy standards for cars and light trucks, while establishing new minimum efficiency standards for lighting as well as residential and commercial appliance equipment.

National Gas Pipeline Safety Act of 1968

The Natural Gas Pipeline Safety Act of 1968 authorizes the United States Department of Transportation to regulate pipeline transportation of flammable, toxic, or corrosive natural gas and other gases as well as the transportation and storage of liquefied natural gas. The Pipeline and Hazardous Materials Safety Administration within the Department of Transportation develops and enforces regulations for the safe, reliable, and environmentally sound operation of the nation's 2.6-million-mile pipeline transportation system. The regulations enacted under this act have been updated several times. The latest revision is dated May 2023 and includes additional safety regulations for gas transmission pipelines, including repair criteria, integrity management improvements, cathodic protection, and other inspection and maintenance procedures. The regulations are encoded in 49 Code of Federal Regulations, Part 192.

State Regulations

Warren-Alquist Act

Established in 1974, the Warren-Alquist Act created the California Energy Commission (CEC) in response to the energy crisis of the early 1970s and the state's unsustainable growing demand for energy resources. The CEC's core responsibilities include advancing State energy policy, encouraging energy efficiency, certifying thermal power plants, investing in energy innovation, developing renewable energy, transforming transportation, and preparing for energy emergencies. The Warren-Alquist Act is updated annually to address current energy needs and issues, and its latest revision is dated January 2022.

California Public Utilities Commission Long Term Energy Efficiency Strategic Plan

Adopted in September 2008 and updated in January 2011, the California Public Utilities Commission (CPUC) Long Term Energy Efficiency Strategic Plan provides a framework for energy efficiency in California through the year 2020 and beyond. It articulates a long-term vision, as well as goals for each economic sector, identifying specific near-, mid-, and long-term strategies to assist in achieving these goals. The plan sets forth the following four goals, known as "Big Bold Energy Efficiency Strategies," to achieve significant reductions in energy demand:

- All new residential construction in California will be zero net energy by 2020.
- All new commercial construction in California will be zero net energy by 2030.
- Heating, ventilation, and air conditioning will be transformed to ensure that its energy performance is optimal for California's climate.
- All eligible low-income customers will be given the opportunity to participate in the low-income energy efficiency program by 2020.

The CPUC and CEC have adopted the following goals to achieve zero net energy levels by 2030 in the commercial sector:

- Goal 1: New construction will increasingly embrace zero net energy performance (including clean, distributed generation), reaching 100 percent penetration of new starts in 2030.
- Goal 2: 50 percent of existing buildings will be retrofit to zero net energy by 2030 through achievement of deep levels of energy efficiency and with the addition of clean distributed generation.
- Goal 3: Transform the commercial lighting market through technological advancement and innovative utility initiatives.

California Energy Code

The State of California provides a minimum standard for energy conservation through Title 24, Part 6 California Code of Regulations, commonly referred to as the California Energy Code. The California Energy Code was first adopted by the California Energy Resources Conservation and Development Commission (now the CEC) in June 1977. The standards are updated on a three-year cycle to allow for consideration and possible incorporation of new energy efficiency technologies and methods. In August 2021, the CEC adopted the 2022 California Energy Code, which went into effect on January 1, 2023. The 2022 standards require mixed-fuel single-family homes to be electric ready to accommodate replacement of gas appliances with electric appliances. In addition, the new standards also include prescriptive photovoltaic

systems and battery requirements for high-rise, multifamily buildings (i.e., more than three stories) and noncommercial buildings such as hotels, offices, medical offices, restaurants, retail stores, schools, warehouses, theaters, and convention centers.[76]

California Green Building Standards

On July 17, 2008, the California Building Standards Commission adopted the nation's first green building standards. CALGreen (24 California Code of Regulations, Part 11) was adopted as part of the California Building Standards Code. It includes mandatory requirements for new residential and nonresidential buildings throughout California. CALGreen is intended to (1) reduce greenhouse gas (GHG) emissions from buildings; (2) promote environmentally responsible, cost-effective, healthier places to live and work; (3) reduce energy and water consumption; and (4) respond to the directives by the governor. The latest 2022 CALGreen code became effective on January 1, 2023.

