

COMMUNITY SERVICES AND FACILITIES



Topics:

This chapter addresses utilities, public services, and community services within the Town of Tiburon. Public services include the provision of utilities including water services, wastewater (sewer) services, stormwater, solid waste disposal, electricity, and natural gas. Community services include fire protection, law enforcement, parks and recreation, schools, libraries, and other public facilities.

- 1 Water Services
- 2 Wastewater
- 3 Stormwater
- 4 Solid Waste
- 5 Electricity and Natural Gas
- 6 Public Safety
- 7 Parks and Recreation
- 8 Schools, Libraries, and Other Public Facilities

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1. WATER SERVICES

This section describes the Town of Tiburon's water demands, water supplies, water distribution system, and water quality.

KEY TERMS

Acre feet (AF): The volume of one acre of water to a depth of one foot. Each acre-foot of water is equal to 325,851.4 gallons.

GPD: Gallons per day.

Groundwater: Water that is underground and below the water table, as opposed to surface water, which flows across the ground surface. Water beneath the earth's surface fills the spaces in soil, gravel, or rock formations. Pockets of groundwater are often called "aquifers" and are the source of drinking water for a large percentage of the population in the United States. Groundwater is often extracted using wells which pump the water out of the ground and up to the surface. Groundwater is naturally replenished by surface water from precipitation, streams, and rivers when this recharge reaches the water table.

MG: Million gallons.

MGD: Million gallons per day.

Surface water: Water collected on the ground or from a stream, river, lake, wetland, or ocean. Surface water is replenished naturally through precipitation, but is lost naturally through evaporation and seepage into soil.

REGULATORY FRAMEWORK

STATE

California Water Quality Control Board

The State Water Quality Control Board (Water Board), Division of Drinking Water, oversees the Drinking Water Program. The Drinking Water Program regulates public water systems and certifies drinking water treatment and distribution operators. It provides support for small water systems and for improving their technical, managerial, and financial capacity. It provides subsidized funding for water system improvements under the State Revolving Fund ("SRF") and Proposition 50 programs. The Drinking Water Program also oversees water recycling projects, permits water treatment devices, supports and promotes water system security, and oversees the Drinking Water Treatment and Research Fund for MTBE and other oxygenates.

Consumer Confidence Report Requirements

California Code of Regulations (CCR) Title 22, Chapter 15, Article 20 requires all public water systems to prepare a Consumer Confidence Report for distribution to its customers and to the Water Board. The Consumer Confidence Report provides information regarding the quality of potable water provided by the water system. It includes information on the sources of the water, any detected contaminants in the water, the maximum contaminant levels set by regulation, violations and actions taken to correct them, and opportunities for public participation in decisions that may affect the quality of the water provided.

Urban Water Management Planning Act

The Urban Water Management Planning Act has as its objectives the management of urban water demands and the efficient use of urban water. Under its provisions, every urban water supplier is required to prepare and adopt an urban water management plan. An "urban water supplier" is a public or private water supplier that provides water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually. The plan must identify and quantify the existing and planned sources of water available to the supplier, quantify the projected water use for a period of 20 years, and describe the supplier's water demand management measures. The urban water supplier should make every effort to ensure the appropriate level of reliability in its water service sufficient to meet the needs of its

various categories of customers during normal, dry, and multiple dry years. The Department of Water Resources must receive a copy of an adopted urban water management plan.

Senate Bill 610 and Assembly Bill 901

The State Legislature passed Senate Bill (SB) 610 and Assembly Bill (AB) 901 in 2001. Both measures modified the Urban Water Management Planning Act.

SB 610 requires additional information in an urban water management plan if groundwater is identified as a source of water available to an urban water supplier. It also requires that the plan include a description of all water supply projects and programs that may be undertaken to meet total projected water use. SB 610 requires a city or county that determines a project is subject to CEQA to identify any public water system that may supply water to the project and to request identified public water systems to prepare a specified water supply assessment. The assessment must include, among other information, an identification of existing water supply entitlements, water rights, or water service contracts relevant to the identified water supply for the proposed project, and water received in prior years pursuant to these entitlements, rights, and contracts. AB 901 requires an urban water management plan to include information, to the extent practicable, relating to the quality of existing sources of water available to an urban water supplier over given time periods. AB 901 also requires information on the manner in which water quality affects water management strategies and supply reliability. The bill requires a plan to describe plans to supplement a water source that may not be available at a consistent level of use, to the extent practicable. Additional findings and declarations relating to water quality are required.

Senate Bill (SB) 221

SB 221 adds Government Code Section 66455.3, requiring that the local water agency be sent a copy of any proposed residential subdivision of more than 500 dwelling units within five days of the subdivision application being accepted as complete for processing by the city or county. It also adds Government Code Section 66473.7, establishing detailed requirements for establishing whether a “sufficient water supply” exists to support any proposed residential subdivisions of more than 500 dwellings, including any such subdivision involving a development agreement. When approving a qualifying subdivision tentative map, the city or county must include a condition requiring availability of a sufficient water supply. The applicable public water system must provide proof of availability. If there is no public water system, the city or county must undertake the analysis described in Government Code Section 66473.7. The analysis must include consideration of effects on other users of water and groundwater.

LOCAL

Marin Municipal 2020 Water District Urban Water Management Plan

The 2020 Urban Water Management Plan (UWMP) is a foundational document for Marin Municipal Water District (Marin Water) and is a source of information about Marin Water’s historical and projected water demands, water supplies, supply reliability and potential vulnerabilities, water shortage contingency planning, and demand management programs. Marin Water prepared the UWMP to remain in compliance with the Urban Water Management Planning Act (California Water Code Section 10610 et seq.). This document also describes the actions Marin Water is taking to promote water conservation, both by the Marin Water and by its customers (referred to as “demand management measures”), and includes a plan to address potential water supply shortages such as drought or other impacts to supply availability (the “Water Shortage Contingency Plan”). The UWMP is updated every five years in accordance with state requirements under the Urban Water Management Planning Act (UWMP Act) and amendments (Division 6 Part 2.6 of the California Water Code Sections 10610 – 10656).

Marin Municipal Water District Water Resources Plan 2040

Marin Water prepared the Water Resources Plan 2040 to evaluate resiliency in the face of a variety of threats to water resources in its service area and to identify options to enhance resiliency for its customers. The Water Resources Plan 2040

provides information to enable the district to make informed water supply planning decisions in the face of a variety of potential reliability threats, including an updated Water Shortage Contingency Plan that includes to provide the district more flexibility in addressing dry periods early. As part of the Water Resources Plan 2040, Marin Water updated the baseline operational yield, which is defined as the maximum annual demand that can be met by the district's local water supply system during the hydrologic record, assuming 25 percent of supply capacity (beyond unusable storage) is reserved for emergency purposes. To better understand potential changes in future supply availability under various future conditions, the Water Resources Plan 2040 addresses simulated reliability threats or "events" and the "futures" that would result from those events that could impact baseline supply conditions, including earthquakes, drought, climate change, wildfire, landslides, and water quality issues. Based on the results of the simulated reliability threats, the Water Resources Plan 2040 recommends actions that Marin Water should take to increase the water supply resiliency, including increased water conservation, investing in watershed management, and exploring groundwater partnering opportunities.

Water Supply Master Plan

Marin Water is preparing a Water System Master Plan (WSMP) that is intended to provide a roadmap for investing in the water system, ensure cost effective use of resources, evaluate and address system needs, and update its planning and design criteria. The WSMP is anticipated to be completed in mid-2022.

Marin Municipal Water District Code

Title 11 Water Service Rules and Regulations. This title outlines the rules and regulations that are adopted to establish uniform practices governing water service and to define the obligations of Marin Water to consumers and of consumers to Marin Water. Topics in this title of the code include applications for water service, installation of new service connections, cross-connections, meter reading, billing and rendering of bills, payment of bills, termination of water service, water main extensions, charges for main extensions, installation of services, charges for service installations and connection fees, and fire flow fees.

Chapter 13.02 Water Conservation and Dry Year Water Use Reduction Program. This chapter provides a water conservation plan to minimize the effect of a shortage of water on consumers and to adopt provisions that will significantly reduce the consumption of water during an extended dry weather period (drought), which would extend the available water for consumers while reducing the hardship on the general public to the greatest extent possible. The programs developed in this chapter are triggered based on lake storages developed by computer simulations performed utilizing Marin Water's seven reservoirs with approximately 80,000 acre feet of total capacity and up to 9,000 acre feet per year of imported water. This chapter establishes prohibitions on nonessential activities, requirements for water services, and identifies programs to reach 10% and 25% reduction goals in dry periods.

Chapter 13.03 Water Budgets and Related Conservation Measures. This chapter specifies the terms and conditions under which water budgets will be required and to specify when consumers will be required to retrofit water using fixtures with low flow or ultra-low flow fixtures to reduce the per capita consumption of water. Implementation of the provisions of this chapter would reduce the hardship on consumers resulting from over subscription of the Marin Water's water supplies which has increased the susceptibility to short-falls in dry years.

Chapter 13.04 Comprehensive Drought Water Conservation and Enforcement Measures. Chapter 13.04 was amended multiple times in 2021 in response to drought conditions that led Marin Water to declare a water shortage emergency and adopt mandatory water restrictions. In 2022, Marin Water repealed restrictions that established maximum water use for single-family residential accounts, single-family irrigation, and commercial irrigation accounts, while maintaining regulations and restrictions on water. As amended, Chapter 13.04, establishes drought water waste prohibitions that address prohibited nonessential uses, including washing of sidewalks, driveways, parking lots, and other hard surfaced areas, water leaks, water use for decorative elements, water use for various landscaping activities, refilling drained swimming pools, and initial filling of swimming pools and restrictions on reverse osmosis units. Chapter 13.04 provides exemptions from daytime water

prohibition for testing and repair of irrigation systems to eliminate water use, allows for adjustments of water use limits for larger households, and provided for variances for use of water due to hardship, emergency conditions, or comparable water conservation efforts.

Town of Tiburon General Plan

The existing Town of Tiburon General Plan Land Use and Open Space and Conservation Elements identify the following goals and policies related to water services, supply, and conservation:

Land Use Element

Goals

LU-E: To propose future land uses within environmental constraints and consistent with Prime Open Space preservation and other General Plan policies, and the ability of the land and related infrastructure, streets, utilities, public services and other facilities to support such land uses.

LU-J: To address regional issues, such as transportation, schools, and water, through development review and in coordination with neighboring cities, the county, and other governmental entities.

Policies

LU-8: Sewer, water, and other essential infrastructure improvements must be available to the developer to serve new development by the time of completion of construction. Developers shall participate in the funding of essential expanded infrastructure to the maximum extent allowed by law.

LU-9: The Town shall coordinate with urban service providers such as Marin Municipal Water District and the sanitary districts to ensure that they have the capacity to serve new development.

LU-37: The Town shall coordinate its land use and zoning plans with the County of Marin, Strawberry Community, the City of Belvedere, Town of Corte Madera, LAFCO, and other agencies to provide for more effective comprehensive planning.

Open Space and Conservation Element

Policies

OSC-49: Support the efforts of the Marin Municipal Water District to conserve the use of water through enforcement of the Town's water conservation ordinance requiring implementation of water conservation ordinance requiring implementation of water conservation measures.

OSC-50: The Town shall coordinate planning activities with Marin Municipal Water District to ensure that both the Town and Marin Municipal Water District have the latest information with respect to land use and water supply planning.

Implementing Measures

OSC-j: Revise the Town's water conservation ordinance when required by changes in Marin Municipal Water District's water conservation ordinance.

