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# **SAN MATEO**

## **EXISTING CONDITIONS REPORT**

# **UTILITIES**

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# Existing Conditions Report: Utilities

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EXISTING CONDITIONS REPORT: UTILITIES .....	1
A.    WATER SERVICES .....	1
1.    Regulatory Framework .....	1
2.    Existing Conditions.....	3
B.    WASTEWATER .....	10
1.    Regulatory Framework .....	10
2.    Existing Conditions.....	11
C.    STORMWATER SERVICES .....	14
1.    Regulatory Framework .....	14
2.    Existing Conditions.....	15
D.    ENERGY .....	19
1.    Regulatory Framework .....	19
2.    Existing Conditions.....	20
E.    SOLID WASTE .....	22
1.    Regulatory Framework .....	22
2.    Existing Conditions.....	23

## APPENDIX

### Appendix A: Utilities Regulatory Setting Links

## LIST OF FIGURES

Figure 1	San Mateo Water Suppliers.....	6
Figure 2	Existing Watersheds.....	16

## LIST OF TABLES

Table 1	General Plan Goals and Policies Relevant to Water Use.....	7
Table 2	Retail: Demands for Potable in City of San Mateo from Cal Water 2015 Actual.....	8
Table 3	Water Consumption by Customer Type – Past and Current .....	8
Table 4	Retail: Normal Year Supply for the Bayshore, Bear Gulch, and South San Francisco Districts – Supply and Demand Comparison .....	8
Table 5	Retail: Dry Year Supply for Mid-Peninsula, Bear Gulch, and South San Francisco Districts – Supply and Demand Comparison .....	9
Table 6	Retail: Multiple Dry Years for the Bayshore, Bear Gulch, and South San Francisco Districts – Supply and Demand Comparison .....	9
Table 7	General Plan Goal and Policies Relevant to Wastewater.....	13
Table 8	Breakdown of Sewer Collection System by Age .....	13
Table 9	General Plan Goal and Policy Relevant to Stormwater .....	17
Table 10	Storm Drain Collection System Inventory .....	18
Table 11	General Plan Goal and Policy Relevant to Electric and Gas.....	21
Table 12	General Plan Goals and Policies Relevant to Solid Waste .....	24

# *Existing Conditions Report: Utilities*

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This report describes the existing utilities in the City of San Mateo and evaluates the potential impacts for the potential future buildout of the City and the facilities that serve it. Water supply, wastewater conveyance and treatment, storm drainage systems, natural gas and electric facilities, and solid waste disposal are addressed in this report. Appendix A compiles links and sources for all federal, State, regional, and local regulations cited below.

## **A. WATER SERVICES**

The City of San Mateo gets its water supply primarily from the California Water Service, Mid-Peninsula District for emergencies, and the Foster City Estero Municipal Improvement District for bayside portions of San Mateo (Figure 1). This section outlines the regulatory framework as well as the existing conditions of the water services to the City of San Mateo.

### **1. Regulatory Framework**

This section summarizes federal, State, regional and the local regulations related to water supply in San Mateo.

#### *Federal and State Regulations*

##### Federal Safe Drinking Water Act (SDWA)

The Safe Drinking Water Act (SDWA) was established to ensure the protection of the quality of drinking water in the US. It authorizes the Environmental Protection Agency (EPA) to establish minimum health standards for public water system owners or operators. Water suppliers are required to remove contaminants that exceed water quality standards. The Department of Health Services is the primary water safety regulatory agency in California. The water supplier must notify its customers if the water is below required standards.

##### Porter-Cologne Water Quality Control Act

The Porter-Cologne Act provides local jurisdictions and established agencies, such as the State Water Resources Control Board as well as the nine Regional Water Quality Control Boards, the authority to enforce water quality standards over State water rights and quantity policies.

##### California Senate Bill (SB) 610 and 221

SB 610 and SB 221 were amended in 2001 to assure coordination between the local water and land use decisions to confirm that California cities and communities are provided with adequate water supply. Specific projects are required to prepare a Water Supply Assessment (WSA). The WSA is composed of information regarding existing and forecasted water demands, as well as information pertaining to available water supplies for the new development.

The following projects are required to prepare a WSA:

- Residential developments consisting of more than 500 homes, or

- A business employing more than 1,000 people or having more than 500,000 square feet;
- A commercial office building employing more than 1,000 people or having more than 250,000 square feet of floor space;
- A hotel having more than 500 rooms;
- An industrial complex with more than 1,000 employees and occupying more than 40 acres of land; or
- A mixed-use project that require the same or greater amount of water as a 500 dwelling-unit project.

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

#### California Urban Water Management Planning Act (UWMP)

The California Urban Water Management Planning Act (UWMP) and Section 10620 of the Water Code requires that every urban water supplier within California shall prepare and adopt an UWMP and update it every five years. The UWMP describes the service area of the water supplier, projected 20-year water supply and demand for the service area in normal years, dry years and multiple dry years, and water recycling strategies.

#### California Sustainable Groundwater Management Act

The California Sustainable Groundwater Management Act (SGMA), which was amended in 2014, is comprised of AB 1739, SB 1168, and SB 1319 and provides a framework for sustainable groundwater management. The SGMA requires governments and water agencies that deal with high and medium priority basins, as assessed by the State's Department of Water Resources, to halt overdraft and implement measures to bring the groundwater basins back into sustainable levels of pumping and recharge. As the sustainability plans are implemented, the respective basins should return back into sustainable levels within 20 years. The SGMA supports local agencies by providing guidance, as well as financial and technical assistance.

#### 2016 California Plumbing Code

The 2016 California Plumbing Code is an overarching document that provides plumbing guidelines and requirements. The purpose of the plumbing code is to provide a universal document for reference and to prevent conflicting plumbing codes within local jurisdictions. Some topics covered in the code include potable and non-potable water systems, water fixtures, and recycled water systems.

#### 2016 CALGreen Building Code

CALGreen mandatory green building standard codes were adopted in 2010. The 2016 CALGreen building codes are effective July 2018. The goals and initiatives of the CALGreen building code is to reduce greenhouse gas (GHG) emissions from buildings, reduce water consumption, and promote environmentally friendly and cost effective places to live and work.

#### The Water Conservation Act of 2009

The Water Conservation Act of 2009, also known as Senate Bill X7-7, requires all water suppliers within California to increase their water use efficiencies. The goal of the bill is to reduce urban water usage by 20 percent by year 2020. Urban water suppliers who do not meet the 20 percent by 2020 will be ineligible for

State water grants or loans. Water suppliers must determine baseline water usage and set goals to meet specified water reductions by certain years.

### *Regional Regulations*

#### 2015 California Water Service Urban Water Management Plan, Mid-Peninsula District

To be in compliance with the Urban Water Management Planning Act and The Water Conservation Act of 2009, Cal Water Mid-Peninsula District, who is the primary provider of water to the City of San Mateo, adopted their 2015 UWMP in June 2016. The UWMP was developed to stay in conformance with California Water Code 10617.

#### Water Shortage Contingency Plan – California Water Service, Mid-Peninsula District

The water shortage contingency plan includes water shortage response strategies. Some of these water shortages can include drought or sudden catastrophic supply interruptions. The goal of the plan is to ensure that the District has the necessary resources and management responses to protect and preserve human health and environmental assets.