The CALGreen code includes provisions to reduce construction waste, make buildings more efficient in the use of materials and energy, and reduce environmental impact during and after construction. CALGreen contains requirements for construction site selection, stormwater control during construction, construction waste reduction, indoor water use reduction, material selection, natural resource conservation, site irrigation conservation, etc. The code provides for design options, allowing the designer to determine how best to achieve compliance for a given site or building condition. The code also requires building commissioning, which is a process for verifying that all building systems (e.g., heating and cooling equipment and lighting systems) are functioning at their maximum efficiency.[77]

2016 Appliance Efficiency Regulations

The 2016 Appliance Efficiency Regulations (Title 20, California Code of Regulations Sections 1601 through 1608), combined with federal standards, set minimum efficiency levels for energy and water consumption in products, such as consumer electronics, household appliances, and plumbing equipment. Twenty-three categories of appliances are included in the scope of these regulations. The standards within these regulations apply to appliances that are sold or offered for sale in California, except those sold wholesale in California for final retail sale outside the state, and those designed and sold exclusively for use in recreational vehicles or other mobile equipment. These regulations exceed the standards imposed by all other states and they reduce GHG emissions by reducing energy demand.

California Energy Benchmarking and Disclosure

The Building Energy Benchmarking Program is mandated under AB 802 and requires owners of large commercial and multifamily buildings to report energy use to the CEC by June 1 annually. This program applies to all buildings with more than 50,000 square feet of gross floor area and owners of multifamily residential buildings with more than 50,000 square feet and 17 or more utility accounts. The bill requires

[76] California Energy Commission, 2021, Amendments to the Building Energy Efficiency Standards (2022 Energy Code) Draft Environmental Report. CEC-400-2021-077-D.

[77] California Building Standards Commission, 2022, 2022 California Code of Regulations Title 24, Part 11, https://codes.iccsafe.org/content/CAGBC2022P1, accessed June 1, 2023.

each utility, upon the request and authorization of the owner, owner's agent, or operator of a building covered under the regulation, to deliver or provide aggregated energy usage data for a covered building. The required energy usage shall be reported to the CEC through the Energy Star Portfolio Manager.

California Renewable Portfolio Standards

A major component of California's Renewable Energy Program is the renewables portfolio standard established under SB 1078 (Sher) and SB 107 (Simitian). The standard requires that a specified percentage of the electricity that utilities provide comes from renewable resources. Renewable sources of electricity include wind, small hydropower, solar, geothermal, biomass, and biogas. SB 1020, signed into law on September 16, 2022, requires renewable energy and zero-carbon resources to supply 90 percent of all retail electricity sales by 2035 and 95 percent by 2040. Additionally, SB 1020 requires all State agencies to procure 100 percent of electricity from renewable energy and zero-carbon resources by 2035.

CPUC Natural Gas Regulations

The CPUC regulates natural gas utility rates and services as well as the transportation of natural gas over the extensive transmission and distribution pipeline systems. The CPUC also regulates gas storage facilities. The Gas Safety and Reliability Branch of the CPUC ensures that natural gas pipeline systems are designed, constructed, operated, and maintained according to the safety standards set by the CPUC and the federal government. The regulations are provided in the CPUC General Order No. 112-E and the Natural Gas Pipeline Safety Act of 2011.