Town of Tiburon Municipal Code

Chapter 13E Water Efficient Landscape. As mandated under State Government Code Section 65595(c), certain new construction, remodel, and rehabilitation projects that include landscape and irrigation improvements are required to comply with water-efficient landscape requirements and monitoring of water usage for irrigation. The purpose of this chapter is to comply with this state mandate regarding water-efficient landscaping. The ordinance contains provisions that include but are not limited to, the following:

1. The application and monitoring of a "maximum applied water allowance" that is established for applicable projects.
2. The review of required landscape and irrigation plans, specifications and supportive documents prepared for applicable projects for compliance with water-efficient landscape restrictions, including limitations on the type and amount of landscape materials and plant species.
3. The review, inspection and approval of landscape and irrigation that is installed for applicable projects to ensure compliance with the approved landscape and irrigation plans and specifications.
4. The post-installation monitoring of water usage for irrigation by applicable projects.

EXISTING CONDITIONS

POTABLE WATER SYSTEM

Chartered on April 25, 1912, the Marin Municipal Water District (Marin Water) is the first municipal water district in California and currently provides potable water service to ten incorporated cities and towns, including San Rafael, Mill Valley, Fairfax, San Anselmo, Ross, Larkspur, Corte Madera, Tiburon, Belvedere, and Sausalito. The Marin Water service area covers approximately 147 square miles and serves a population of approximately 191,000 customers through about 61,700 active service connections (Marin Water, June 2021). Marin Water averages 22.4 million gallons per day (mgd) of water use with a maximum daily water design capacity of 71 mgd¹.

Approximately 75 percent of Marin Water's water supply originates from rainfall on about 22,000 acres of protected Mount Tamalpais watershed land owned by the district and in the grassy hills of west Marin, which flows into one of seven Marin Water reservoirs. Additionally, Marin Water supplements its water supply with purchased water from the Sonoma County Water Agency (SCWA), which comes from the Russian River system in Sonoma County. The Russian River water supply originates from rainfall that flows into Lake Sonoma and Lake Mendocino, and it is naturally filtered through 80 feet of sand beds adjacent to the river. The Russian River water supply is blended with Marin Water's reservoir water, within its distribution system. The reservoir water is treated at one of the three Marin Water's treatment plants before traveling through the extensive distribution system—including 886 miles of water mains, 121 storage tanks, and 94 pump stations². Figure 1 illustrates the Marin Water facilities that serves the Tiburon Planning Area.

As California's first municipal water district, replacing aging infrastructure is one of the most critical needs in the district. Many pipelines are more than 100 years old; therefore, upgrading the system of underground pipelines increases the overall reliability of Marin Water's system. In 2019, Marin Water managed 14 large construction projects designed to improve the reliability of the existing infrastructure. These projects included water main replacements and repairs, large valve replacements, and bypass installations. Additionally, many of these projects were designed to deliver large amounts of water in a short period for firefighting, improving fire flow³.

Additionally, Marin Water is currently conducting a comprehensive evaluation of its complex water system through the development of the Water System Master Plan (WSMP), which is anticipated to be completed in July 2022. The WSMP will evaluate long-term investments for water system assets that are essential to maintaining delivery of water to customers. From this system-wide evaluation, the WSMP will determine infrastructure needs and recommend long-term capital investments for maintaining service reliability and improving system operations⁴.

¹ Marin Water. 2021. 2020 Urban Water Management Plan. [page 21]

² Marin Water. 2021.3030 Urban Water Management Plan. [p. 20]

³ Marin Water. 2020. Marin Water 2019 Annual Report. [page 6]

⁴ Marin Water Board of Directors Special Meeting. 2020. Agenda Item 1: Board 2020 Annual Retreat. September 25, 2020. [Attachment 1b]

WATER SYSTEM SUPPLIES

As previously stated, the Town of Tiburon receives potable water from Marin Water. Marin Water’s water supplies presently come from a combination of water imported from Sonoma County Water Agency (SCWA), local surface water, and recycled water. Groundwater is not currently or planned to be used as a municipal water supply source by the district, though private groundwater wells are used in Marin Water’s service area. Table 1 summarizes, by source, the total amount of actual water supplied in 2020.

TABLE 1: MARIN WATER’S WATER SUPPLIES – ACTUAL (AFY)

WATER SUPPLY	ADDITIONAL WATER SUPPLY DETAIL	2020	
		ACTUAL VOLUME	WATER QUALITY
Purchased or Imported Water	Purchased from SCWA	6,822	Drinking Water
Surface Water	Not desalinated	20,449	Drinking Water
Surface Water	Environmental releases from Kent and Soulajule Lakes	12,699	Raw Water
Other	Water sold to the Meadow Club	180	Raw Water
Total		40,149	--

SOURCE: MARIN WATER 2020 URBAN WATER MANAGEMENT PLAN. TABLE 6-9. (JUNE 2021)

Table 2 summarizes, by source, the total amount of projected water supply from 2025 to 2045 in five-year increments. Note that the numbers represent the total amount of supply available to the district, whereas Table 1 showed only the supply that was used to meet demand, regardless of how much was available.

TABLE 2: MARIN WATER’S PROJECTED WATER SUPPLIES (AFY)

WATER SUPPLY	PROJECTED WATER SUPPLY				
	2025	2030	2035	2040	2045
Purchased/Imported Water	5,300	5,300	5,300	5,300	5,300
Surface Water	78,450	78,793	78,525	78,558	78,626
Recycled Water	750	750	750	750	750
Other	171	174	176	176	176
Total	84,761	85,017	84,751	84,784	84,852

NOTE: RAV = REASONABLE AVAILABLE VOLUME; TRSY = TOTAL RIGHT OR SAFE YIELD

SOURCE: MARIN WATER 2020 URBAN WATER MANAGEMENT PLAN. TABLE 6-10 (JUNE 2021)

Purchased/Imported Water Supply

Since 1975, Marin Water has contracted with the SCWA for a supplemental supply of water, primarily from Lake Sonoma via the Russian River. Marin Water’s present contract with SCWA is based on two antecedent documents: the 1975 Off-Peak Water Supply Agreement (Off-Peak Agreement) and its amendments, and the 1991 Agreement for the Sale of Water between SCWA and the district. In 1996, these two contracts were combined into a single new agreement, the Supplemental Water Supply Agreement (Agreement).

The Agreement combined the two prior agreements such that the district can now take deliveries of up to 14,300 AFY from SCWA. All of these deliveries are also now classified as “firm” water. In addition to the annual delivery limit, the Agreement also places seasonal limitations on water delivery rates to the district. Deliveries are limited to 23.1 mgd from December to March and 12.8 mgd from May to September. In April and November, deliveries cannot exceed 20.1 mgd, and in October,

deliveries are limited to 17.1 mgd. The Agreement will remain in force through June 30, 2025 and includes a renewal provision that will extend the Agreement through June 30, 2040⁵.

In addition to contractual delivery limits, Russian River water deliveries to Marin Water are subject to available pipeline capacity in facilities owned by SCWA and Novato Municipal Water District (NMWD). Russian River water is diverted by SCWA at a series of sub-surface Ranney collectors near Wohler Bridge in Sonoma County. Water destined for Marin Water flows through SCWA pipelines to Petaluma. From Petaluma, the water flows southward in NMWD's aqueduct for eight miles to the northern end of Marin Water's pipeline facilities in Novato. The Interconnection Agreement from 2014 describes Marin Water's rights to use the excess capacity in NMWD's facilities. The Interconnection Agreement runs contiguous with the SCWA Restructured Agreement for Water Supply, which will expire on June 30, 2040, and has renewal options (Marin Water, June 2016).

Water imported from SCWA is naturally filtered in the deep sand and gravel below the riverbed and requires no further clarification. This water enters Marin Water's system at the Ignacio Water Quality and Pumping Station, where water quality is monitored continually and adjusted as needed. Marin Water's water use projections for imported water from SCWA are shown in Table 3, which have been coordinated with the demands and methodology in the SCWA's 2020 UWMP. It is noted that Marin Water's current contract allows the purchase of up to 14,300 AFY from SCWA; however, Marin Water's ability to accept this water is limited by infrastructure constraints.

TABLE 3: WHOLESALE WATER SUPPLIES – EXISTING AND PLANNED SOURCES OF WATER (AFY)

WHOLESALE SOURCE – SONOMA COUNTY WATER AGENCY	2025	2030	2035	2040	2045
Normal Year	5,300	5,300	5,300	5,300	5,300
Single-Dry Year	7,200	7,200	7,200	7,200	7,200
Extended Drought, First Year	7,200	7,200	7,200	7,200	7,200
Extended Drought, Second Year	7,200	7,200	7,200	7,200	7,200
Extended Drought, Third Year	4,597	4,597	4,597	4,597	4,597
Extended Drought, Fourth Year	4,300	4,300	4,300	4,300	4,300
Extended Drought, Fifth Year	4,300	4,300	4,300	4,300	4,300

SOURCE: MARIN WATER 2020 MUNICIPAL WATER DISTRICT URBAN WATER MANAGEMENT PLAN. TABLE 7-3. (JUNE 2021)

Surface Water Supply

Marin Water's primary water supply is local surface water. Until 1976, the district's water supply was obtained solely from rainfall collected from the Mount Tamalpais watershed, including approximately 28 square miles of Marin Water-owned lands, and 36 square miles not owned by Marin Water. Presently, total reservoir storage operated by Marin Water is 25.9 billion gallons (79,566 AF). The annual runoff into Marin Water's reservoirs varies greatly from a maximum of 220,000 AF in 1983 to a minimum of only 4,100 AF in 1977. The average and median annual runoff are 84,800 AF and 72,300 AF, respectively (Marin Water, June 2016). Table 4 provides a chronology of Marin Water's water rights and development of its reservoir system.

TABLE 4: MARIN WATER'S SURFACE WATER RESERVOIR SYSTEM (AF)

RESERVOIR NAME	YEAR CONSTRUCTED	STORAGE CAPACITY (AF)	WATER RIGHTS
Lake Lagunitas	1873	350	Pre-1914
Phoenix Lake	1905	411	Pre-1914
Bon Tempe Reservoir	1948	4,017	Appropriative Permit No. 05633

⁵ Marin Water. June 2016. Urban Water Management Plan 2015 Update.

Alpine Lake	1918	3,069	Pre-1914 Appropriative Permit No. 05633
	1924	4,600	
	1941	8,891	
Kent Lake	1953	16,050	Appropriative Permit Nos. 05633, 09390, 18546
	1982	32,895	
Nicasio Reservoir	1960	29,000 ¹	Appropriative Permit No. 12800
Soulajule Reservoir	1980	10,572	Appropriative License 12807 and Permit No. 16892
Total Existing Reservoir Storage		79,566	

NOTE: 1) UNDER THE WATER RIGHT FOR STORAGE, 6,570 AF OF WATER FROM NICASIO CREEK CAN BE TRANSFERRED FROM NICASIO RESERVOIR TO KENT LAKE TO FILL KENT LAKE. THIS WOULD FREE UP CAPACITY IN NICASIO RESERVOIR FOR ADDITIONAL STORAGE UP TO THE TOTAL OF 29,000 AF (22,430 AF STORED IN NICASIO RESERVOIR PLUS 6,750 TRANSFERRED AND STORED IN KENT LAKE).

SOURCE: MARIN WATER 2020 URBAN WATER MANAGEMENT PLAN. TABLE 6-2. (JUNE 2021)

In managing its surface water supply, Marin Water defines the operational yield of its water supply system as the volume of water that can be provided to its customers in most years without depleting its reservoir storage to the point where stored water would be insufficient to meet a reduced water demand during a repeat of the most severe historical drought period. Marin Water’s operational yield is based on 115 years of estimated monthly hydrologic data. The operational yield was determined using the Marin WaterSim model developed to simulate MMWD’s water supply system, as described in the Marin WaterSim Model Technical Memorandum of the Marin Water Water Resources Plan 2040. The analysis was limited to MMWD’s local watershed supplies, meaning it excluded the water imported from the SCWA and locally produced recycled water. According to the Marin Water Water Resources Plan 2040, Marin Water currently estimates the “operational yield” of its surface water sources to be about 29,020 AFY if 25 percent of usable storage is reserved for emergency supply and imported water is excluded from the analysis. (Marin Water, March 2017).