### *Local Regulations*

#### City of San Mateo 2030 General Plan

The City of San Mateo 2030 General Plan contains policies and goals addressing water use and conservation, including a critical need to conserve existing water supplies by practicing efficient and sustainable water use. Table 1 provides a summary of the goals and policies related to water use and supply.

#### City of San Mateo Municipal Code

In addition to the General Plan, the City of San Mateo's Municipal Code provides a framework that shapes the development within the City. Chapters in the Municipal Code that pertain to water supply include: 23.16, Plumbing Code; 23.70, Green Building Code; 23.72, Water Conservation in Landscaping. These codes ensure that new development incorporate water conservation practices.

## **2. Existing Conditions**

### *Water Supply Sources*

#### Cal Water

Cal Water's Bayshore District (Mid-Peninsula (MPS) system) is the municipal water utility that provides retail water service to the City of San Mateo and San Carlos. The Bayshore District is comprised of the formerly separate South San Francisco District and Mid-Peninsula Districts. The Mid-Peninsula reference is still used at times administratively to represent the Cal Water service territories of San Mateo and San Carlos. The Mid-Peninsula system does not have any local water supply production. Instead, the water supply for the MPS system is completely purchased from the San Francisco Public Utilities Commission (SFPUC). SFPUC also supplies water to Cal Water's South San Francisco District, which serves areas north of San Mateo, as well as the Bear Gulch District, which serves areas south of San Mateo. Cal Water shares an annual supply of SFPUC purchased water between the entire Bayshore and Bear Gulch Districts. The water supplied by SFPUC comes

from local surface and imported surface water sources, primarily the Hetch Hetchy reservoir in the Sierra Nevada. In 2015, up to 8.5 million gallons per day (MGD) of water were delivered to more than 25,000 service connections in the MPS District.

The City and County of San Francisco's Regional Water System (RWS), operated by SFPUC, provides water to Cal Water through a network of pipelines, tunnels, and treatment plants. The amount of water available is dependent on the hydrology, institutional parameters, and physical facilities that capture the water supply from the Tuolumne River watershed, Alameda Creek watershed, and San Mateo County watersheds. About 85 percent of the water comes from the Tuolumne River watershed while the remaining volume comes from the Alameda Creek watershed and San Mateo County watersheds. SFPUC is significantly dependent on reservoir levels to provide adequate water supplies to its wholesale customers.

Cal Water has a Water Supply Agreement with SFPUC which specifies an Individual Supply Guarantee (ISG), which ensures that a specific amount of water is allocated for Cal Water each year. Cal Water's ISG for the three Districts that SFPUC serves is 35.68 MGD.

The potable water supplied to the Bayshore District is primarily used in single family applications but it is also used for multi-family, commercial, industrial, institutional/government, and other uses. Approximately 70 percent of the water use in the District is for residential use, as seen in Table 2.

#### Estero Municipal Improvement District

Estero Municipal Improvement District (EMID) provides water to portions of San Mateo bordered by Mariner's Island Blvd and the Marina Lagoon and provides one 12-inch emergency water line to serve the City. EMID primarily provides services to the City of Foster City. Similarly to the Bayshore District, 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 MGD of water from SFPUC.

The District does not clearly define the percentage of water usage from the City of San Mateo. Table 3 conveys the total water usage and use types of the District for its entire service area.

#### *Projected Supply and Demand – Cal Water, Mid-Peninsula District*

Cal Water has performed a supply and demand assessment from year 2020 to year 2040. All supply and demand values are in acre-feet per year (AFY). Table 4 presents Cal Water's projected supply and demand totals from year 2020 through year 2040 for the normal year condition.

Table 4 indicates there is sufficient water supply sourced from SFPUC, the South San Francisco District groundwater supply, and the Bear Gulch District local surface water to supply their own Districts as well as the MPS District.

Table 5 presents Cal Water's projected demands and supply totals from year 2020 through year 2040 for the single dry year condition. Table 5 projects there is an insufficient water supply to meet the demands during single dry years. This is based on historical data which indicates that the surface water supplies from the Bear Gulch Reservoir have declined and that the South San Francisco District's normal ground water supply has remained consistent during single dry years. The projected shortages are around 20 percent.

Table 6 presents Cal Water's projected demands and supply totals from year 2020 through year 2040 for the multiple dry year condition. Table 6 projects a shortage of about 19 to 22 percent during the first dry year and



taper down to about 14 to 17 percent by the third dry year. According to historical data, the amount of groundwater supplied from the South San Francisco District remained consistent, while the surface water supply from the Bear Gulch District declined.

Based on historical records, the local surface supply from the Bear Gulch Reservoir provides an average of approximately 609 AFY in multiple dry years. The South San Francisco District's normal groundwater supply of 1,535 AFY is expected to be fully available in multiple dry years. The supply totals shown in Table 6 include these volumes as well as the available SFPUC supplies of 28.52 MGD (31,950 AF) in each of the three years. Shortages that can exceed 20 percent in the first year are followed by projected second and third year shortages of between 15 percent and 20 percent.

As shown in these three tables, the District has a sufficient supply during years under normal conditions. However, during one-year or multi-year droughts, shortfalls up to 20 percent or more are projected. Under such conditions, Cal Water will implement its Water Shortage Contingency Plan, as described in Chapter 8 of Cal Water's 2015 Mid-Peninsula District Urban Water Management Plan. In the 2012-2017 drought, District customers were asked to reduce their demand by 16 percent as specified by the State Board Resources Control Board. The District has exceeded this amount (25 percent reduction based on June 2015 to March 2016 totals). Cal Water is also striving to increase the water supply portfolio for this District and for the other two peninsula districts (Mid- Peninsula and South San Francisco). As described above, these three Districts share Cal Water's SFPUC supply, and any supply added to one of these Districts will benefit the others.

FIGURE 1 SAN MATEO WATER SUPPLIERS



Source: California Water Service, 2016. PlaceWorks, 2018.