Local Regulations

The SMMC includes various directives that pertain to energy impacts. The SMMC is organized by title, chapter, and section, and in some cases, articles. Most provisions related to energy impacts are included in Title 15, *Public Utilities*, and Title 23, *Buildings and Construction.*

- Chapter 15.16, *Gas and Electric Franchise*, applies to franchise applicants that will construct poles, wires, and conduits for transmitting and distributing electricity and applicants that will lay pipes for transmitting and distributing gas under City streets. This chapter also specifies the percentage of gross annual receipts that must be paid to the City for the utility service that has been awarded.
- Chapter 15.24, *Community Antenna Television Franchise*, describes the procedures for granting a franchise to applicants that provide cable service, which includes video programming and which is provided to multiple subscribers within the city.
- Chapter 15.25, *State Video Franchises*, provides regulations for the provision of video service by state franchise holders, in accordance with the Digital Infrastructure and Video Competition Act of the California Public Utilities Code.
- Chapter 23.23, *Energy Code*, adopts the 2022 Edition of the California Energy Code.
- Chapter 23.44, *Electric Vehicle Charging Stations*, provides the requirements for all electric vehicle charging stations to meet applicable health and safety standards imposed by the State and the City. Permit applications must be submitted to the City's Building Division, which will review the application and conduct inspections.

- Chapter 23.46, *Small Residential Rooftop Solar Energy Systems*, provides an expedited, streamlined solar energy permitting process to achieve timely and cost-effective installations of small residential rooftop solar energy systems. The chapter lists the requirements for submittal of an expedited application for a solar energy system and the City's website provides a standard electrical plan that can be used as a template.
- Chapter 26.32, *Public Utilities*, requires utility easements to be provided within subdivisions that are designed for underground electrical and communications distribution services. All utility distribution facilities shall be placed underground, expect for equipment appurtenant to underground facilities and metal poles supporting high voltage wires, switches, transformers, and streetlights.
- Chapter 23.70, *Green Building Code*, includes provisions to provide electric car charging capabilities for new single-family dwellings, townhouses, multi-family dwellings, and new non-residential construction. This chapter also contains a local amendment that requires all-electric buildings for new residential and non-residential construction. There are exceptions to this requirement, but the infrastructure must be designed to accommodate the future installation of electric heating appliances.

Existing Conditions

Electricity

Two electricity providers, Pacific Gas and Electric Company (PG&E) and Peninsula Clean Energy (PCE) serve the EIR Study Area.

PCE was launched by San Mateo County and all twenty of its cities, including San Mateo, to meet local climate action goals. PCE is the default electricity provider for all communities and cities in San Mateo County and offers two electricity options, each with a different percentage of sustainable energy.[78] Residents and businesses in San Mateo are automatically enrolled in PCE's ECOplus service, which is distributed to customers through PG&E's existing grid infrastructure. The City of San Mateo has opted to purchase ECO100, which is 100 percent renewable electricity, for all of its municipal accounts.

PCE also offers rebates of up to $3,000 for heat pump water heaters, up to $3,500 for heat pump heating, ventilation, and air conditioning (HVAC) systems, and no-cost electric appliance, energy efficiency upgrade, and home repairs to income-qualified residents of San Mateo County.

Customers have the option to opt-out of PCE renewable energy sources and receive their energy service from PG&E. PG&E is responsible for maintaining transmission lines, handling customer billing, and responding to new service requests and emergencies within the PCE service area.

PG&E is a publicly traded utility company that generates, purchases, and transmits energy under contract with the CPUC. PG&E's service territory is 70,000 square miles, roughly extending north to south from Eureka to Bakersfield, and east to west from the Sierra Nevada to the Pacific Ocean. PG&E's electricity

[78] City of San Mateo, 2023, Peninsula Clean Energy. https://www.cityofsanmateo.org/3261/Peninsula-Clean-Energy accessed on June 1, 2023.

distribution system consists of 106,681 circuit miles of electric distribution lines and 18,466 circuit miles of interconnected transmission lines with approximately 5.5 million electric customer accounts.[79]

The electricity is generated by a combination of sources such as natural gas-fired power plants, nuclear power plants, and hydro-electric dams as well as newer sources of energy such as wind turbines and photovoltaic plants, also known as solar farms. The electric grid is a network of high-voltage transmission lines that link power plants with the PG&E system. The distribution system, comprised of lower voltage secondary lines, is at the street and neighborhood level and consists of overhead or underground distribution lines, transformers, and individual service "drops" that connect to the individual customer.