Recycled Water

Recycled water is highly treated wastewater that is safe for many purposes. Wastewater is treated at the Recycled Water Facility, a state-of-the-art membrane treatment plant located at, and operated by, the Las Gallinas Valley Sanitary District. Once treated, recycled water travels through separate pipelines to district customers. Marin Water’s recycled water system contains 24.5 miles of pipeline, 5 MG of storage, 4 pump stations, and 333 service connections. The recycled water distribution system primarily serves customers in the City of San Rafael, as well as the unincorporated communities of Marin County.

In 2020, the recycled water system served about 748 AFY, or about 2 percent of the total demand, through 333 service connections. Table 5 indicates the existing and projected future recycled water uses (Marin Water, June 2021).

TABLE 5: CURRENT AND PROJECTED RECYCLED WATER USES (AFY)

BENEFICIAL USE TYPE	GENERAL DESCRIPTION OF USE	2020 ACTUAL USE	2025	2030	2035	2040	2045
Landscape irrigation (excluding golf courses)		443	433	433	433	433	433
Golf course irrigation ¹		88	88	88	88	88	88
Commercial Use		162	163	163	163	163	163
Industrial use		33	33	33	33	33	33
Other	Toilet/urinal flushing in commercial and residential settings	23	23	23	23	23	23
Total		748	750	750	750	750	750

SOURCE: MARIN WATER 2020 URBAN WATER MANAGEMENT PLAN. TABLE 6-5. (JUNE 2021)

Groundwater Supply

According to the DWR’s Bulletin 118 Groundwater Basin Lookup, there are three groundwater basins identified within the Marin Water’s service area, including the Ross Valley Groundwater Basin, San Rafael Valley Groundwater Basin, and portions of the Novato Groundwater Basin. All three basins are categorized by the California Statewide Groundwater Elevation Monitoring (CASGEM) program as very low priority basins. It should be noted that no groundwater basins are identified within the Tiburon Planning Area.

As previously stated, groundwater use within Marin Water’s service area is limited to small, domestic use through private groundwater pumping wells. Marin Water has studied the potential for municipal groundwater use.; however, several studies have determined the potential for municipal groundwater use within the boundaries of Marin Water’s service area is very limited due to limited production capabilities, water quality constraints, and potential water rights issues. As a result of these studies, groundwater is not currently or planned to be used as a municipal water supply source by the district (MMWD, 2016).

CURRENT AND PROJECTED WATER DEMANDS AND SUPPLIES

According to Marin Water’s 2020 UWMP, the 2020 actual water demands of the district were 40,149 AFY. Water demand projections were developed through 2045 using Marin Water’s Demand Side Management Least Cost Planning Decision Support System (DSS) model. Table 6 compares projected water supplies available in a normal year to projected demand totals, with the difference showing a projected surplus during the planning horizon of the UWMP.

TABLE 6: NORMAL YEAR SUPPLY AND DEMAND COMPARISON (AFY)

	2025	2030	2035	2040	2045
Supply totals	84,761	85,018	54,751	84,784	84,582
Demand totals	38,018	38,049	37,974	38,051	38,207
Difference	46,742	46,972	46,777	46,733	46,645

SOURCE: MARIN WATER 2020 URBAN WATER MANAGEMENT PLAN. TABLE 7-7. (JUNE 2021)

Table 7 compares projected water supplies available in a single dry year to projected demand totals, with the difference showing a projected surplus during the planning horizon of the UWMP.

TABLE 7: SINGLE DRY YEAR SUPPLY AND DEMAND COMPARISON (AFY)

	2025	2030	2035	2040	2045
Supply totals	52,432	52,137	52,135	52,139	52,149
Demand totals	38,019	68,046	37,974	38,051	38,207
Difference	14,113	14,091	14,161	14,088	13,942

SOURCE: MARIN WATER 2020 URBAN WATER MANAGEMENT PLAN. TABLE 7-8. (JUNE 2021)

Table 8 compares total supply available in multiple dry years to projected demand totals, with the difference in multiple dry years showing a projected surplus during the planning horizon of the UWMP. Based on this comparison, Marin Water will have sufficient supplies to meet the demands during normal and dry water years. This is attributed to the measures already implemented by the district to increase storage and SCWA supply, as well as the district’s aggressive conservation measures and Dry Year Water Use Reduction Program.

TABLE 8: MULTIPLE DRY YEARS SUPPLY AND DEMAND COMPARISON (AFY)

		2025	2030	2035	2040	2045
First Year	Supply totals	79,556	79,560	79,560	79,562	79,567
	Demand totals	38,019	38,046	37,974	38,051	38,207
	Difference	41,537	41,514	41,586	41,511	41,360

Second Year	Supply totals	84,321	84,313	84,342	84,314	84,262
	Demand totals	38,019	38,046	37,974	38,051	38,207
	<i>Difference</i>	46,302	46,267	46,368	46,263	46,055
Third Year	Supply totals	86,430	86,448	86,419	86,453	86,530
	Demand totals	38,019	38,046	37,974	38,051	38,207
	<i>Difference</i>	48,411	48,402	48,445	48,402	48,323

SOURCE: MARIN WATER 2020 URBAN WATER MANAGEMENT PLAN, TABLE 7-9. (JUNE 2021)

WATER SHORTAGE CONTINGENCY PLAN

As the water purveyor, Marin Water must provide the minimum health and safety water needs of the communities it serves at all times. As part of urban water management planning, water suppliers are required to provide a Water Shortage Contingency Plan (WSCP) outlining how the supplier will prepare for and respond to water shortages.

Table 9 shows the seven stages of the WSCP and their associated shortage range and shortage response actions.

TABLE 9: WATER SHORTAGE CONTINGENCY PLAN LEVELS

STAGE	PERCENT SHORTAGE RANGE	SHORTAGE RESPONSE ACTIONS
0	0%	<ul style="list-style-type: none"> Includes water waste prohibitions effective at alltimes.
1	Up to 10%	<ul style="list-style-type: none"> If rainfall is 30% below average for the water year¹as of April 1st Includes implementation of mandatory restrictions on end uses (see 2020 UWMP Table 8-2) as well as agency actions (see 2020 UWMP Table 8-3).
2	U to 20%	<ul style="list-style-type: none"> Total reservoir storage is in the vicinity of 45,000acre-feet on January 1st. Includes implementation of mandatory restrictions on end uses (see 2020 UWMP Table 8-2) as well as agency actions (see 2020 UWMP Table 8-3).
3	P to 30%	<ul style="list-style-type: none"> Total reservoir storage is in the vicinity of 50,000AF on February 1st Includes implementation of mandatory restrictions on end uses (see 2020 UWMP Table 8-2) as well as agency actions (see 2020 UWMP Table 8-3).
4	Up to 40%-	<ul style="list-style-type: none"> Total reservoir storage is in the vicinity of 55,000 AF on April 30th and/or storage level projections using average rainfall indicate December 1st storage in vicinity of 30,000 AF. Includes implementation of mandatory restrictions on end uses (see 2020 UWMP Table 8-2) as well as agency actions (see 2020 UWMP Table 8-3).
5	Up to 50%-	<ul style="list-style-type: none"> Total reservoir storage on December 1 is less than30,000 AF. Includes implementation of mandatory restrictions on end uses (see 2020 UWMP Table 8-2) as well as agency actions (see 2020 UWMP Table 8-3).
6	Up to 60%	<ul style="list-style-type: none"> Continued drought and forecasted decreasing storage levels or catastrophic event beyond Stage 5, or total reservoir storage is projected to be in the vicinity of 30,000 AF on April 1st. Includes implementation of mandatory restrictions on end uses (see

		2020 UWMP Table 8-2) as well as agency actions (see 2020 UWMP Table 8-3).
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NOTE: 1) TOTAL RESERVOIR STORAGE INCLUDES EMERGENCY STORAGE AND DEAD STORAGE

SOURCE: MARIN WATER 2020 URBAN WATER MANAGEMENT PLAN. TABLE 8-1. (JUNE 2021)

WATER SYSTEM QUALITY

According to Marin Water's 2020 Annual Water Quality Report, Marin Water conducts more than 120,000 water quality and process control tests yearly from watershed to faucet, to ensure the potable water supply is safe to drink. This includes ongoing process control testing at the treatment plants as well as laboratory testing of the district's water samples. Many of these samples undergo chemical, bacteriological and physical analyses in the district's water quality laboratory, which is certified by the California State Water Resources Control Board's Environmental Laboratory Accreditation Program. Additionally, Marin Water sends other samples to specialty labs for testing. Marin Water's 2020 Annual Water Quality Report indicates that all water supplied to customers during 2020 met all state and federal regulatory standards.

It should be noted that routine water testing at Bel Aire Elementary School in Tiburon was conducted in August 2019, which showed possibly dangerous levels of lead close to or exceeding the EPA's safety threshold for toxic metals of 15 parts per billion. The routine water testing identified a drinking fountain inside a classroom with toxic metals measured at 14.7 parts per billion, a hallway fountain with toxic metals measured at 17.4 parts per billion, and a fountain at a play field with toxic metals measured at 12.3 parts per billion. All three water fountains were replaced with new hydration stations. Marin Water indicated that the water quality issue was with the school's plumbing or fountain fixtures and that there were no issues with lead in Marin Water's water supply or delivery system⁶.

REFERENCES

- Marin Municipal Water District. March 2017. Marin Municipal Water District Water Resources Plan 2040. Available at: <https://www.marinwater.org/sites/default/files/2020-09/Water%20Resources%20Plan%202040.pdf>
- Marin Municipal Water District. 2020. Marin Municipal Water District 2019 Annual Water Quality Report. Available at: https://www.marinwater.org/sites/default/files/2020-10/Marin%20Water%20Annual%20Water%20Quality%20Report%202019_0.pdf
- Marin Municipal Water District. 2020. Marin Water 2019 Annual Report. Available at: <https://www.marinwater.org/sites/default/files/2020-09/Marin%20Water%202019%20Annual%20Report.pdf>
- Marin Municipal Water District. 2021. Marin Water 2020 Annual Report. Available at: <https://www.marinwater.org/sites/default/files/2021-06/AQWR%20-%20English%20-%202020.pdf>
- Marin Municipal Water District. 2020. Marin Municipal Water District Fact Sheet. Available at: <https://www.marinwater.org/sites/default/files/2020-10/District%20Fact%20Sheet%202020.pdf>
- Marin Municipal Water District. June 2021. 2020 Urban Water Management Plan. Available at: https://www.marinwater.org/sites/default/files/2021-07/Final%20MMWD%20UWMP_w_Appendices_rev.pdf

⁶ Rodriguez, Adrian. "Tiburon School's Water Tests Show Lead Contamination". Marin Independent Journal. October 14, 2019.