**TABLE 1** GENERAL PLAN GOALS AND POLICIES RELEVANT TO WATER USE

Goal/ Policy #	Goals/Policy
LU Goal 1e	Provide adequate transportation, utilities, cultural, educational, recreational, and public facilities, and ensure their availability to all members of the community. Establish San Mateo as the cultural center of San Mateo County.
LU Goal 1i	<b>Consider the effects of Climate Change on the City of San Mateo.</b> Incorporate Sustainability into the City's policies, work programs and standard operations.
Policy LU 1.1	<b>Planning Area Growth and Development to 2030.</b> Plan for land uses, population density, and land use intensity as shown on the Land Use, Height and Building Intensity and City Image Plans for the entire planning area. Design the circulation system and infrastructure to provide capacity for the total development expected in 2030. Review projections annually and adjust infrastructure and circulation requirements as required if actual growth varies significantly from that projected.
LU Goal 4a	<b>Facilities.</b> Seek to provide a safe and predictable supply of water, and provide storm drainage, sewer and flood control facilities adequate to serve existing needs, the projected population and employment growth and to reduce the associated life safety and health risks to acceptable levels.
Policy LU 4.4	<b>Water Supply.</b> Seek to ensure a safe and predictable water system for existing and future development by taking the following actions: <ul style="list-style-type: none"> <li>▪ As a high priority, work with California Water Company and Estero Municipal Improvement District and adjacent jurisdictions to develop supplemental water sources and conservation efforts.</li> <li>▪ Strongly encourage water conservation by implementing pro-active water conservation methods, including requiring all new development to install low volume flush toilets, low-flow shower heads, and utilize drip irrigation while promoting high-efficiency washing machines and establishing an education program to improve water conservation practices.</li> <li>▪ Investigate the feasibility of developing capacity to use recycled wastewater, stormwater runoff, graywater and ground water that will enable reuse of water for irrigation purposes, freeing comparable potable water supplies for other uses.</li> </ul>
Policy LU 4.28	<b>Peakload Water Supply.</b> Seek to ensure that the California Water Service Company and the Estero Municipal Improvement District provide and maintain a water supply and distribution system which provides an adequate static pressure to deliver a minimum fire hydrant flow of 2,500 gallons per minute to all areas of the City, except where a lesser flow is acceptable as determined by the Fire Chief. Ensure that new development does not demand a fire flow in excess of that available.
LU Goal 5	Promote cooperative interaction with other public agencies regarding regional issues.
Policy LU 5.1	<b>Inter-Agency Cooperation.</b> Promote and participate in cooperative planning with other public agencies and adjacent jurisdictions, especially regarding regional issues such as water supply, traffic congestion, rail transportation, air pollution, waste management, fire services, emergency medical services and climate change.
LU Goal 8b	Recognize potential climate change consequences such as increased sea level rise, changing weather events, less snow melt in the Sierras - therefore less drinking water availability, hotter temperatures, changing air quality and more heat related health issues.
LU Goal 8c	Ensure that all improvements to existing structures are developed or remodeled in a sustainable manner.
Policy LU 8.7	<b>Water Reduction Strategies.</b> Establish a partnership with California Water Service (CWS), Bay Area Water Supply Conservation Agency and other mid-peninsula cities to promote the water reduction strategies that are offered and to create an outreach program that will help inform residences and businesses of increase costs and the need for conservation efforts.
Policy LU 8.8	<b>Water Rates.</b> Actively support a strategy to decouple water utility revenues from water consumption and any other regulatory changes that will offer incentives to CWS to actively pursue conservation while working with CWS to implement progressive water rates.
Policy LU 8.12	<b>Engaging the Public.</b> Create a multi-phased information campaign to educate residents and businesses on the Climate Action Plan and to spark behavioral changes in individual energy and water consumption, transportation mode choices, and recycling.

**TABLE 1 GENERAL PLAN GOALS AND POLICIES RELEVANT TO WATER USE**

Goal/ Policy #	Goals/Policy
Policy C/OS 2.3	<b>Hydrologic Impacts.</b> Ensure that improvements to creeks and other waterways do not cause adverse hydrologic impacts on upstream or downstream portions of the subject creek; comply with Safety Element Policy S-2.1 regarding flood control.
Policy C/OS 2.6	<b>Water Quality.</b> Continue to strive for the highest possible level of water quality reasonable for an urban environment in City creeks, channels, Marina Lagoon, and the Bay through the provision of administrative, maintenance, and treatment measures. At a minimum, water quality levels must meet Environmental Protection Agency (EPA) standards, allow for limited water recreation and sustain aquatic/wildlife habitat appropriate to the water flow. The more stringent requirements applicable to contact water creation would apply to Marina Lagoon and beach areas.
Policy C/OS 13.6	<b>Sustainability Practices.</b> Establish management and operating practices that are environmentally, socially and economically sustainable.

Source: City of San Mateo, 2010, General Plan 2030.

**TABLE 2 RETAIL: DEMANDS FOR POTABLE IN CITY OF SAN MATEO FROM CAL WATER 2015 ACTUAL**

	Single-Family	Multi-Family	Commercial	Industrial	Institutional/ Governmental	Other	Losses	Total
Active Services	22,081	584	2,410	9	246	45	-	25,372
2015 Delivery (AF/yr)	4,659	1,629	2,027	5	567	117	556	9,560
Supply Percent of Total	49%	17%	21%	0%	6%	1%	6%	100%

**TABLE 3 WATER CONSUMPTION BY CUSTOMER TYPE – PAST AND CURRENT**

	Year	Water Use Sectors	Single-Family	Multi-Family	Comm./ Instit.	Indust.	Landscape Irrigation	Misc.	Unaccounted	Totals
A	2005	# of Accounts	4,654	2,899	198	68	26		488	8,333
		Deliveries AF/Y	1,655	2,021	484	86	26		1,575	5,847
	2010	# of Accounts	4,800	2,691	226	70	481	53		8,321
		Deliveries AF/Y	1,403	1,816	506	71	1,141	6	462	5,407

Source: Estero Municipal Improvement District. 2010 – 2015 Urban Water Management Plan.

**TABLE 4 RETAIL: NORMAL YEAR SUPPLY FOR THE BAYSHORE, BEAR GULCH, AND SOUTH SAN FRANCISCO DISTRICTS – SUPPLY AND DEMAND COMPARISON**

	2020	2025	2030	2035	2040
Supply Totals	40,225	40,280	40,647	41,149	41,767
Demand Totals	40,225	40,280	40,647	41,149	41,767
Difference	0	0	0	0	0

Source: California Water Service, 2015 Urban Water Management Plan.

**TABLE 5 RETAIL: DRY YEAR SUPPLY FOR MID-PENINSULA, BEAR GULCH, AND SOUTH SAN FRANCISCO DISTRICTS – SUPPLY AND DEMAND COMPARISON**

	2020	2025	2030	2035	2040
Supply Totals	33,836	33,836	33,836	33,836	33,836
Demand Totals	41,984	42,041	42,425	42,947	43,591
Difference	(8,148)	(8,205)	(8,589)	(9,111)	(9,755)
Percent Shortage	19%	20%	20%	21%	22%

Source: California Water Service. 2015 Urban Water Management Plan.

**TABLE 6 RETAIL: MULTIPLE DRY YEARS FOR THE BAYSHORE, BEAR GULCH, AND SOUTH SAN FRANCISCO DISTRICTS – SUPPLY AND DEMAND COMPARISON**

		2020	2025	2030	2035	2040
First Year	Supply Totals	33,836	33,836	33,836	33,836	33,836
	Demand Totals	41,984	42,041	42,425	42,947	43,591
	Difference	(8,148)	(8,205)	(8,589)	(9,111)	(9,755)
	Percent Shortage	19%	20%	20%	21%	22%
Second Year	Supply Totals	34,223	34,223	34,223	34,223	34,223
	Demand Totals	40,764	40,819	41,192	41,700	42,327
	Difference	(6,541)	(6,596)	(6,969)	(7,477)	(8,104)
	Percent Shortage	16%	16%	17%	18%	19%
Third Year	Supply Totals	34,223	34,223	34,223	34,223	34,223
	Demand Totals	39,758	39,812	40,176	40,671	41,283
	Difference	(5,535)	(5,589)	(5,953)	(6,448)	(7,060)
	Percent Shortage	14%	14%	15%	16%	17%

Source: California Water Service. 2015 Urban Water Management Plan.

## **B. WASTEWATER**

The City of San Mateo maintains its own sanitary sewer systems. San Mateo's Wastewater Treatment Plant is jointly owned by the City of San Mateo and the City of Foster City / Estero Municipal Improvement District (EMID). This section describes the regulatory framework as well as the existing conditions of the wastewater conveyance and treatment facilities serving the City of San Mateo.

### **1. Regulatory Framework**

The following is a summary of federal, State, regional and local regulations related to wastewater conveyance and treatment in San Mateo.