The power mix PG&E provided to customers in 2021 consisted of renewable resources (50 percent), nuclear (39 percent), natural gas plants (7 percent), and large hydroelectric facilities (4 percent). The renewable resources include wind, geothermal, biomass, solar, and small hydro.[80] PG&E also has 600 megawatts of battery storage capacity already connected to the electric grid and has contracts for an additional 3,300 megawatts of capacity by 2024.

PG&E's projected average annual electricity demand growth (mid-demand forecast) between 2019 and 2035 is approximately 1.5 percent. Total mid-electricity consumption in PG&E's service area was 106,617 gigawatt-hours per year in 2019 and is forecast to increase to 133,893 gigawatt-hours in 2035.[81] PG&E is expected to meet its electricity demands in 2035 and is ahead of schedule on meeting California's GHG-free requirements.

In addition, the City encourages the installation of local renewable resources, such as rooftop solar energy systems, which will reduce the cost of electricity for residents and businesses and enhance the local economy. The City is also pursuing policies and building code changes that would require new and existing buildings to be all-electric and eliminate natural gas as an energy source. By expanding on-site electricity generation and storage, San Mateo will not only reduce greenhouse gas emissions but also minimize the impact of grid failures and power disruptions.

Natural Gas

PG&E is also the natural gas service provider for the City of San Mateo. The natural gas system includes approximately 50,000 miles of natural gas pipelines, including 6,700 miles of transmission pipelines and 42,000 miles of distribution pipelines.[82] The transmission pipelines move natural gas from compressor stations and storage facilities to regulator stations. At the regulator station, the pressure in the pipeline is reduced before gas enters the distribution system, which consists of smaller diameter pipelines that

[79] PG&E, 2023, Company Profile. https://www.pge.com/en_US/about-pge/company-information/profile/profile.page accessed on June 1, 2023.

[80] PG&E, 2023, PG&E's 2021 Power Mix, https://www.pge.com/en_US/about-pge/environment/what-we-are-doing/clean-energy-solutions/clean-energy-solutions.page, accessed June 1, 2023.

[81] California Energy Commission, 2023, California Energy Demand Forecast, 2021-2035, https://www.energy.ca.gov/data-reports/reports/integrated-energy-policy-report/2021-integrated-energy-policy-report/2021-1, accessed June 1, 2023.

[82] PG&E, 2023, PG&E Natural Gas System. https://www.pge.com/en_US/safety/how-the-system-works/natural-gas-system-overview/natural-gas-system-overview.page accessed February 18, 2023.

deliver gas to residences and businesses. PG&E has approximately 4.5 million natural gas customer accounts.

Natural gas demand statewide is projected to decline an average of 1.1 percent per year through 2035.[83] This is primarily due to the goal of reducing greenhouse gas emissions and the ordinances of some cities for new construction to be all electric. Gas demand is expected to decrease from 5,298 million cubic feet of gas per day in 2022 to 4,857 million cubic feet per day by 2035. California's gas storage facilities supplement pipeline gas supply during high demand periods and also provide supply reliability. The supplies of natural gas would meet the demand through year 2035.[84]

Telecommunications and Internet Providers

Telecommunications services include wireless internet, cell phone and land line telephone, cable television, and satellite television. There are numerous telecommunication and internet providers that serve the EIR Study Area. Telecommunication providers include AT&T, T-Mobile, Verizon, and others. Internet providers include Spectrum, Xfinity, AT&T, T-Mobile, Earthlink, and others. Multiple choices give San Mateo residents and businesses a variety of options when choosing telecommunication providers.