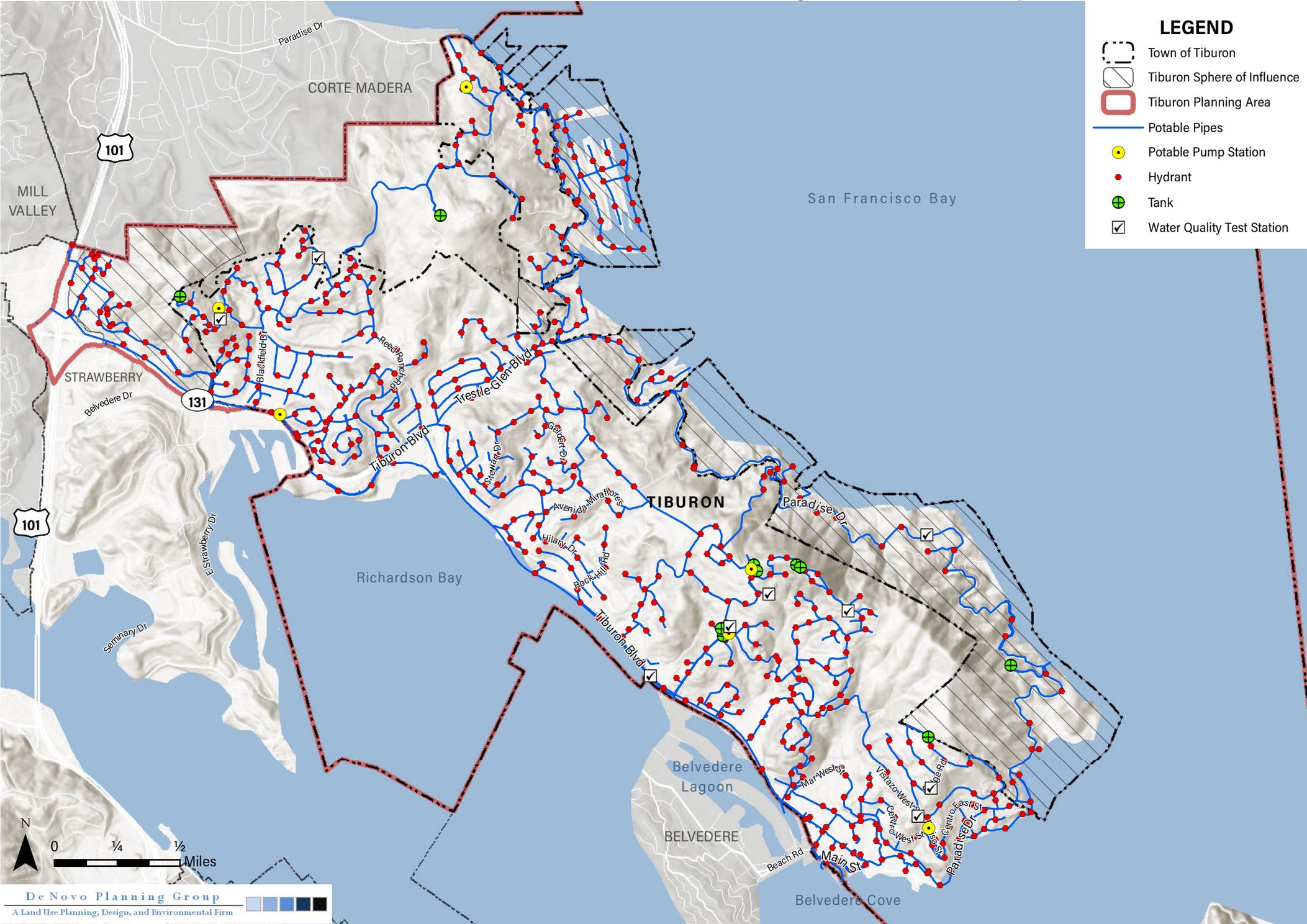
Marin Municipal Water District Board of Directors Special Meeting. 2020. Agenda Item 1b: Board 2020 Annual Retreat. September 25, 2020. Available at: <https://www.marinwater.org/sites/default/files/2020-11/09-25-2020%20Board%20Retreat%20Packet%20Updated.pdf>

Rodriguez, Adrian. "Tiburon School's Water Tests Show Lead Contamination". Marin Independent Journal. October 14, 2019. Available at: <https://www.marinij.com/2019/10/14/marin-school-addresses-lead-contamination-in-drinking-water/>

Town of Tiburon. As Amended Through February 3, 2016. Town of Tiburon General Plan. Available at: <https://www.townoftiburon.org/206/General-Plan>

DWR. (2004). Bulletin 118: Groundwater Basin Lookup. Available at: <https://water.ca.gov/Programs/Groundwater-Management/Bulletin-118>.

Figure 1: Marin Municipal Water District Facilities



LEGEND

- Town of Tiburon
- Tiburon Sphere of Influence
- Tiburon Planning Area
- Potable Pipes
- Potable Pump Station
- Hydrant
- Tank
- Water Quality Test Station

Sources: ArcGIS Online World Hillshade Map Service; MMWD. Map date: February 9, 2021.

2. WASTEWATER

This section describes the Town of Tiburon's wastewater infrastructure, wastewater flows, treatment, regulatory requirements, and infrastructure planning.

KEY TERMS

Effluent: In the context of wastewater treatment plants, effluent is wastewater that has been through a treatment process to remove pollution and undesirable constituents from the water.

PDES: Water pollution degrades surface waters making them unsafe for drinking, fishing, swimming, and other activities. As authorized by the Clean Water Act, the National Pollutant Discharge Elimination System (NPDES) permit program controls water pollution by regulating point sources that discharge pollutants into waters of the United States. Point sources are discrete conveyances such as pipes or man-made ditches. Individual homes that are connected to a municipal system, use a septic system, or do not have a surface discharge do not need an NPDES permit; however, industrial, municipal, and other facilities must obtain permits if their discharges go directly to surface waters.

WWTP: Wastewater treatment plant. Treatment of wastewater may include the following processes: screening to remove large waste items; grit removal to allow sand, gravel, and sediment to settle out; primary sedimentation where sludge can settle out of the wastewater; secondary treatment to substantially degrade the biological content of the sewage; tertiary Treatment to raise the quality of the effluent before it is discharged; and discharge.

REGULATORY FRAMEWORK

FEDERAL

Clean Water Act (CWA) / National Pollutant Discharge Elimination System (NPDES) Permits

The CWA is the cornerstone of water quality protection in the United States. The statute employs a variety of regulatory and non-regulatory tools to sharply reduce direct pollutant discharges into waterways, finance municipal wastewater treatment facilities, and manage polluted runoff. These tools are employed to achieve the broader goal of restoring and maintaining the chemical, physical, and biological integrity of the nation's waters so that they can support "the protection and propagation of fish, shellfish, and wildlife and recreation in and on the water."

The CWA regulates discharges from "non-point source" and traditional "point source" facilities, such as municipal sewage plants and industrial facilities. Section 402 of the Act creates the NPDES regulatory program which makes it illegal to discharge pollutants from a point source to the waters of the United States without a permit. Point sources must obtain a discharge permit from the proper authority (usually a state, sometimes EPA, a tribe, or a territory). NPDES permits cover industrial and municipal discharges, discharges from storm sewer systems in larger cities, storm water associated with numerous kinds of industrial activity, runoff from construction sites disturbing more than one acre, mining operations, and animal feedlots and aquaculture facilities above certain thresholds.

Permit requirements for treatment are expressed as end-of-pipe conditions. This set of numbers reflects levels of three key parameters: (1) biochemical oxygen demand (BOD), (2) total suspended solids (TSS), and (3) pH acid/base balance. These levels can be achieved by well-operated sewage plants employing "secondary" treatment. Primary treatment involves screening and settling, while secondary treatment uses biological treatment in the form of "activated sludge."

All so-called "indirect" dischargers are not required to obtain NPDES permits. An indirect discharger is one that sends its wastewater into a city sewer system, so it eventually goes to a sewage treatment plant. Although not regulated under NPDES, "indirect" discharges are covered by another CWA program called pretreatment. "Indirect" dischargers send their wastewater

into a municipal sewer system, which carries it to the municipal sewage treatment plant, through which it passes before entering surface water.

STATE

State Water Resources Control Board/Regional Water Quality Control Board

In California, all wastewater treatment and disposal systems fall under the overall regulatory authority of the Water Board and the nine California Regional Water Quality Control Boards (RWQCBs), who are charged with the responsibility of protecting beneficial uses of State waters (ground and surface) from a variety of waste discharges, including wastewater from individual and municipal systems. The Town of Tiburon is within the jurisdiction of the San Francisco Bay Regional Water Quality Control Board (SFBRWQCB).

The RWQCB's regulatory role often involves the formation and implementation of basic water protection policies. These are reflected in the individual RWQCB's Basin Plan, generally in the form of guidelines, criteria and/or prohibitions related to the siting, design, construction, and maintenance of on-site sewage disposal systems. The Water Board's role has historically been one of providing overall policy direction, organizational and technical assistance, and a communications link to the State legislature.

The RWQCBs may waive or delegate regulatory authority for on-site sewage disposal systems to counties, cities or special districts. Although not mandatory, it is commonly done and has proven to be administratively efficient. In some cases, this is accomplished through a Memorandum of Understanding (MOU), whereby the local agency commits to enforcing the Basin Plan requirements or other specified standards that may be more restrictive. The RWQCBs generally elect to retain permitting authority over large and/or commercial or industrial on-site sewage disposal systems, depending on the volume and character of the wastewater.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act is California's statutory authority for the protection of water quality. Under the Porter-Cologne Act, the State is required to adopt policies, plans, and objectives that will protect the State's waters for the use by and enjoyment of Californians. In California, the State Water Resources Control Board (Water Board) has the authority and responsibility for establishing policy related to the State's water quality. Regional authority is delegated by the Water Board to a RWQCB. The Porter-Cologne Act authorizes the Water Board and RWQCB to issue NPDES permits.

Under the RWQCB NPDES permit system, all existing and future municipal and industrial discharges to surface water within the city would be subject to regulation. NPDES permits are required for operators of municipal separate storm sewer systems, construction projects, and industrial facilities. These permits contain limits on the amount of pollutants that can be contained in each facility's discharge.

LOCAL

Richardson Bay Sanitary District

The Richardson Bay Sanitary District of Marin County (RBSD) is an independent special district that provides wastewater collection services to parts of the Tiburon Peninsula and the unincorporated area of Strawberry. The RBSD serves over 4,140 households and has been servicing the area since 1949. The RBSD is a Member Agency (MA) of the Sewerage Agency of Southern Marin (SASM), which is a Joint Powers Agency formed in 1979 to consolidate the wastewater collection, treatment, water reclamation, and disposal in southern Marin County. RBSD's wastewater flows are conveyed to the SASM wastewater treatment plant (WWTP) in Mill Valley.

RBSD Sewer System Management Plan

The RBSD Sewer System Management Plan (SSMP) was updated in June 2019 to comply with the requirements of the Water Board Order No. 2006-0003-DWQ, and Amended Monitoring and Reporting Program (MRP), Order No. WQ 2013-0058-Exec. The objective of the RBSD SSMP is to establish goals that align the sewer collection system operation, management and capacity assurance activities in a manner that achieves the following:

- To properly manage, operate, and maintain all parts of the wastewater collection system, so as to preserve and protect the public's investment in that system;
- To provide adequate capacity to convey peak flows to the WWTP;
- To minimize the frequency and duration of sewer system overflows (SSOs), including implementing regular, proactive maintenance of the system to remove issues that may cause sewer backups or SSOs;
- To mitigate the impact of SSOs on public health and the environment;
- To respond quickly and respectfully to public notifications of SSOs or other collection system issues;
- To collect complete and accurate information regarding SSOs for reporting to the appropriate regulatory agencies;
- To uphold the District's standards and specifications on newly constructed public and private sewers;
- To provide a safe working environment for District employees; and
- To provide District employees with the tools and training needed to perform their work effectively and achieve the District goals.