#### *Federal and State Regulations*

##### Federal Clean Water Act

The Federal Clean Water Act creates the framework for regulating pollutant discharge into the waters of the United States and provides water quality standards for surface waters. The Clean Water Act was initially enacted in 1948 and was significantly revised and expanded in 1972.

The EPA, under the Clean Water Act, has set wastewater standards and made it unlawful to discharge pollutants from a point source to any navigable waters without obtaining a permit. Some of these point sources include pipes and man-made drainage channels that drain industrial facilities or commercial facilities.

##### National Pollutant Discharge Elimination System

The National Pollutant Discharge Elimination System (NPDES) program was created in 1972 by the Federal Clean Water Act. The NPDES program helps regulate water pollution by imposing regulations that control the pollutant at the source of discharge. The EPA has authorized State, tribal, and territorial governments the ability to perform administrative, enforcement, and permitting aspects of the NPDES program.

##### State Water Resources Control Board

The State Water Resources Control Board establishes statewide policies and regulations for California under the Federal Clean Water Act and the Porter-Cologne Water Act. The Board's role is to protect California's water resources, which is comprised of surface waters and groundwater. The Board regulates water quality and mitigates for deficiencies in the State's water resources.

#### *Regional Regulations*

##### San Francisco Bay Regional Water Quality Control Board

The San Francisco Bay Regional Water Quality Control Board was created as a result of the California Porter-Cologne Act. The Board's jurisdiction includes Alameda, Contra Costa, San Francisco, Santa Clara, San Mateo, Marin, Sonoma, Napa, and Solano counties. The Board's purpose is to protect the water quality at the regional level by implementing and enforcing rules that regulate discharge.

## *Local Regulation*

### City of San Mateo Sewer System Management Plan

The most recent Sewer System Management Plan (SSMP) was updated in 2015. The purpose of the SSMP is to create a record of the activities and events that the City utilizes to manage its wastewater collection system. Some of these methods include maintaining the system to provide reliable service for the future, provide or increase capacities to allow for peak sewer flows, and minimize the number of sewer overflows. The plan should meet the requirements of the Regional Water Quality Board and the Statewide General Waste Discharge Requirements. It is important that system overflows are minimized because they pose a hazard to natural drainage systems and the environment.

### City of San Mateo 2030 General Plan

The City of San Mateo 2030 General Plan contains policies and goals that address wastewater infrastructure, as summarized in Table 7.

### City of San Mateo Municipal Code

In addition to the General Plan, the City of San Mateo Municipal Code provides a framework that shapes the development within the City. Chapters in the Municipal Code related to wastewater include Chapters 7.38, Sanitary Sewer Use; 23.16, Plumbing Code; 23.70, Green Building Code; 23.72, Water Conservation in Landscaping.

### Clean Water Program – San Mateo

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 2016. The Clean Water Program costs approximately \$900 million over approximately 10-years. Primary objectives of the Clean Water Program are to replace aging infrastructure and facilities, build wet weather sewer system capacity assurance to prevent overflows, meet current and future regulatory requirements, and align with the City of San Mateo and Foster City's sustainability goals.

## **2. Existing Conditions**

### *Wastewater Collection*

#### City of San Mateo Sewer Collection System<sup>1</sup>

The City of San Mateo's underground sewer collection system is comprised of 236 miles of sanitary sewer lines, more than 5,000 manholes, and 26 sewer lift stations. The collection system was built in the mid-1900s and is comprised of predominantly vitrified clay pipe (VCP). A majority of the system is over 60 years old, as shown in Table 8. This system is maintained by the City's Department of Public Works, Environmental Services division. Individual indoor waste drains are conveyed by the wastewater collection system to the City's Wastewater Treatment Plant, where the effluent is treated and eventually discharged into the San Francisco Bay.

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<sup>1</sup> City of San Mateo, 2015. Sewer System Management Plan. Sewer System Management Plan, <https://www.cityofsanmateo.org/DocumentCenter/View/47516/City-of-San-Mateo-SSMP-2015?bidId=>, accessed on June 10, 2018.

City plans to upgrade the aging infrastructure are outlined in the Sewer System Management Plan, Integrated Wastewater Master Plan, and San Mateo's Clean Water Program. The City does not yet have plans in place for repurposing treated wastewater into a recycled water system.

### *Wastewater Treatment*

#### San Mateo Wastewater Treatment Plant<sup>2</sup>

The San Mateo Wastewater Treatment Plant is owned by the City of San Mateo (approximately 75 percent ownership) and the City of Foster City/ EMID (approximately 25 percent ownership). A 2017 Joint Powers Agreement between the City of San Mateo and City of Foster City / EMID establishes the capacity, ownership, and cost distribution to the parties.

A 1989 sanitary sewage agreement was established between the City of San Mateo and three other agencies: the Town of Hillsborough, Crystal Springs County Sanitation District, and the County of San Mateo, as these agencies convey their wastewater to the San Mateo Wastewater Treatment Plant for treatment.

The treatment plant has been in operation since 1935 and treats an average dry weather flow of approximately 9 to 12 MGD of wastewater, with approximately 4.1 dry metric tons of biosolids removed from the plant each day. The City's National Pollutant Discharge Elimination System permit allows the wastewater treatment plant to discharge up to 60 MGD of treated effluent into the San Francisco Bay.<sup>3</sup>

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<sup>2</sup> City of San Mateo, 2015. Sewer System Management Plan. Sewer System Management Plan, <https://www.cityofsanmateo.org/DocumentCenter/View/47516/City-of-San-Mateo-SSMP-2015?bidId=>, accessed on June 10, 2018.

<sup>3</sup> Phillips, Jennifer. Jacobs. E-mail communication with Deryk Daquigan, City of San Mateo. August 27, 2018.



TABLE 7 GENERAL PLAN GOAL AND POLICIES RELEVANT TO WASTEWATER

Goal/ Policy #	Goals/Policy
LU Goal 1e	Provide adequate transportation, utilities, cultural, educational, recreational, and public facilities, and ensure their availability to all members of the community. Establish San Mateo as the cultural center of San Mateo County.
Policy LU 1.1	<b>Planning Area Growth and Development to 2030.</b> Plan for land uses, population density, and land use intensity as shown on the Land Use, Height and Building Intensity and City Image Plans for the entire planning area. Design the circulation system and infrastructure to provide capacity for the total development expected in 2030. Review projections annually and adjust infrastructure and circulation requirements as required if actual growth varies significantly from that projected.
Policy LU 4.5	<b>Wastewater Treatment Plant Expansion.</b> Provide adequate waste water treatment for the projected 2030 service area population, employment and development. Require that any future expansion of the Waste Water Treatment Plant (WWTP) be designed to be compatible with the adjacent parks, school, and low-density residential areas by screening views of WWTP with extensive and tall landscaping and reducing the height of all new structures to the maximum practicably feasible. Any future expansion of the WWTP shall take into account the possible rise in sea level.
Policy LU 4.6	<b>Inter-Agency Coordination.</b> Coordinate future expansion or modification of the Wastewater Treatment Plant with the other users of the plant including the Estero Municipal Improvement District (Foster City), the Crystal Springs County Sanitation District, Hillsborough and Belmont.
Policy LU 4.7	<p><b>Sewer System.</b> Provide a sewer system which safely and efficiently conveys sewage to the wastewater treatment plant. Implement the Sewer System Management Plan (SSMP) to ensure proper Maintenance, operations and management all parts of the wastewater collection system.</p> <p><b>1. Comprehensive Sewer System Study.</b> As a high priority maintain the comprehensive sewer system study to address the efficiency and integrity of the sewer lines and facilities, and develop a Capital Improvement Program to make any necessary improvements.</p> <p><b>2. Sewer Requirements for New Development.</b> Require new major multi-family and commercial developments to evaluate the main sewer lines in the project vicinity which will be utilized by the new development and make any improvements necessary to convey the additional sewage flows.</p>

Source: Vision 2030, San Mateo General Plan.