The wireless networks consist of fiber-optic cables that connect major internet hubs over long distances. In San Mateo County, these cables typically run north to south throughout the County. The networks can be expanded by using small cell facilities, which are small antennae placed on existing utility poles or streetlights along with small pole-mounted radios and other accessory equipment. In this manner, the fiber-optic network can be easily expanded to meet the demand for wireless services. The current infrastructure is in place and sufficient to serve existing and future customers in San Mateo and the surrounding area.

The City will continue to require franchises to underground utility service connections for new development and underground existing overhead lines, when justifiable. The City will also continue to work with PG&E and other utility providers to underground new and existing overhead infrastructure as opportunities and funding permit.

4.17.5.2 STANDARDS OF SIGNIFICANCE

Implementation of the proposed project would result in significant impacts related to energy infrastructure if it would:

- Require or result in the relocation or construction of new or expanded electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.

[83] California Public Utilities Commission, 2022, 2022 California Gas Report. https://www.socalgas.com/sites/default/files/Joint_Utility_Biennial_Comprehensive_California_Gas_Report_2022.pdf accessed June 1, 2023.

[84] California Public Utilities Commission, 2022, 2022 California Gas Report. https://www.socalgas.com/sites/default/files/Joint_Utility_Biennial_Comprehensive_California_Gas_Report_2022.pdf accessed June 1, 2023.

- In combination with past, present, and reasonably foreseeable projects, result in a cumulative impact with respect to electric power, natural gas, or telecommunications facilities.

4.17.5.3 IMPACT DISCUSSION

UTIL-12 Implementation of the proposed project would not require or result in the relocation or construction of new or expanded electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.

Electrical service to the EIR Study Area would be provided by PCE and PG&E through connections to existing off-site electrical lines and new on-site infrastructure. As shown in Table 4.17-13, *Year 2040 Forecast Electricity Consumption,* electricity use in the EIR Study Area would increase by 177,799,653 kilowatt-hours per year. However, the per person electricity use would decrease by 161 kWh per year, which reflects the replacement of existing building stock with new development that meets the California Building Energy Efficiency Standards and CALGreen standards.

TABLE 4.17-13 YEAR 2040 FORECAST ELECTRICITY CONSUMPTION

	Electricity Usage (kWh/year) [a]		
Land Use	Existing Conditions	Proposed Project	Net Change
City			
Residential	190,128,160	286,083,820	95,955,660
Nonresidential	333,200,500	413,129,990	79,929,490
SOI			
Residential	6,147,817	6,195,622	47,805
Nonresidential	5,837,058	7,703,756	1,866,698
Total	**535,313,535**	**713,113,188**	**177,799,653**
Service Population	170,460	239,400	68,940
Per Service Population Annual Consumption	**3,140**	**2,979**	**-161**

Note:
a. Residential energy and nonresidential energy forecasts do not account for reductions due to increases in energy efficiency from compliance with the Building Energy Efficiency Standards and CALGreen.
Source: See Appendix C, *Air Quality and Greenhouse Gas Emissions Data,* of this Draft EIR.

As shown in Table 4.17-14, *Year 2040 Forecast Natural Gas Consumption*, natural gas use with buildout of the proposed project would increase natural gas use in the EIR Study Area by 10,391,714 therms annually, or approximately 41 percent, from existing conditions. The per service population natural gas consumption is estimated to slightly increase from 149 therms per person per year in 2019 to 150 therms per person per year in 2040. This is conservative as many projects in the city would be subject to the SMMC code's all-electric requirements.