The RBSD SSMP references the RBSD Sewer Use Code and service agreements to demonstrate that the district has legal authority to prevent illicit discharges into its wastewater collection system; require sewers and connections be properly designed and constructed; ensure access for maintenance, inspection, or repairs for portions of the laterals owned or maintained by the district; to limit discharges of fats, oils, and greases (FOG) and other debris that may cause blockages; and enforce any violation of its sewer ordinances.

RBSD Sewer Use Code

The RBSD Sewer Use Code consists of rules and regulations that govern sewer construction, the disposal of sewage and drainage from buildings, and the connection to the sewerage works of the RBSD. RBSD Sewer Use Code Articles III and VII, specifically Section 301, names specific wastes that are not allowed in the sewer system. RBSD Sewer Use Code Article VII, Section 701 calls attention to the requirements of the SASM Ordinance 83-1 (see "Sewage Agency of Southern Marin Ordinances"), which provides uniform requirements for discharges into the wastewater collection and treatment system. Additionally, RBSD Sewer Use Code Article VII, Section 702 provides authority to require installation and maintenance of grease traps or grease interceptors by restaurants, school kitchens, hotels, hospitals, or other establishments where grease may be introduced into drainage or sewerage system in quantities that could affect line stoppage or hinder sewage treatment or private sewage disposal.

RBSD Sewer Use Code Articles V, VI, and VIII establish requirements for proper design and construction of sewers and connections. RBSD Sewer Use Code Article V, Section 502 and Article VI, Section 613 require all laterals and sewer lines, respectively, be constructed in conformance with the Standard Specifications for Building Sewer Construction of the RBSD. Both RBSD Sewer Use Code Articles V and VI provide other requirements for development of plans and specification, and for District inspections and approvals. Additionally, RBSD Sewer Use Code Article VIII, Sections 801 to 803 require a permit and establish compliance to assure that sewer construction and design meets RBSD standards.

RBSD Sewer use Code Article IV, Section 406 states that the district has the right to inspect any individual sewer disposal system and Article VI, Section 601 requires all new building sewers to be accompanied by a contract with the District that authorizes inspection. Lastly, RBSD Sewer use Code Article X, Section 1003 provides authorized representatives of the district to enter in and upon any and all buildings, industrial facilities, and properties for the purpose of inspection, re-inspection, observation, sampling, testing, or otherwise performing such duties, as may be necessary.

Sewerage Agency of Southern Marin

As previously stated, the SASM is a Joint Powers Agency formed in 1979 to consolidate the wastewater collection, treatment, water reclamation, and disposal needs of about 29,500 residents in southern Marin County. SASM is made up of six MAs, including the City of Mill Valley, Tamalpais Community Services District, Almonte Sanitary District, Alto Sanitary District, Homestead Valley Sanitary District, and RBSD. The mission of the SASM is to efficiently provide wastewater treatment services to its member agencies and work cooperatively with government agencies on all compliance requirements, guided at all times by the following core values:

- Public health and safety with an emphasis on facility operations, employee safety, and neighborhood well-being;
- Operational excellence, customer service and public education;
- Environmental stewardship with an emphasis on quality treated effluent, zero controllable spills, and re-use of biosolids, methane and reclaimed water; and
- Support and encourage cooperative activities between all member agencies.

Each MA owns, operates and maintains a sanitary sewer system, which connect to the main sewer lines owned by SASM that carry the wastewater to the SASM WWTP located in Mill Valley at 450 Sycamore Avenue. At the SASM WWTP, the water flows through several treatment units which reduce and remove a variety of pollutants and organic materials. The processed wastewater is disinfected and pumped six miles to Racoon Straits in Tiburon for deep water discharge into the San Francisco Bay.

SASM WWTP Master Plan

In December 2014, the SASM adopted a WWTP Master Plan to develop a “road map” for the next 25 years of WWTP improvements, including a list of necessary projects, an implementation schedule, and cost estimates to ensure that capital funds are properly allocated to improvements that will benefit the SASM in the short and long term. The primary objectives of the SASM WWTP Master Plan are to:

- Evaluate the existing treatment processes for capability of reliably meeting existing discharge requirements;
- Evaluate the existing treatment system to meet potential future discharge requirements, such as stricter nutrient limits or reducing blending during weather flows;
- Develop a prioritized 25-year capital improvements program (CIP) that phases projects and results in reasonable customer rate impacts; and
- Examine and recommend sustainable elements and strategies, which can be incorporated into the proposed CIP, that are complementary to SASM’s policy initiatives.

Based on the evaluation of the existing SASM WWTP and treatment system, the SASM developed recommended improvements, including rehabilitation and/or replacement improvements to maintain overall reliability, capacity improvements to treat existing and future flows/loads, flood mitigation and sustainability projects, improvements required if ammonia removal is required, improvements required if nitrogen removal is required, improvements required if blending is prohibited, recycled water expansion project, and collection and conveyance system improvements.

SASM Ordinances

The SASM Wastewater Discharge Ordinance (Ordinance No. 83-1) was adopted in 1983 to set uniform requirements for discharges into the wastewater collection and treatment system and enable SASM to comply with the administrative provisions of the Clean Water Grant Regulations and the water quality requirements set by the RWQCB. Article II of the Wastewater Discharge Ordinance lists prohibitions on discharges that include, but are not limited to, substances that could cause fire or explosion, obstruct the treatment works, cause danger to life or safety, have a strong offensive odor, have a detrimental impact to Waters of the State, or cause the treatment works to be overloaded. Specifically, Section 2.08.2 of the Wastewater Discharge Ordinance states that no person shall discharge any wastewater containing 300 milligrams per liter

(mg/l) of oil or grease of animal or vegetable origin or containing more than 100 mg/l of oil or grease of mineral or petroleum origin.

Additionally, SASM adopted a Mercury Reduction ordinance (Ordinance No. 2010-01) in 2010 to help prevent the spread of mercury pollution and a Private Lateral Model ordinance (Ordinance No. 2014-01) in 2014 to regulate the construction, use, and maintenance of private sewer laterals. The Mercury Reduction ordinance requires dental facilities in the SASM jurisdiction to separate amalgam (the silver material used in dental fillings which contains mercury) and properly dispose of waste in compliance with the Bay Area Pollution Prevention Group (BAPPG). The Private Lateral Model ordinance authorizes the SASM to enforce the upgrade and repairs of private sewer laterals to ensure SASM sewer treatment facilities are not overburdened.

Sanitary District Number 2 of Marin County

Sanitary District Number 2 of Marin County (SD2) was incorporated on January 21, 1901, and was re-incorporated as a subsidiary district to Corte Madera on January 15, 1969. SD2 provides sewage collection services for Corte Madera, limited areas of the surrounding communities of Larkspur and Tiburon, and certain unincorporated land within Marin County. Services include the installation and maintenance of sanitary sewer pipelines and pump stations, regulation of sanitary sewer connections, and waste collection services within the boundary of SD2. Treatment of sanitary sewer flow is provided by the Central Marin Sanitation Agency (CMSA).

SD2 SSMP

The SD2 SSMP is a document that guides the design, development, and maintenance of the sewer utilities within the district and was last updated in August 2013. Specifically, the SD2 SSMP:

- Identifies goals to properly manage, operate, and maintain all parts of its wastewater collection system in order to reduce and prevent SSOs, as well as to mitigate any SSOs that occur;
- Identifies SD2 Staff who are responsible for implementing this SSMP, responding to SSO events, and meeting the SSO reporting requirements;
- Provides a summary of SD2's overflow emergency response plan;
- Discusses SD2's FOG control measures, including identification of problem areas, focused cleaning, and source control;
- Discusses SD2's legal authority, including its sanitary code and agreements with other agencies;
- Identifies SD2's measures and activities, including maps, resources and budget, preventive maintenance, condition assessments, equipment, training, and outreach;
- Identifies the design and construction standards;
- Outlines SD2's Capacity Management program; and
- Identifies SD2's monitoring, measurement, and program modifications plan.

SD2 Sewer Master Plan

The SD2 Sewer Master Plan was prepared in August 2009 to provide information to support the SD2 SSMP. The primary focus of the SD2 Sewer Master Plan was to evaluate the condition of the existing system, further develop the existing hydraulic model, and establish a capital improvement plan (CIP) that will allow for the continued operation, maintenance and replacement of the system as required. Projects recommended in the CIP were developed to support the levels of service and the total cost of the 40-year CIP is \$94,600,000, an average of \$2.3 million annually.

SD2 Sanitary Code

The SD2's Sanitary Code, the Town of Corte Madera Municipal Code, Title 21: SD2 a Subsidiary District of The Town of Corte Madera includes several provisions that establish the District's legal authority to control discharges and maintain their sanitary sewer system.

Chapter 21.16 (Sewer Use Regulations) outlines the use regulations of SD2's sewer system, including prohibited drainage into the sanitary sewers, types of waste prohibited, required interceptors, maintenance of interceptors, preliminary treatment of wastes, and maintenance of pretreatment facilities. Section 21.16.010 (Drainage into Sanitary Sewers prohibited) prohibits stormwater drainage entering into the SD2's sanitary sewers. Additionally, Section 21.16.020 (Types of Wastes Discharged to Public Sewers) outlines the types of waste prohibited from being discharged or deposited into the sewer system, including the discharge of any water or waste which contains more than one hundred parts per million, by weight, of fat, oil or grease. Section 21.16.030 (Installation of Grease Interceptors) allows for the SD2 to require installation of grease interceptors at non-residential buildings. Interceptors shall be of a type and capacity approved by district staff and shall be located in such a manner as to be readily and easily accessible for inspection by the district.

Chapter 21.20 (Sewer Laterals and Connections) outlines the regulations related to sewer laterals and connections, including the new construction of laterals; the ownership, maintenance, and repair of private sewer laterals; separate sewers; connection to district sewer system; sewer lateral and connection cleanouts; backflow prevention devices; sewer too low; maintenance; testing and right of entry; access to properties for sewer lateral inspections; mandatory testing; and permits required.

Chapter 21.22 (Infiltration and Inflow; Inspection; Repairs) provides for the SD2 to authorize and mandate the enforcement of the upgrade, replacement or repair of private sewer laterals to address inflows and infiltrations and sewer overflows contributed by private sewer laterals.

Chapter 21.28 (Permits and Permit Fees) outlines the necessary permit and permit fees to connect to the SD2 sanitary sewer system, as well as the minimum standards for the design and construction of new sewers, and for the repair or replacement of existing sewers.

Central Marin Sanitation Agency

On October 15, 1979, the San Rafael Sanitation District, Sanitary District No. 1 of Marin County, SD2, and the City of Larkspur entered into a joint powers agreement to create the CMSA to oversee the construction and operation of a regional WWTP. The purpose of the CMSA is to plan, acquire, construct, maintain and operate facilities, for the collection, treatment, reclamation, and disposal of wastewater, and to capture and utilize the renewable resources derived from the wastewater treatment process, including but not limited to biogas, recycled water, and biosolids. The goals of the CMSA are to:

- Continue to operate and maintain its wastewater facilities to produce high quality effluent and biosolids, within a changing regulatory environment;
- Continually improve financial management practices to ensure transparency, financial sustainability, and sound fiscal principles;
- Further incorporate green business principles and consider renewable resource opportunities in its short- and long-term planning;
- Lead or actively participate in collaborative efforts to address local and regional environmental opportunities and challenges; and
- Attract and retain high quality employees by providing a work environment that motivates staff, fosters professional development values.

Central Marin Sanitation Agency Ordinances

CMSA adopted a FOG ordinance (Ordinance No. 2007-1) to minimize sanitary sewer overflows (SSOs) in the CMSA service area. The FOG ordinance controls the discharge of FOG to the sanitary sewer from commercial food service establishments by establishing requirements for food service establishments to install and maintain grease traps and interceptors. CMSA Ordinance No. 2019-1 outlines the fees to be paid for each new sewer connection based on land use or plumbing fixtures. Fees are also assessed for septic and chemical toilet waste haulers, FOG haulers, and industrial waste discharges. CMSA

Ordinance No. 2009-2 is aimed at reducing the mercury load to the sanitary sewer system by regulating the discharge of amalgam wastes from dental offices.