TABLE 8 BREAKDOWN OF SEWER COLLECTION SYSTEM  
BY AGE

Pipe Age	Length (Feet)	Length (miles)	Percentage of System
2000 – present	14,414	2.7	1
1980 – 1999	61,082	11.6	5
1960 – 1979	203,758	38.6	16.4
1940 – 1959	638,134	120.8	51.2
1920 – 1939	273,484	51.8	22
1900 – 1919	54,227	10.3	4.4
Before 1900	0	0	0
<b>Total</b>	<b>1,245,099</b>	<b>235.8</b>	<b>100%</b>

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

## C. STORMWATER SERVICES

The City of San Mateo maintains storm drain systems citywide. The system comprises 80 miles of storm drain lines that typically direct flow to the nearest creek before reaching San Francisco Bay (see Figure 2).

### 1. Regulatory Framework

This section summarizes the federal, State level, regional level, and local regulations governing stormwater conveyance and treatment in San Mateo.

#### *Federal and State Regulations*

##### Federal Clean Water Act

The Federal Clean Water Act creates the framework for regulating pollutant discharge into the waters of the United States and provides water quality standards for surface waters. The Clean Water Act was initially enacted in 1948 and was significantly revised and expanded in 1972.

The EPA, under the Clean Water Act, has set wastewater standards and made it unlawful to discharge pollutants from a point source to any navigable waters without obtaining a permit. Some of these point sources include pipes and man-made drainage channels that drain industrial facilities or commercial facilities.

##### National Pollutant Discharge Elimination System

The National Pollutant Discharge Elimination System (NPDES) program was created in 1972 by the Federal Clean Water Act. The NPDES program helps regulate water pollution by imposing regulations that control the pollutant at the source of discharge. The EPA has authorized State, tribal, and territorial governments the ability to perform administrative, enforcement, and permitting aspects of the NPDES program.

##### State Water Resources Control Board

The State Water Resources Control Board establishes statewide policies and regulations for California under the Federal Clean Water Act and the Porter-Cologne Water Act. The Board's role is to protect California's water resources, which is comprised of surface waters and groundwater. The Board regulates water quality and mitigates for defects in the State's water resources.

##### National Flood Insurance Act of 1968

The City of San Mateo has been a regular member of the National Flood Insurance Program since 1981. In participating communities which adopt adequate floodplain management policies, FEMA is allowed to make affordable insurance protection against losses from flooding available to property owners. Certain areas in San Mateo are prone to flooding from the results of studies completed in the 1980s, and areas protected by levees are now at risk to flooding after FEMA adopted new policies in 1988.

## *Regional Regulations*

### San Francisco Bay Regional Water Quality Control Board

The San Francisco Bay Regional Water Quality Control Board was created as a result of the California Porter-Cologne Act. The Board's jurisdictions include Alameda, Contra Costa, San Francisco, Santa Clara, San Mateo, Marin, Sonoma, Napa, and Solano counties. The Board's purpose is to protect the water quality at the regional level by implementing and enforcing rules that regulate discharge. The Board-issued Municipal Regional Stormwater NPDES Permit (version 2.0) regulates stormwater management for the City of San Mateo and other municipalities and local agencies in Alameda, Contra Costa, San Mateo and Santa Clara Counties, and the cities of Fairfield, Suisun City, and Vallejo.

## *Local Regulation*

### City of San Mateo Vision 2030 General Plan

The City of San Mateo 2030 General Plan contains policies and goals addressing management of stormwater and storm drain infrastructure, as listed in Table 9.

### City of San Mateo Municipal Code

In addition to the General Plan, the City of San Mateo's Municipal Code provides a framework that shapes the development within the City. The Municipal Code includes the following sections regarding stormwater management and discharge control: Section 7.38, Sanitary Sewer Use; Section 7.39, Stormwater Management and Discharge Control; and Section 23.72, Water Conservation in Landscaping.

## **2. Existing Conditions**

### *Stormwater*

#### City of San Mateo Stormwater System<sup>4</sup>

In addition to storm drain lines (see Table 10), the San Mateo storm collection system includes 25 miles of open channels and ditches that convey storm-generated runoff into the bay. The City is divided into seven watersheds: Laurel Creek, 19<sup>th</sup> Avenue Channel, 16<sup>th</sup> Avenue Channel, San Mateo Creek, North San Mateo, Shoreview Park, and Mariners Island. The storm drainage system is maintained by the City Department of Public Works, as are levees that provide flood protection from creek flooding and the San Francisco Bay. The 2004 San Mateo Storm Drain Master Plan addresses stormwater conveyance deficiencies through capital improvements.

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<sup>4</sup> City of San Mateo, 2004, *Storm Drain Master Plan, San Mateo, CA*.

FIGURE 2 EXISTING WATERSHEDS



Source: San Mateo County GIS

TABLE 9 GENERAL PLAN GOAL AND POLICY RELEVANT TO STORMWATER

Goal/Policy #	Goals/Policy
Policy LU 4.4.5	<p><b>Stormwater Treatment.</b> Continue to implement the San Mateo Countywide Stormwater Pollution Prevention Plan Program to ensure compliance with the National Pollutant Discharge Elimination System (NPDES) permit.</p> <ul style="list-style-type: none"> <li>▪ Prevent water pollution from point and non-point sources.</li> <li>▪ Minimize stormwater runoff and pollution by encouraging low-impact design features, such as pervious parking surfaces, bioswales and filter strips in new development.</li> <li>▪ Encourage the use of drought-tolerant and native vegetation in landscaping.</li> </ul> <p>The City of San Mateo is required under the countywide stormwater pollution prevention program to prevent stormwater pollution. The principal goal is to minimize erosion, sediment, and other waste runoff from active construction sites and to implement effective post-construction permanent treatment measures. The City has implemented design and permit requirements based on the current NPDES permit. With the requirements set forth under the permit, the City has managed to prevent further erosion of our natural creeks, increase the amount of natural vegetation, and decrease the amount of stormwater runoff from in-fill development projects with the use of specific guidelines, pamphlets, and project conditions of approval.</p>
LU Goal 4a	<p><b>Facilities.</b> Seek to provide a safe and predictable supply of water, and provide storm drainage, sewer and flood control facilities adequate to serve existing needs, the projected population and employment growth and to reduce the associated life safety and health risks to acceptable levels.</p>

Source: Vision 2030, San Mateo General Plan.