TABLE 4.17-14 YEAR 2040 FORECAST NATURAL GAS CONSUMPTION

	Natural Gas Usage (Therms per year) [a]		
Land Use	Existing Conditions	Proposed Project	Net Change
City			
Residential	15,549,930	23,397,810	7,847,880
Nonresidential	9,195,040	11,677,000	2,481,960
SOI			
Residential	502,809	506,719	3,910
Nonresidential	181,252	239,216	57,964
Total	**25,429,031**	**35,820,745**	**10,391,714**
Service Population	170,460	239,400	68,940
Per Service Population Annual Consumption	**149**	**150**	**1**

Note:
a. Residential energy and nonresidential energy forecasts do not account for reductions due to increases in energy efficiency from compliance with the Building Energy Efficiency Standards and CALGreen.
Source: See Appendix C, *Air Quality and Greenhouse Gas Emissions Data,* of this Draft EIR

These energy consumption rates are modest increases when considered in the context of PCE's and PG&E's service territories. The increase in electricity usage for the EIR Study Area is approximately 0.1 percent of PG&E's projected energy supply in 2035, and the increase in natural gas consumption for the EIR Study Area is less than 0.06 percent of PG&E's natural gas supply.[85] PG&E also states that there would be sufficient electrical and natural gas supplies to cover its service area in 2035.

In addition, potential future development would be required to comply with the current and future updates to the California Energy Code and the CALGreen Code, which would contribute to reducing energy demands. New buildings would also use new energy-efficient appliances and equipment, pursuant to the Appliance Efficiency Regulations, which would ensure the use of efficient electricity and natural gas consumption. New and replacement buildings in compliance with these standards would generally have greater energy efficiency than existing buildings. Also, San Mateo is in the process of requiring all-electric appliances for new development.

The Public Services and Facilities (PSF) Element of the proposed General Plan contains goals, policies, and actions that require local planning and development decisions to address efficient use of energy and energy conservation. The following General Plan 2040 goal, policies, and actions would further limit wasteful and unnecessary energy consumption:

- Goal PSF-4: Promote the development of a clean energy supply, energy efficient technology, and telecommunications facilities that benefit all members of the community.
  - Policy PSF 4.1: Clean Energy. Support the advancement of a carbon neutral energy supply.
  - Policy PSF 4.2: Energy Conservation. Support efforts to reduce per capita energy use.

[85] PG&E's projected energy supplies for electricity and natural gas do not extend beyond 2035.

- Policy PSF 4.3: Building Electrification. Require electrification for new building stock and reduce fossil fuel usage for existing building stock at the time of building alteration.
- Policy PSF 4.4: Energy Resilience. Require new development projects to incorporate energy-efficiency measures, electric equipment, solar energy systems, and battery storage into their projects (Building Integrated Photo-Voltaic/BIPV) and encourage existing development to incorporate solar energy systems and battery storage.
- Policy PSF 4.5: Grid Resilience. Support PG&E's efforts to improve grid resilience and capacity to meet increased electrical demand.
- Policy PSF 4.6: Renewable Energy Neighborhood Microgrids. Encourage the establishment of renewable energy neighborhood microgrids to support resilience.
- Policy PSF 4.7: Service Improvement and Expansion. Seek to ensure adequate energy and communation systems to serve existing and future needs while minimizing impacts on existing and future residents by requiring new development to underground power lines and provide underground connections, when feasible, and prioritizing cellular coverage for all areas of the city while appropriately minimizing visual impacts of cellular facilities, antennas, and equipment shelters.
- Policy PSF 4.8: Access and Availability. Work with service providers to support access to and availability of a wide range of state-of-the-art telecommunication systems and services for households, businesses, institutions, and public agencies in San Mateo.
- Policy PSF 4.9: Coordinate Infrastructure Improvements. Combine, to the extent possible, upgrades and repairs to public infrastructure, such as roadways with utility needs, broadband upgrades, bicycle and pedestrian improvements, and levees.
- Policy PSF 4.10: Private Utility Undergrounding. Require new private development to underground service connections onto private property.
- Policy PSF 4.11: Public Wi-Fi. Provide high-speed internet access to the public at all City facilities.
- Action PSF 4.12: Dig Once. Establish a "dig once" policy, coordinating utility and roadway construction to avoid digging up the right-of-way multiple times, to reduce costs and impacts on the public right-of-way. The policy shall apply to infrastructure, utilities, and broadband whenever possible.
- Action PSF 4.13: Utility Network Undergrounding. Underground existing electrical and communication transmission and distribution lines in the public right-of-way as funds permit.
- Action PSF 4.14: Utility Undergrounding Requirements. Amend the San Mateo Municipal Code to require new private development to underground utilities and service connections on and adjacent to the site and to install and maintain signs, streetlights, and street landscaping adjacent to sidewalks.
- Action PSF 4.15: Renewable Energy. Increase new annual installations of solar or renewable energy systems. Partner with Peninsula Clean Energy to study and implement a sustainable and resilient system that can be used as a pilot program for locally generated power not reliant on outside power sources.