Sanitary District Number 5 of Marin County

Sanitary District Number 5 of Marin County (SD5) is a special district that has been providing collection and treatment of wastewater to parts of the Tiburon Peninsula and the City of Belvedere since the early 1940s. SD5 maintains two separate sewer collection systems each with their own WWTP: the Main Sewer System and the Paradise Cove Sewer System. The SD5 Main Sewer System serves the City of Belvedere and parts of the Town of Tiburon east of Gilmartin Drive and the majority of sewage collected and treated in the service area is residential with a very small commercial component serving downtown Tiburon. The collected sewage in the Main Sewer System is conveyed to SD5's Main WWTP located at 2001 Paradise Drive for treatment. The SD5 Paradise Cove Sewer System is located in unincorporated Marin County and serves the Town of Tiburon unincorporated area from 3200 Paradise Drive through 4200 Paradise Drive, as well as the Seafirth Estates neighborhood. Collected sewage is conveyed to SD5's Paradise Cove WWTP located at 3700 Paradise Drive for treatment.

SD5 SSMP and SD5 – Paradise Cove SSMP

The SD5 SSMP and SD5 – Paradise Cove SSMP are documents that guides the design, development, and maintenance of the sewer utilities within SD5's Main Sewer System and Paradise Cove Sewer System. Both SSMP's were last updated in May 2018. The SD5 SSMP and SD5 – Paradise Cove SSMP:

- Identify goals SD5 has set for the management, operation, and maintenance of both sewer systems and discuss the role of the SSMPs in supporting these goals;
- Identify SD5 staff who are responsible for implementing the SSMPs, responding to SSO events, and meeting the SSO reporting requirements;
- Provide an overview and summary of the SD5's emergency response documents and procedures for sewer overflows;
- Discuss the SD5's FOG control measures, including identification of problem areas, focused cleaning, and source control;
- Discuss SD5's Legal Authority and includes agreements with other agencies;
- Discuss SD5 operations, maintenance and other related measures and activities;
- Discuss SD5's design and construction standards;
- Discuss SD5's capacity management measures;
- Discuss parameters SD5 tracks to monitor the success of the SSMPs and how the SD5 plans to keep the SSMPs current; and
- Discuss the SD5's SSMPs auditing program.

SD5 Municipal Code

The SD5 Municipal Code includes several provisions and regulations that establish SD5's legal authority to control discharges and maintain their sanitary sewer systems.

Chapter 3.05 (Sanitary Code) of the SD5 Municipal Code outlines the rules and regulations of sewer construction, disposal of sewage and drainage of buildings, and connections to SD5's sewage system. This chapter regulates the use of public and private sewers and drains and discharge of waters and waste into the public sewer system and provides penalties for the violation of the provisions. This chapter also adopts standard specifications as minimum standards for the design and construction of sewerage facilities within the boundaries of SD5. Additionally, Article VIII (Use of Public Sewers) of Chapter 3.05 outlines all measures prohibiting illicit discharges and discharges of any pollutant into the sewers that would obstruct or damage the collection system, interfere with treatment, or threaten harm to human health or the environment. Examples of discharges include waste or water containing more than 100 parts per million, by weight, of FOG, any gasoline or other

flammable or explosive liquid/solid/gas, and any other solid or viscous substance capable of causing obstruction to the flow in the sewers, to name a few.

Chapter 3.10 (Mercury Reduction) of the SD5 Municipal Code is intended to significantly reduce the quantity of mercury entering SD5's water pollution control system by establishing waste management practices for all owners and operators of dental facilities that remove, repair, or place amalgam fillings.

Chapter 3.25 (FOG) of the SD5 Municipal Code is intended to facilitate the implementation and enhance the effectiveness of the FOG control program. SSOs are a major concern to wastewater agencies throughout the State of California. A frequent cause of SSOs is the blockage of sewer lines due to discharge of FOG from food preparation and clean-up operations. To prevent SSOs in its sanitary sewer system, Chapter 3.25 outlines regulations and requirements to reduce the discharge of FOG from restaurants and other food service establishments to levels that will not cause blockage in sewer lines.

Title V (Standard Specifications) of the SD5 Municipal Code provides minimum standards for the design and construction of sewerage facilities within the boundaries of SD5, as well as outlines the procedures for the submittal, review, and approval of plans and permits of sewerage facilities, such as sewer mains. Additionally, Title V outlines SD5's annexation policy, downstream capacity policy, right-of-way policy, condemnation policy, and engineering policy.

Tiburon/Belvedere Wastewater Financing Authority

The Tiburon/Belvedere Wastewater Financing Authority, via SD5, provides collection and treatment of wastewater to parts of the Tiburon Peninsula and the City of Belvedere. The Tiburon/Belvedere Wastewater Financing Authority is set up to assist SD5 to meet or exceed all applicable local, state and federal laws and regulations, and is dedicated to the protection of public health and the environment through effective and economical collection, conveyance, treatment and disposal of wastewater. SD5 is an independent local agency governed by an elected Board of Directors, whom are then appointed to the Board of Directors for the Tiburon/Belvedere Wastewater Financing Authority.

Town of Tiburon General Plan

The existing Town of Tiburon General Plan Land Use Element identifies the following goals and policies related to wastewater services:

Land Use Element

Goals

LU-E: To propose future land uses within environmental constraints and consistent with Prime Open Space preservation and other General Plan policies, and the ability of the land and related infrastructure, streets, utilities, public services and other facilities to support such land uses.

LU-J: To address regional issues, such as transportation, schools, and water, through development review and in coordination with neighboring cities, the county, and other governmental entities.

Policies

LU-8: Sewer, water, and other essential infrastructure improvements must be available to the developer to serve new development by the time of completion of construction. Developers shall participate in the funding of essential expanded infrastructure to the maximum extent allowed by law.

LU-9: The Town shall coordinate with urban service providers such as Marin Municipal Water District and the sanitary districts to ensure that they have the capacity to serve new development.

LU-10: If no other alternatives exist, then an investigation with appropriate tests shall be required to determine if the on-site soils are suitable for development of a septic system. In hillside areas, an evaluation of the additional water from a septic

system on slope stability issues shall be also required. All new or improved septic systems shall be designed by a registered civil engineer that specializes in septic design.

LU-37: The Town shall coordinate its land use and zoning plans with the County of Marin, Strawberry Community, the City of Belvedere, Town of Corte Madera, LAFCO, and other agencies to provide for more effective comprehensive planning.

Town of Tiburon Municipal Code

Chapter 13C Individual and Alternative Sewage Disposal Systems. This chapter adopts the Marin County individual sewage disposal ordinance and the alternative sewage disposal system ordinance. The individual sewage and alternative sewage disposal systems ordinances both includes provisions to ensure that the disposal of sewage and/or the distribution of graywater shall be accomplished in a safe and sanitary manner in order to protect the public health, safety and welfare.

EXISTING CONDITIONS

Wastewater service in the Tiburon Planning Area is provided by multiple local agencies, including the RBSD, SD5, and SD2 of Marin County. As shown on Figure 2, the majority of the Planning Area is served by either the RBSD or the SD5 while a small northeastern portion of the Town and Planning Area is served by SD2.

Below is an overview of each agency, including the existing wastewater system and current and projected wastewater flows.

RICHARDSON BAY SANITARY DISTRICT

RBSD is an independent special district. It encompasses an approximate 3.1 square mile jurisdictional boundary within southeast Marin County. Approximately 60 percent of its jurisdictional area is within Tiburon Town limits, and the other 40 percent covers the unincorporated community of Strawberry.

RBSD is a member of the SASM. RBSD provides sewage collection and water reclamation services and connects to the main sewer lines owned by SASM which carry the wastewater to the SASM wastewater treatment plant. Once processed, the wastewater is disinfected and pumped 6 miles to Racoon Straits in Tiburon for deep-water discharge into the San Francisco Bay. Processed water is also further treated, or reclaimed, and used for landscape irrigation by the City of Mill Valley Parks Department. Figure 3 illustrates the RBSD wastewater infrastructure and facilities that serve the Tiburon Planning Area.

RBSD Capacity

As part of the 2019 RBSD Sewer System Management Plan, a capacity assessment was completed for RBSD based on flow monitoring data obtained during the 2008/09 and 2009/10 wet weather seasons, which was used to develop a Capacity Assurance Plan and Capital Improvement Plan (CIP). The modeled facilities in the RBSD collection system included the Hawthorne Terrace, Del Mar, and Belveron Gardens pump stations, downstream force mains, and gravity sewers that convey flow to the Salt Works Pump Station from the northeast and southwest, and to the Ricardo Road Pump Station from the northwest and southeast. According to the 2019 Sewer System Management Plan, the capacity assessment identified some sewers in the RBSD system that may surcharge under peak design event wet weather flow conditions; however, none of the surcharge was severe enough to present a significant risk of overflow.

Additionally, the 2019 Sewer System Management Plan noted the RBSD completed a sewer rehabilitation project in the Belveron Gardens Pump Station tributary area in response to a 2009 hydraulic model analysis identifying the Belveron Gardens Pump Station as not having sufficient firm capacity to convey design storm flows. The Belveron Gardens Pump Station sewer rehabilitation project consisted of the rehabilitation and/or replacement of over 7,000 feet of sewer mains,

lower laterals, and some upper laterals. As a result, the Belveron Gardens Pump Station did not have a sewer system overflow during the February 13, 2019 wet weather event, which closely resembled a design storm event⁷.

SASM Wastewater Treatment Plant

The SASM WWTP is located in Mill Valley at 450 Sycamore Avenue, approximately 1.9 miles west of the Tiburon Town limits. The SASM WWTP treats raw wastewater from its six member agencies. The WWTP’s treatment process consists of screening, grit removal, flow equalization, primary sedimentation, biological treatment (trickling filters), secondary clarification, disinfection (chlorination), and dechlorination. Dechlorination occurs prior to discharge to Raccoon Strait in the San Francisco Bay via a submerged outfall that is jointly shared with the Sanitary District No. 5 of Marin County.

Current and Projected Wastewater Flows

Table 10 identifies the current and projected wastewater flow and loading, as summarized in the SASM WWTP Master Plan.

TABLE 10: SUMMARY OF WASTEWATER FLOWS AND CHARACTERISTICS – SASM WWTP

PARAMETER	UNITS	EXISTING CONDITIONS (2014)			PROJECTED 2035 VALUES		
		ADW	ADA	ADMM	ADW	ADA	ADMM
Flow	mdg	2.22	2.67	4.19	2.34	2.81	4.41
BODS	mg/L	253	213	--	253	213	--
	lb/d	4,557	4,686	6,167	4,803	4,939	6,500
TSS	mg/L	323	271	--	323	271	--
	lb/d	5,811	5,984	7,689	6,125	6,307	8,104
Minimum Hour Dry Weather Flow		0.40 mgd			0.42 mgd		
Peak Hour Dry Weather Flow		4.67 mgd			4.92 mgd		
Peak Hour Wet Weather Flow		32.7 mgd			32.7 mgd		

NOTE: FLOWS REPRESENT AVERAGE DRY WEATHER (ADW) FLOWS, AVERAGE DAILY ANNUAL (ADA) FLOWS, AND AVERAGE DAY MAXIMUM MONTH (ADMM) FLOWS AND LOADS IN LB/D REPRESENT ADW LOADS, ADA LOADS, AND ADMM, LOADS.