**TABLE 10 STORM DRAIN COLLECTION SYSTEM INVENTORY**

Pipe Type	Diameter/ Size (Inches)	Total Length in System (Feet)
Reinforced Concrete Pipe	8	740
	10	330
	12	99,630
	15	85,080
	18	74,200
	21	31,140
	24	44,770
	27	14,720
	30	14,780
	33	10,030
	36	35,140
	42	91,900
	48	15,200
	54	4,760
	60	2,960
	66	5,100
	72	3,770
	120	260
Elliptical Pipe	19 x 30	2,210
	38 x 60	460
	48 x 76	2,340
	53 x 83	4,300
Arch Pipe	36 x 22	950
	43 x 27	720
	14' x 5'-8	2,020
Egg Shaped Pipe	48 x 32	580
<b>Total Pipe Length</b>		<b>419,990</b>
Ditches and Canals		127,750

Source: 2004 Storm Drain Master Plan, City of San Mateo.

## D. ENERGY

The Pacific Gas & Electric company (PG&E) provides electric and natural gas service in San Mateo. PG&E transports the electrical energy and Peninsula Clean Energy consortium provides the electrical commodity.

### 1. Regulatory Framework

#### *Federal and State Regulations*

##### Energy Independence and Security Act of 2007

The Energy Independence and Security Act of 2007 introduced requirements to shift the US towards energy independence and security. These requirements include increasing the production of cleaner renewable fuels, increasing the efficiency of products and energy for buildings and vehicles.

##### Energy Policy Act of 2005

The Energy Policy Act of 2005 provides resources to entities that develop or use technologies that reduce the production of GHGs. Some energy production methods that are addressed include energy efficiency, renewable energy, and electricity and energy tax incentives.

##### 2016 California Building Code

The 2016 California Building Code establishes building energy efficiency standards. The Building Energy Efficiency Standards section provides regulations on what new commercial and residential buildings have to adhere to with regards to building energy. Requirements in this Code include efficient HVAC systems and lighting systems.

##### California Public Utilities Commission

The California Public Utilities Commission (CPUC) is an agency that regulates utilities, ensures reliable access to utility infrastructure, and protects the environment and consumers. In relation to energy, the CPUC specifically regulates investor-owned electric and natural gas utilities operating in California. One of these companies includes PG&E, which serves the City of San Mateo. Some initiatives and mandates addressed by CPUC relate to consumer electric costs, electric power procurement and generation, infrastructure, customer energy resources, energy efficiency, and energy rates.

##### 2006 Appliance Efficiency Regulations

The 2006 Appliance Efficiency Regulations provides standards and requirements for the 21 different categories of appliances that are sold in California. They include federally regulated and non-regulated appliances.

##### Governor's Green Building Executive Order<sup>5</sup>

Enacted in April 2012, the Governor's Green Building Executive Order required the reduction of GHGs. The Order sought to achieve this directive by requiring new government buildings to be Net Zero Energy by 2025,

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<sup>5</sup> State of California, April 12, 2012. Executive Order B-18-12, <https://www.gov.ca.gov/2012/04/25/news17508>, accessed on June 10, 2018.

reduction of peak electrical loads, pursuing of electrical vehicle systems and obtaining at a minimum, LEED silver certification for large government buildings.

### *Regional Regulations*

#### Peninsula Clean Energy

Peninsula Clean Energy (PCE) is the official provider of electricity for San Mateo County and primarily focuses on providing renewable energy. Its portfolio consists of over 50 percent of eligible renewal energies and consumers can choose between PCE or PG&E when selecting an energy provider. Energy provided by PCE is transmitted through PG&E distribution channels.

### *Local Regulation*

#### City of San Mateo 2030 General Plan

The City of San Mateo 2030 General Plan contains policies and goals that call for sustainable energy efficiency and conservation practices, as listed in Table 11.

#### City of San Mateo Municipal Code

The City has adopted the California Green Building Code, which covers a number of requirements, from energy efficiency in building operation to provision of electrical vehicle infrastructure (see Sections 23.08, Building Code; 23.12, Electrical Code; 23.24, Energy Code; 23.44, Electrical Vehicle Charging Stations; 23.70, Green Building Code).

## **2. Existing Conditions**

### *Pacific Gas & Electric & Peninsula Clean Energy<sup>6,7</sup>*

Pacific Gas & Electric Company and Peninsula Clean Energy together provide electrical services in San Mateo. PG&E is the sole provider for natural gas services to the City. PG&E provides distribution of electrical services to the city, while PCE provides the electrical commodity. PCE works in conjunction with PG&E to provide electricity to consumers through the use of PG&E's distribution infrastructure and network. Both utilities are regulated by the California Public Utilities Commission.

PG&E serves California in the areas north of Bakersfield and south of Eureka, and from the Sierra Nevada in the east to the Pacific Ocean from the west. PG&E owns over 106,000 circuit miles of electric distribution lines, 18,000 circuit miles of interconnected transmission lines, 42,000 miles of natural gas distribution pipelines, and 6,400 miles of transportation pipelines. PG&E provides energy to over 5 million electric customers and over 4 million natural gas customers.

As of 2016, the PG&E energy generation profile consists of 12 percent large hydroelectric facilities, 17 percent natural gas, 24 percent nuclear, 14 percent energy from unspecified sources, and 33 percent eligible

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<sup>6</sup> Company profile, No Date, [https://www.pge.com/en\\_US/about-pge/company-information/profile/profile.page](https://www.pge.com/en_US/about-pge/company-information/profile/profile.page), accessed on June 10, 2018.

<sup>7</sup> PG&E's Power Mix, Understanding Our Clean Energy Solutions, 2017, [https://www.pge.com/pge\\_global/local/assets/data/en-us/your-account/your-bill/understand-your-bill/bill-inserts/2017/november/power-content.pdf](https://www.pge.com/pge_global/local/assets/data/en-us/your-account/your-bill/understand-your-bill/bill-inserts/2017/november/power-content.pdf), accessed on June 10, 2018.



renewable energies, which includes biomass and waste, geothermal, small hydroelectric, solar and wind. PCE's portfolio consist of 27 percent hydroelectric facilities, 15 percent unspecific sources, and 58 percent eligible renewable energies, which includes small hydroelectric and wind.

**TABLE 11** GENERAL PLAN GOAL AND POLICY RELEVANT TO ELECTRIC AND GAS

Goal/Policy #	Goals/Policy
LU Goal 1i	Consider the effects of Climate Change on the City of San Mateo. Incorporate sustainability into the City's policies, work programs and standard operation.
Policy LU 4.16	<p><b>Service Improvements and Expansion.</b> Seek to ensure adequate gas, electric and communication systems to serve existing and future needs while minimizing impacts on existing and future residents by taking the following actions:</p> <ul style="list-style-type: none"> <li>▪ Underground electrical and communication transmission and distribution lines in residential and commercial areas as funds permit.</li> <li>▪ Require all new developments to underground lines and provide underground connections when feasible.</li> <li>▪ Balance the need for cellular coverage with the desire to minimize visual impacts of cellular facilities, antennas, and equipment shelters.</li> </ul>

Source: City of San Mateo, 2010, General Plan 2030.

## E. SOLID WASTE

This section describes existing conditions related to solid waste disposal services in the City of San Mateo.

### 1. Regulatory Framework

#### *State Regulations*

##### California 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. AB 939 also establishes a goal for all California counties to provide at least 15 years of ongoing landfill capacity. To help achieve this, the Act requires that each city and county prepare a Source Reduction and Recycling Element to be submitted to the Department of Resources Recycling and Recovery (CalRecycle).