- Action PSF 4.16: Solar Energy. Promote local partnerships and rebate opportunities that make solar and battery storage simpler and more affordable while ensuring that the permit process is quick and inexpensive.

Compliance with federal, State, and local regulations (e.g., Building Energy Efficiency Standards, CALGreen, and Renewables Portfolio Standards) would increase building energy efficiency and reduce building energy demands. Additionally, the proposed General Plan goal, policies, and actions listed above will contribute to minimizing building-related energy demands and demands on nonrenewable sources of energy. Implementation of the proposed General Plan goal, policies, and actions in conjunction with and complementary to regulatory requirements, would ensure that energy demand associated with growth under the proposed project would not be inefficient, wasteful, or unnecessary, therefore avoiding the need for new or expanded electric power and natural gas facilities. In addition, the energy providers and telecommunications providers that serve the EIR Study Area indicate that they have the capability to serve future increases in population within their service areas without significant changes to the existing infrastructure. Therefore, implementation of the proposed project would not require or result in the relocation or construction of new or expanded electric power, natural gas, or telecommunications facilities and impacts would be *less than significant*.

Significance without Mitigation: Less than significant.

UTIL-13	**The proposed project would not, in combination with past, present, and reasonably foreseeable projects, result in a cumulatively considerable impact to electric power, natural gas, or telecommunications facilities.**

The area considered for cumulative impacts are the service areas of PCE and PG&E for electricity and PG&E for natural gas. Other projects within the service areas would increase electricity and natural gas demands.

The CPUC has identified the Integrated Energy Policy Report as "the appropriate venue for considering issues of load forecasting, resource assessment, and scenario analyses, to determine the appropriate level and ranges of resource needs for load serving entities in California." The latest report shows that California's electricity sector is leading efforts to reduce GHG emissions and there has been an increase in electricity consumption of only 10 percent while California's economy grew by 54 percent between 2000 and 2018.[86] Natural gas consumption is expected to level out between 2020 and 2030 with no significant increase due to energy savings from new building standards and the implementation of city and county ordinances that require new construction to have all-electric appliances and heating.

In addition, all future projects developed within the PCE and PG&E service areas would implement the requirements of the California Energy Code and CALGreen Building Code. New buildings would also use new energy-efficient appliances and equipment, pursuant to the Appliance Efficiency Regulations. Counties and cities review project design plans against these codes and ensure compliance before issuing

[86] California Energy Commission, 2020. Adopted 2019 Integrated Energy Policy Report.

construction permits. These measures would reduce the overall consumption of electricity and natural gas.

The energy providers and telecommunications providers that serve the EIR Study Area indicate that they have the capability to serve future increases in population within their service areas without significant changes to the existing infrastructure. In addition, the proposed General Plan includes goal, policies, and actions that would contribute to minimizing inefficient, wasteful, or unnecessary energy consumption and ensure compliance with State, regional, or local plans for renewable energy, therefore avoiding the need for new or expanded electric power and natural gas facilities. Therefore, the proposed project would not result in a cumulatively considerable impact to electric power, natural gas, or telecommunication facilities and cumulative impacts would be *less than significant*.

Significance without Mitigation: Less than significant.