SOURCE: SASM WWTP MASTER PLAN (DECEMBER 2014)

The current average dry weather flow (ADWF) to the SASM WWTP is 2.22 mgd, with a service population in 2014 of 29,000. The SASM WWTP Master Plan identifies anticipated population growth in Marin County by approximately 5.4 percent and in Mill Valley by approximately 5 percent by 2035. Therefore, the SASM WWTP Master Plan projects that the ADWF in 2035 will be 2.34 mgd. During wet weather events, the wastewater collection system receives a significant amount of extraneous flows, known as infiltration and inflow. Because of the high infiltration and inflow contributions, the existing peak hourly wet weather flow (PHWWF) to the WWTP is 32.7 mgd⁸.

The existing NPDES permit rates the facility capacity at 3.6 mgd for ADWF and 24.7 mgd for PWWF; however, the influent pump station has a capacity of 32.8 mgd. Therefore, when flows exceed 24.7 mgd, excess wastewater flows are diverted to the equalization basins for treatment after the event. If the equalization basins reach capacity, the excess flows are treated in primary clarifiers and blended with the secondary effluent. The blended effluent is required to meet the NPDES permit discharge standards (SASM, December 2014).

As part of the SASM WWTP Master Plan, a hydraulic and process capacity assessment of the WWTP and outfall was performed, which estimated that the WWTP and outfall have a firm hydraulic capacity of 23.5 to 25.2 mgd during wet weather events. The process analysis indicated that the WWTP can adequately treat an ADFW of up to 2.77 mdg under maximum month load conditions to current discharge standards when all units are in service. Therefore, the WWTP has adequate

⁷ Richardson Bay Sanitary District. April 2019. Sewer System Management Plan. [page 8-2]

⁸ Sewerage Agency of Southern Marin. December 2014. Wastewater Treatment Plan Master Plan. [page ES-4]

capacity to treat the projected ADWF flows in 2035. However, capacity improvements would be necessary to meet the PHWWF of 24.7.

In response, the SASM initiated the Wastewater Treatment Plant Rehabilitation Project – Phase I in April 2018 to increase the WWTP's PHWWF capacity to 24.7, which is currently 90 percent complete and is expected to conclude in February 2021. The primary goal of the WWTP Rehabilitation Project is to ensure reliable treatment of wastewater under the National Pollutant Discharge Elimination System permit (NPDES), as well as compliance with regional, State and Federal regulations⁹.

SANITARY DISTRICT NUMBER 5

SD5 is an independent special district and provides secondary treatment of domestic and commercial wastewater to the City of Belvedere, the Town of Tiburon east of Gilmartin Drive, and unincorporated areas of the Tiburon Peninsula. SD5 maintains two separate sewer collection systems each with their own WWTP: the Main Sewer System and the Paradise Cove Sewer System. Figure 3 illustrates the SD5 wastewater infrastructure and facilities that serve the Tiburon Planning Area, including the Main WWTP and Paradise Cove WWTP.

It should be noted that Figure 3 also identifies the Seafirth WWTP within the jurisdictional boundaries of SD5; however, the Seafirth WWTP is not active and has been decommissioned. The Seafirth WWTP was originally apart of the Seafirth Estates neighborhood private wastewater collection system serving the 30-unit subdivision, which was owned and operated by the Seafirth Estates Company¹⁰. Following the establishment of SD5's Paradise Cove Sewer System and WWTP, SD5 worked with the Seafirth Estates Company and SFBRWQCB in decommissioning the aging Seafirth Estates WWTP and connecting the neighborhood to the new Paradise Cove force main. Additionally, two new pump stations were installed in the Seafirth Estates neighborhood to facilitate pumping to the Paradise Cove WWTP¹¹.

Main Sewer System and Wastewater Treatment Plant

The Main Sewer System consists of approximately 30.9 miles of pipe, ranging from 4 inches to 18 inches in diameter, and 24 pump stations (9 in the Tiburon Zone, 13 in the Belvedere Zone and 2 in the Paradise Cove Zone). Of the 30.9 miles of pipe, 28.5 miles are gravity lines and the remaining 2.4 miles are Force Main lines. The Main Sewer System serves a population of about 8,400 and provides sewer service to most businesses and residents within the service area, as well as unincorporated areas within the District's sphere of influence. The majority of sewer collected and treated in the service area is residential with a very small commercial component serving downtown Tiburon. There are no industrial activities in the SD5 service area and the Tiburon/Belvedere peninsula is fully developed with very few opportunities for future developments.

Collected sewage in the main sewer system is conveyed to the SD5 Main WWTP located at 2001 Paradise Drive in Tiburon. The Main WWTP provides secondary treatment of wastewater for discharge to Raccoon Strait in Central San Francisco Bay. The treatment process consists of raw influent grinding, primary clarification, activated sludge aeration, secondary clarification, sodium hypochlorite disinfection, and sodium bisulfite dechlorination. The WWTP also has onsite storage consisting of an additional primary clarifier, an offline aeration basin, and a surge tank, totaling 315,000 gallons. During wet weather, when primary-treated flows exceed the WWTP's biological treatment capacity and all onsite storage is used, the WWTP routes the portion of flows above 2.3 MGD from its primary clarifiers directly to its sodium hypochlorite disinfection tank (bypassing activated sludge aeration and secondary clarification) where it is blended with biologically treated effluent prior to discharge. Any primary treated flows stored onsite are routed back to the headworks for full treatment.

The Main WWTP shares an outfall with the SASM WTP in Mill Valley (regulated under NPDES Permit No. CA0037711). Discharge of treated effluent to Raccoon Strait in Central San Francisco Bay is through a 36-inch outfall and a submerged,

⁹ Sewerage Agency of Southern Marin. April 2018. Wastewater Treatment Plant Rehabilitation Project – Phase I Notice

¹⁰ California Regional Water Quality Control Board – San Francisco Bay Region. December 2006. Order No. R2-2006-0082. [page 4]

¹¹ Sanitary District No. 5 of Marin County. August 2014. Grand Jury Report Findings Response “The Scoop on Marin County Sewer Systems: Part 1”. [page 3].

multi-port diffuser located about 840 feet offshore. The diffuser spans 195 feet and consists of 15 risers, each with four 3-inch diameter ports submerged approximately 84 feet below mean sea level. The average daily outfall capacity is 31.4 MGD¹².

Current and Projected Wastewater Flows

The Main WWTP is licensed to provide biological treatment for an average daily dry weather design flow of 0.98 mgd. Additionally, the WWTP can provide biological treatment for up to 2.3 mgd wet weather flows (California Regional Water Quality Control Board – San Francisco Bay Region, August 2018). In the calendar year 2020, the Main WWTP received and treated:

- Average dry weather flow of 0.57 mgd;
- Average daily annual flow of 0.585 mgd;
- Average wet weather flow of 0.63 mgd (very dry year); and
- Peak wet weather flow of 1.17 mgd (very dry year)¹³.

According to Tony Rubio, District Manager – Chief Plant Operator of SD5, the Main WWTP has plenty of capacity to treat future flows for the occasional new home or upgraded home that adds fixture units. According to the 2018 Sewer System Master Plan for the main sewer system, the portions of Tiburon and the City of Belvedere in the service area are close to being completely built out; therefore, no major increases in flow are anticipated in the near future. To date, the Main Sewer System has not had an overflow event attributed to capacity deficiency; therefore, it is anticipated the main sewer system has capacity to treat future flows.

Paradise Cove Sewer System and Wastewater Treatment Plant

The Paradise Cove Sewer System consists of approximately 3.1 miles of pipe, ranging from 3 inches to 6 inches in diameter, and 2 pump stations. Of the 3.1 miles of pipeline, 1.4 miles are gravity lines while the remaining 1.7 miles are associated with the force main pipeline. The majority of sewer collected and treated in the service area is residential. The Paradise Cove Sewer System serves 400 customers through 109 service connections within unincorporated area within the Tiburon Sphere of Influence from 3200 through 4200 Paradise Drive, as well the Seafirth Estates neighborhood.

The Paradise Cove WWTP is located at 3700 Paradise Drive within the Tiburon Sphere of Influence. SD5 is responsible for the operation and maintenance of the collection system associated with the Paradise Cove WWTP. The WWTP treatment process uses two identical treatment trains, each with an average daily dry weather capacity of 0.02 mgd, consisting of grinding, influent screening, flow equalization (primary clarification), extended aeration, secondary clarification, chlorination (sodium hypochlorite), and dechlorination (sodium bisulfite). The treated, disinfected, and dechlorinated wastewater is then discharged into the Central San Francisco Bay through a submerged, four-inch, rubber duckbill diffuser valve located approximately 400 feet offshore. It should be noted that the Paradise Cove WWTP does not process any biosolids. Waste-activated sludge is stored in a holding tank (aerobic digestion) and is hauled to the Main Sewer System's WWTP for processing¹⁴.

Current and Projected Wastewater flows

The Paradise Cove WWTP can provide secondary treatment for an average daily dry weather design flow of 0.04 mgd. In 2014, the average daily flow was 0.015 mgd (California Regional Water Quality Control Board – San Francisco Bay Region, 2016). In the calendar year 2020, the Paradise Cove WWTP received and treated:

- Average dry weather flow of 0.015 mgd;
- Average daily annual flow of 0.015 mgd;

¹² California Regional Water Quality Control Board – San Francisco Bay Region. August 2018. Order No. R2-2018-0038. [page F-5]

¹³ Sanitary District No. 5 of Marin County. February 11, 2021. Email correspondence with Tony Rubio, District Manager – Chief Plant Operator.

¹⁴ California Regional Water Quality Control Board – San Francisco Bay Region. 2016. Tentative Order No. R2-2016-00XX

- Average wet weather flow of 0.016 mgd (very dry year); and
- Peak wet weather flow of 0.019 mgd (very dry year)¹⁵.

According to Tony Rubio, District Manager – Chief Plant Operator of SD5, the Paradise Cove WWTP has plenty of capacity for the occasional new home or renovations/remodels that add fixture units. Additionally, according to the 2018 Paradise Cove -- Sewer System Master Plan, the Paradise Cove Sewer System has not had an overflow event that has been attributed to capacity deficiency and that the land in the service area is close to being completely built out with no major increases in flow anticipated. For these reasons, it is anticipated that the Paradise Cove Sewer System will have capacity to treat future wastewater flows.

SANITARY DISTRICT NUMBER 2

SD2 serves 4.5 square miles and provides sewerage collection services for the Town of Corte Madera, small portions of the surrounding communities of Larkspur and Tiburon and some adjacent unincorporated County land. SD2 operates the 44.7 miles of the gravity sewage collection system, 19 pump stations, and 5.1 miles of force mains¹⁶. Figure 3 illustrates the SD2 wastewater infrastructure and facilities that serve the Tiburon Planning Area.

SD2 is a member of CMSA, as previously described. The CMSA WWTP on the north side of Point San Quentin was completed in 1985. Its dry weather capacity is 10 mgd. The flow from SD2 is delivered to the treatment plant through the Ross Valley Interceptor that includes the flows from the other MAs (SD2, August 2013).

As part of SD2’s Sewer Master Plan, SD2 conducted a capacity assessment to assess the current and future capacity requirements of its collection system. To develop and calibrate the hydraulic model, two separate data sources were used: flow meters at the Paradise pump station, at the Golden Hind pump station, and upstream of the SD2 connection to the Ross Valley Interceptor (District FM), and level monitoring devices in specific manholes. Table 11 identifies the results of the capacity evaluation comparing the peak flow to the Paradise Pump Station to the peak flow to the District FM, as identified in the Sewer Master Plan.