In 2007, SB 1016 amended AB 939 to establish a per capita disposal measurement system. California Integrated Waste Management Board (CIWMB) sets a target per capita disposal rate for each jurisdiction. Each jurisdiction must submit an annual report to CIWMB with an update of its progress in implementing diversion programs and its current per capita disposal rate.<sup>8</sup> The City of San Mateo disposal rate in 2017 was 4.3 pounds of waste per person per day (ppd) per resident and 8.3 ppd per employee, which was well below the CIWMB targets of 5.8 ppd per resident and 13.3 ppd per employee.<sup>9</sup>

In September 2016, Governor Brown signed establishing methane emissions reduction targets in a statewide effort to reduce emissions of short-lived climate pollutants (SLCP) in various sectors of California's economy. The SB 1383 establishes targets to achieve a 50 percent reduction in the level of the statewide disposal of organic waste from the 2014 level by 2020 and a 75 percent reduction by 2025. The law grants CalRecycle the regulatory authority required to achieve the organic waste disposal reduction targets and establishes an additional target that at least 20 percent of currently disposed edible food be recovered for human consumption by 2025. Methane emissions resulting from the decomposition of organic waste in landfills are a significant source of greenhouse gas (GHG) emissions contributing to global climate change. Organic materials—including waste that can be readily prevented, recycled, or composted—account for a significant portion of California's overall waste stream.

##### 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.

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<sup>8</sup> CalRecycle, No Date. Per Capita Disposal and Goal Measurement (2007 and later), <http://www.calrecycle.ca.gov/LGCentral/Basics/PerCapitaDsp.htm#Jurisdiction>, accessed on July 10, 2018.

<sup>9</sup> CalRecycle, Jurisdiction Diversion/Disposal Rate Summary (2007 – Current), <http://www.calrecycle.ca.gov/LGCentral/reports/diversionprogram/JurisdictionDiversionPost2006.aspx>, accessed on July 10, 2018.

### CALGreen Building Code<sup>10</sup>

The California Green Building Standards Code (CALGreen Code) is applied to any project initiated after January 1, 2011. Section 4.408, Construction Waste Reduction Disposal and Recycling, mandates that, in the absence of a more stringent local ordinance, a minimum of 50 percent of non-hazardous construction and demolition debris must be recycled or salvaged. The Code requires the Applicant to have a waste management plan for on-site sorting or construction debris, which is submitted to the City of San Mateo for approval. The plan:

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

### *Local Regulations*

#### City of San Mateo 2030 General Plan

The Land Use section of the General Plan contains goals and policies relevant to solid waste (see Table 12). Specifically, there is a policy to “continue to support programs to reduce solid waste materials in landfill areas in accordance with State requirements,” and to “support programs to recycle solid waste in compliance with State requirements, and require provisions for onsite recycling for all new development.”<sup>11</sup> Additionally, Land Use Policy 8.6 (LU 8.6) seeks to “increase measured waste diversion to 50 percent in 2020 and maximum diversion 90 percent by 2050 by mandating recycling, setting aggressive waste reduction goals for all new development and increasing costs for residential and commercial waste collection then using increased waste collection revenue to provide waste reduction incentives.”<sup>12</sup>

#### City of San Mateo Municipal Code

Chapter 7.32, Garbage, and Chapter 7.33, Recycling and Salvaging of Construction and Demolition Debris of the Municipal Code, govern solid waste and recycling activities in San Mateo. Chapter 7.32 establishes where and how solid waste is collected and removed from homes and businesses, and how it is disposed of in local landfills. Chapter 7.33 requires recycling of construction and demolition debris from all new residential or commercial development and remodel projects valued at more than \$50,000. At least 50 percent for alterations and 60 percent for new construction of the waste generated from the project must be recycled.

## **2. Existing Conditions**

Recology San Mateo County (Recology) provides residential and commercial solid waste collection, composting, and recycling services for the City of San Mateo. Waste is transferred to Shoreway Environmental Center in San Carlos where visible recyclable materials are separated from gross refuse. The Shoreway Environmental Center has a permitted daily capacity of 3,000 tons, and currently processes between 1,500 to

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<sup>10</sup> <https://codes.iccsafe.org/public/document/details/toc/657>, accessed on October 8, 2018.

<sup>11</sup> City of San Mateo, *Vision 2030 General Plan*, page II-34.

<sup>12</sup> City of San Mateo, *Vision 2030 General Plan*, page II-42.

1,900 tons daily.<sup>13</sup> 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. The Ox Mountain landfill is permitted to receive up to 3,598 tons of waste per day or 1.3 million tons per year and has a remaining capacity of 22 million cubic yards.<sup>14</sup> The Ox Mountain landfill is estimated to close by 2034.<sup>15</sup>

**TABLE 12 GENERAL PLAN GOALS AND POLICIES RELEVANT TO SOLID WASTE**

Goal/Policy #	Goal/Policy
<b>Land Use</b>	
Policy LU 4.31	<b>Solid Waste Disposal.</b> Continue to support programs to reduce solid waste materials in landfill areas in accordance with State requirements.
Policy LU 4.32	<b>Recycling and Composting.</b> Support programs to recycle solid waste in compliance with State requirements. Require provisions for onsite recycling for all new development and expand composting of green waste and food scraps, as directed by the City's Climate Action Plan which is an appendix of the General Plan.
Goal 5	Promote cooperative interaction with other public agencies regarding regional issues.
Policy LU 5.1	<b>Inter-Agency Cooperation.</b> Promote and participate in cooperative planning with other public agencies and adjacent jurisdictions, especially regarding regional issues such as water supply, traffic congestion, rail transportation, air pollution, waste management, fire services, emergency medical services and climate change.
Goal 8c	Ensure that all improvements to existing structures are developed or remodeled in a sustainable manner.
Policy LU 8.6	<b>Waste Reduction.</b> Reduce waste sent to landfills by San Mateo's residents, businesses and visitors by a minimum of 75% from 2005 levels by 2020 by mandating recycling, setting aggressive waste reduction goals for all development, implementing composting programs, and increasing costs for residential and commercial waste collection then using increased waste collection revenue to provide waste reduction incentives. Supportive actions for waste reduction are detailed in the Climate Action Plan.

Source: City of San Mateo, 2010, General Plan 2030.

<sup>13</sup> City of San Mateo, *Vision 2030 General Plan*, page II-34.

<sup>14</sup> San Mateo County Environmental Health Division, March 2017, *Ox Mountain Landfill Environmental Impact Report Technical Addendum*, page 2.

<sup>15</sup> San Mateo County Environmental Health Division, March 2017, *Ox Mountain Landfill Environmental Impact Report Technical Addendum*, page 2.

## ***Appendix A***

### ***Utilities Regulatory Setting Links***

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# Water

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## A. FEDERAL AND STATE REGULATIONS

1. Federal Safe Drinking Water Act (SDWA)
  - <https://www.epa.gov/laws-regulations/summary-safe-drinking-water-act>
2. Porter-Cologne Water Quality Control Act
  - [https://www.waterboards.ca.gov/water\\_issues/programs/nps/encyclopedia/0a\\_laws\\_policy.shtml](https://www.waterboards.ca.gov/water_issues/programs/nps/encyclopedia/0a_laws_policy.shtml)
3. California Senate Bill (SB) 610 and 221
  - [http://www.leginfo.ca.gov/pub/01-02/bill/sen/sb\\_0601-0650/sb\\_610\\_cfa\\_20010710\\_173214\\_asm\\_comm.html](http://www.leginfo.ca.gov/pub/01-02/bill/sen/sb_0601-0650/sb_610_cfa_20010710_173214_asm_comm.html)
4. California Urban Water Management Planning Act (UWMP)
  - <https://www.water.ca.gov/Programs/Water-Use-And-Efficiency/Urban-Water-Use-Efficiency/Urban-Water-Management-Plans>
5. California Sustainable Groundwater Management Act
  - <https://www.water.ca.gov/Programs/Groundwater-Management/SGMA-Groundwater-Management>
6. 2016 California Plumbing Code
  - <http://epubs.iapmo.org/2016/CPC/mobile/index.html#p=1>
7. 2016 CALGreen Building Code
  - <https://www.documents.dgs.ca.gov/bsc/CALGreen/CALGreen-Guide-2016-FINAL.pdf>
8. The Water Conservation Act of 2009
  - [http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill\\_id=200920107SB7](http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=200920107SB7)

## B. REGIONAL REGULATIONS

1. 2015 California Water Service Urban Water Management Plan, Mid-Peninsula District, and
2. Water Shortage Contingency Plan – California Water Service, Mid-Peninsula District (p.57)
  - [https://storage.googleapis.com/midpeninsulawater-org/uploads/MPWD\\_2015%20UWMP\\_Final.pdf](https://storage.googleapis.com/midpeninsulawater-org/uploads/MPWD_2015%20UWMP_Final.pdf)

## C. LOCAL REGULATIONS

1. San Mateo 2030 General Plan (Conservation, Public Resource Element)
  - <https://www.cityofsanmateo.org/DocumentCenter/View/7165/COS-PR-Element-?bidId=>
2. City of San Mateo Municipal Code
  - <http://qcode.us/codes/sanmateo/>

# Wastewater

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## A. FEDERAL AND STATE REGULATIONS

1. Federal Clean Water Act
  - <https://www.epa.gov/laws-regulations/summary-clean-water-act>
2. National Pollutant Discharge Elimination System
  - <https://www.epa.gov/npdes>
3. Porter-Cologne Water Act
  - [https://www.waterboards.ca.gov/laws\\_regulations/docs/portercologne.pdf](https://www.waterboards.ca.gov/laws_regulations/docs/portercologne.pdf)
4. State Resources Control Board
  - <https://www.waterboards.ca.gov/>

## B. REGIONAL REGULATIONS

1. San Francisco Bay Regional Water Quality Control Board
  - [https://www.waterboards.ca.gov/publications\\_forms/publications/factsheets/docs/region\\_brds.pdf](https://www.waterboards.ca.gov/publications_forms/publications/factsheets/docs/region_brds.pdf)

## C. LOCAL REGULATIONS

1. City of San Mateo Sewer System Management Plan
  - <https://www.cityofsanmateo.org/DocumentCenter/View/47516/City-of-San-Mateo-SSMP-2015?bidId=>
2. City of San Mateo 2030 General Plan
  - <https://www.cityofsanmateo.org/2021/2030-General-Plan>
3. City of San Mateo Municipal Code
  - <http://qcode.us/codes/sanmateo/>
4. Clean Water Program - San Mateo
  - <http://cleanwaterprogramsanmateo.org/>

# Stormwater

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## A. FEDERAL AND STATE REGULATIONS

1. Federal Clean Water Act
  - <https://www.epa.gov/laws-regulations/summary-clean-water-act>
2. National Pollutant Discharge Elimination System
  - [https://www.waterboards.ca.gov/water\\_issues/programs/nps/encyclopedia/0a\\_laws\\_policy.shtml](https://www.waterboards.ca.gov/water_issues/programs/nps/encyclopedia/0a_laws_policy.shtml)
3. State Water Resources Control Board
  - [https://www.waterboards.ca.gov/water\\_issues/programs/nps/encyclopedia/0a\\_laws\\_policy.shtml](https://www.waterboards.ca.gov/water_issues/programs/nps/encyclopedia/0a_laws_policy.shtml)
4. National Flood Insurance Act of 1968



- [https://www.fema.gov/media-library-data/20130726-1545-20490-9247/frm\\_acts.pdf](https://www.fema.gov/media-library-data/20130726-1545-20490-9247/frm_acts.pdf)

## **B. REGIONAL REGULATIONS**

1. San Francisco Bay Regional Water Quality Control Board
  - [https://www.waterboards.ca.gov/publications\\_forms/publications/factsheets/docs/region\\_brds.pdf](https://www.waterboards.ca.gov/publications_forms/publications/factsheets/docs/region_brds.pdf)

## **C. LOCAL REGULATIONS**

1. City of San Mateo 2030 General Plan
  - <https://www.cityofsanmateo.org/2021/2030-General-Plan>
2. City of San Mateo Municipal Code
  - <http://qcode.us/codes/sanmateo/>

# **Energy**

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## **A. FEDERAL AND STATE REGULATIONS**

1. Energy Independence and Security Act of 2007
  - <https://www.epa.gov/laws-regulations/summary-energy-independence-and-security-act>
2. Energy Policy Act of 2005
  - <https://www.epa.gov/laws-regulations/summary-energy-policy-act>
3. 2016 California Building Code
  - <https://www.energy.ca.gov/2015publications/CEC-400-2015-037/CEC-400-2015-037-CMF.pdf>
4. California Public Utilities Commission
  - <http://www.cpuc.ca.gov/>
5. 2006 Appliance Efficiency Regulations
  - <http://www.energy.ca.gov/appliances/archive/2006regulations/>
6. Governor's Green Building Executive Order
  - <https://www.gov.ca.gov/2012/04/25/news17508>

## **B. REGIONAL REGULATIONS**

1. Peninsula Clean Energy
  - <https://www.peninsulacleanenergy.com/>

## **C. LOCAL REGULATIONS**

1. City of San Mateo 2030 General Plan
  - <https://www.cityofsanmateo.org/2021/2030-General-Plan>
2. City of San Mateo Municipal Code
  - <http://qcode.us/codes/sanmateo/>

# ***Solid Waste***

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## **A. FEDERAL AND STATE REGULATIONS**

1. California Integrated Waste Management Act
  - [https://leginfo.legislature.ca.gov/faces/codes\\_displayText.xhtml?lawCode=PRC&division=30.&title=&part=3.&chapter=18.&article=1](https://leginfo.legislature.ca.gov/faces/codes_displayText.xhtml?lawCode=PRC&division=30.&title=&part=3.&chapter=18.&article=1)
2. SB 1016, 2007
  - [http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill\\_id=200720080SB1016](http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=200720080SB1016)
3. SB 1383, 2016
  - [http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill\\_id=201520160SB1383](http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201520160SB1383)
4. California Solid Waste Reuse and Recycling Access Act of 1991
  - <https://law.justia.com/codes/california/2016/code-prc/division-30/part-3/chapter-18/>
5. CALGreen Building Code
  - <http://www.bsc.ca.gov/Home/CALGreen.aspx>
  - <https://codes.iccsafe.org/public/chapter/content/2057/>

## **B. LOCAL REGULATIONS**

1. City of San Mateo 2030 General Plan
  - <https://www.cityofsanmateo.org/2021/2030-General-Plan>
  - <https://www.cityofsanmateo.org/DocumentCenter/View/44794/Land-Use-Element--CAP-GPA-3-2-15?bidId=>
2. City of San Mateo Municipal Code
  - <http://qcode.us/codes/sanmateo/>