TABLE 11: SUMMARY OF WASTEWATER FLOWS AND CHARACTERISTICS – CMSA WWTP

SCENARIO	PEAK FLOW TO PARADISE PUMP STATION	PEAK FLOW TO DISTRICT FM
Existing Dry Weather Loading	1.37 mgd	1.51 mgd
Future Dry Weather Loading	1.41 mgd	1.59 mgd
Existing Wet Weather Loading	6.32 mgd	6.83 mgd
Future Wet Weather loading	6.35 mgd	6.91 mgd

SOURCE: SD2 SEWER MASTER PLAN (AUGUST 2009)

Based on the results of the capacity assessment, SD2 identified hydraulic deficiencies during wet weather conditions, including gravity segments with excessive flow depth to pipe diameter ratios (flowing full), surcharging manholes, and gradient deficiencies. For design storm conditions, seven gravity segments were deemed hydraulically deficient (out of 1,697 in total) and one manhole was identified for surcharging. Additionally, 10 out of the 1,697 gravity segments were identified with slopes either reversed or less than standard. To alleviate the identified hydraulic deficiencies and surcharges, specific capacity improvement projects were developed and included as Capital improvement Projects, which alleviated capacity issues and surcharges under design storm conditions at buildout¹⁷.

¹⁵ Sanitary District No. 5 of Marin County. February 11, 2021. Email correspondence with Tony Rubio, District Manager – Chief Plant Operator.

¹⁶ Sanitary District No. 2 of Marin County. August 2013. Sewer System Management Plan.

¹⁷ Sanitary District No. 2 of Marin County. August 2009. Sewer Master Plan.

SD2 has developed and completed a number of more recent rehabilitation projects to increase the reliability of the sewer system to ensure sewer flows can be directed to the CSMA WWTP, including the:

- Variable Frequency Drive Replacement at Paradise Drive Pump Station project;
- Trinidad II Pump Station Modifications project to reduce SSO risk, reduce staff maintenance and overtime hours, and improve worker safety;
- Fifer Pump Station Modification project to upgrade submersible pumps to meet wet weather demands, modernizing pump controls, replacing a diesel generator to meet current air quality standards, and refurbishing wet well protective coating to enhance long term durability of the concrete; and
- Boardwalk A & B Pump Station Motor Control Center Update Project.

Additionally, SD2 recently completed the 2019 Sewer Rehabilitation Project, which focused on rehabilitating the sanitary sewer system in several neighborhoods to improve efficiency and operational integrity of the sewer collection system, reduce inflow & infiltration, reduce SSO risk and reducing staff maintenance. Overall, the project replaced a total of 7,450 linear feet of 6-inch pipes with 8-inch pipes and replaced 151 lower laterals¹⁸. Currently, SD2 is working on the 2020 Rehabilitation Project, which will replace 2,900 linear feet of sewer main, 3 spot repairs and a rehabilitation of 33 manholes, as well as replace 156 lower laterals and 4,248 linear feet of associated pipe. The project is designed to improve efficiency and operational integrity of the sewer collection system, reduce inflow & infiltration, reduce SSO risk, and reduce the need for staff maintenance¹⁹. The 2020 Rehabilitation Project is anticipated to be completed in February 2021.

CMSA Wastewater Treatment Plant

The CMSA WWTP is located in San Rafael at 1301 Anderson Drive, approximately 2.3 miles north of the Tiburon Town limits. The CMSA WWTP provides secondary treatment of domestic, commercial, and industrial wastewater for the City of San Rafael and the surrounding CMSA member agencies and serves a population of about 105,000. The CMSA wastewater management system includes over 70 pump stations, more than 450 miles of sewer pipelines throughout the service area, as well as two major interceptors to transport the wastewater to the treatment plant, and a two-mile long outfall through which treated wastewater is discharged into the San Francisco Bay²⁰.

CMSA treats its wastewater by screening, grit removal, primary clarification, secondary biological treatment, secondary clarification, disinfection by chlorine, and dechlorination by sodium bisulfite. The treatment plant uses an onsite storage basin to store up to 6.2-million gallons of effluent during wet weather diversions of the secondary treatment units. When flows subside, the stored wastewater is either sent to the chlorine disinfection units for discharge or routed back to the headworks for re-treatment (if needed). During wet weather periods, primary-treated wastewater above 30 mgd is routed around the secondary treatment processes and blended with the secondary-treated wastewater prior to disinfection²¹. In 2018, CMSA received 3.99 billion gallons of wastewater and removed over 98% of pollutants, and there were zero reportable NPDES permit violations²².

According to the 2017 Facilities Master Plan, the CMSA completed the Wet Weather Improvements Project in May 2010 to handle increasing wet weather flows from the CMSA member agencies. WWTP expansions and modifications included new mechanical equipment for the Aerated Grit Chamber 3, two new primary clarifiers to increase the primary treatment capacity to 125 mgd, polymer storage and feed facilities to increase primary clarifier performance, two new chlorine contact tanks, and a new 155-mgd effluent pumping station to increase disposal capacity during concurrent peak flow and high tide events.

¹⁸ Sanitary District No. 2 of Marin County. Available at: <https://townofcortemadera.org/955/2019-Sewer-Rehabilitation-Project>

¹⁹ Sanitary District No. 2 of Marin County. Available at: <https://townofcortemadera.org/957/2020-Sewer-Rehabilitation-Project>

²⁰ Central Marin Sanitation Agency. June 2020. Biennial Operating and Capital Budget [page 24]

²¹ California Regional Water Quality Control Board – San Francisco Bay Region. January 2018. CMSA WWTP NPDES Permit Reissued.

²² Central Marin Sanitation Agency. 2019. Spring 2019 Newsletter [page 4]

Current Wastewater Flows

According to the CMSA 2017 Facilities Master Plan, the CMSA WWTP has a ADWF capacity of 10 mgd and has a wet weather capacity of 125 mgd. Currently, the WWTP typically receives and treats:

- Average dry weather flow of 3.1 mgd;
- Average annual flow of 4.95 mgd;
- Average wet weather flow of 6.51 mgd; and
- Peak wet weather flow of 58.5 mgd²³.

REFERENCES

- California Regional Water Quality Control Board – San Francisco Bay Region. December 2006. Order No. R2-2006-0082. Available at: https://www.waterboards.ca.gov/sanfranciscobay/board_decisions/adopted_orders/2006/R2-2006-0082.pdf
- California Regional Water Quality Control Board – San Francisco Bay Region. 2016. Order No. R2-2016-00XX. Available at: https://www.waterboards.ca.gov/sanfranciscobay//board_info/agendas/2016/October/paradisecove/Paradise_Cove_Tentative_Order.pdf
- California Regional Water Quality Control Board – San Francisco Bay Region. January 2018. CMSA WTP NPDES Permit Reissued. Available at: https://www.waterboards.ca.gov/sanfranciscobay/board_info/agendas/2018/January/6_ssr.pdf
- California Regional Water Quality Control Board – San Francisco Bay Region. August 2018. Order No. R2-2018-0038. Available at: https://www.waterboards.ca.gov/sanfranciscobay/board_info/agendas/2018/August/5a_final_to
- Central Marin Sanitation Agency. 2018. 2017 Facilities Master Plan. Available at: https://www.cmsa.us/assets/documents/administrative/2017FacilitiesMasterPlan_FINAL.pdf
- Central Marin Sanitation Agency. 2019. Spring 2019 Newsletter. Available at: https://cmsa.us/assets/newsletters/CMSA_Newsltr_1Q_2019_WEB.pdf
- Central Marin Sanitation Agency. June 2020. Biennial Operating and Capital Budget. Available at: <https://www.cmsa.us/assets/documents/administrative/budget/FY20%20&%20FY21%20Budget%20Adopted%20GFOA%20Website%20CMSA%20CA.pdf>
- City of San Rafael. January 2021. San Rafael General Plan 2040 & Downtown Precise Plan Draft EIR. Available at: https://storage.googleapis.com/proudcity/sanrafaelca/uploads/2021/01/4.17_UilitiesServSystems.pdf
- Richardson Bay Sanitary District. April 2019. Sewer System Management Plan.
- Richardson Bay Sanitary District. Sewer Use Code. Available at: http://richardsonbaysd.org/pdfs/sewer_use_code.pdf
- Sanitary District No. 2 of Marin County. August 2009. Sewer Master Plan. Available at: <https://townofcortemadera.org/DocumentCenter/View/1318/Sanitary-District-No-2-Sewer-Master-Plan-8-2009>

²³ City of San Rafael. January 2021. San Rafael General Plan 2040 & Downtown Precise Plan Draft EIR. [page 4.17-31]

- Sanitary District No. 2 of Marin County. August 2013. Sewer System Management Plan. Available at: <https://townofcortemadera.org/DocumentCenter/View/1020/Sanitary-District-No-2-Sewer-System-Mgmt-Plan-8-2013-Update>
- Sanitary District No. 2 of Marin County. Accessed 2021. 2019 Sewer Rehabilitation Project Overview. Available at: <https://townofcortemadera.org/955/2019-Sewer-Rehabilitation-Project>
- Sanitary District No. 2 of Marin County. Accessed 2021. 2020 Sewer Rehabilitation Project Overview. Available at: <https://townofcortemadera.org/957/2020-Sewer-Rehabilitation-Project>
- Sanitary District No. 2 of Marin County. Accessed 2021. VFD Replacement at Paradise Pump Station Project Overview. Available at: <https://townofcortemadera.org/954/VFD-Replacement-at-Paradise-Drive-Pump-S>
- Sanitary District No. 2 of Marin County. Accessed 2021. Trinidad II Pump Station Modification Project Overview. Available at: <https://townofcortemadera.org/951/Trinidad-II-Pump-Station-Modifications>
- Sanitary District No. 2 of Marin County. Accessed 2021. Fifer Pump Station Modification Project Overview. Available at: <https://townofcortemadera.org/950/Fifer-Pump-Station-Modifications>
- Sanitary District No. 2 of Marin County. Accessed 2021. Boardwalk A & B Pump Station Moto Control Center Updates Project Overview. Available at: <https://townofcortemadera.org/953/Boardwalk-A-B-Pump-Station-MCC-Updates>
- Sanitary District No. 5 of Marin County. August 2014. Grand Jury Report Findings Response “The Scoop on Marin County Sewer Systems: Part 1”. Available at: <https://www.marincounty.org/-/media/files/departments/gj/reports-responses/2013/responses/sd5seweri.pdf?la=en>
- Sanitary District No. 5 of Marin County. May 2018. Sanitary District No. 5 of Marin County Sewer System Management Plan. Available at: <https://www.sani5.org/about/documents/file/archives/2018%2005%2016%20F%20Main%20Plant%20SSMP%2005042018TR.pdf>
- Sanitary District No. 5 of Marin County. May 2018. Sanitary District No. 5 of Marin County – Paradise Cove Sewer System Management Plan. Available at: <https://www.sani5.org/about/documents/file/archives/2018%2005%2016%20F%20Paradise%20Cove%20SSMP%20UPDATE%202018%2005012018TR.pdf>
- Sanitary District No. 5 of Marin County Municipal Code. Current through Resolution 2020-10, passed October 2020. Available at: <https://www.codepublishing.com/CA/MarinCSD5/#!/MarinCSD501/MarinCSD501.html>.
- Sanitary District No. 5 of Marin County. February 11, 2021. Email correspondence with Tony Rubio, District Manager – Chief Plant Operator.
- Sewerage Agency of Southern Marin. December 2014. Wastewater Treatment Plan Master Plan. Available at: <https://www.sasmwwtp.org/projects/masterplan.htm>
- Sewerage Agency of Southern Marin. April 2018. Wastewater Treatment Plant Rehabilitation Project – Phase I Notice. Available at: <https://www.cityofmillvalley.org/documents/Public%20Notice.pdf>

Figure 2: Wastewater Agency Boundaries

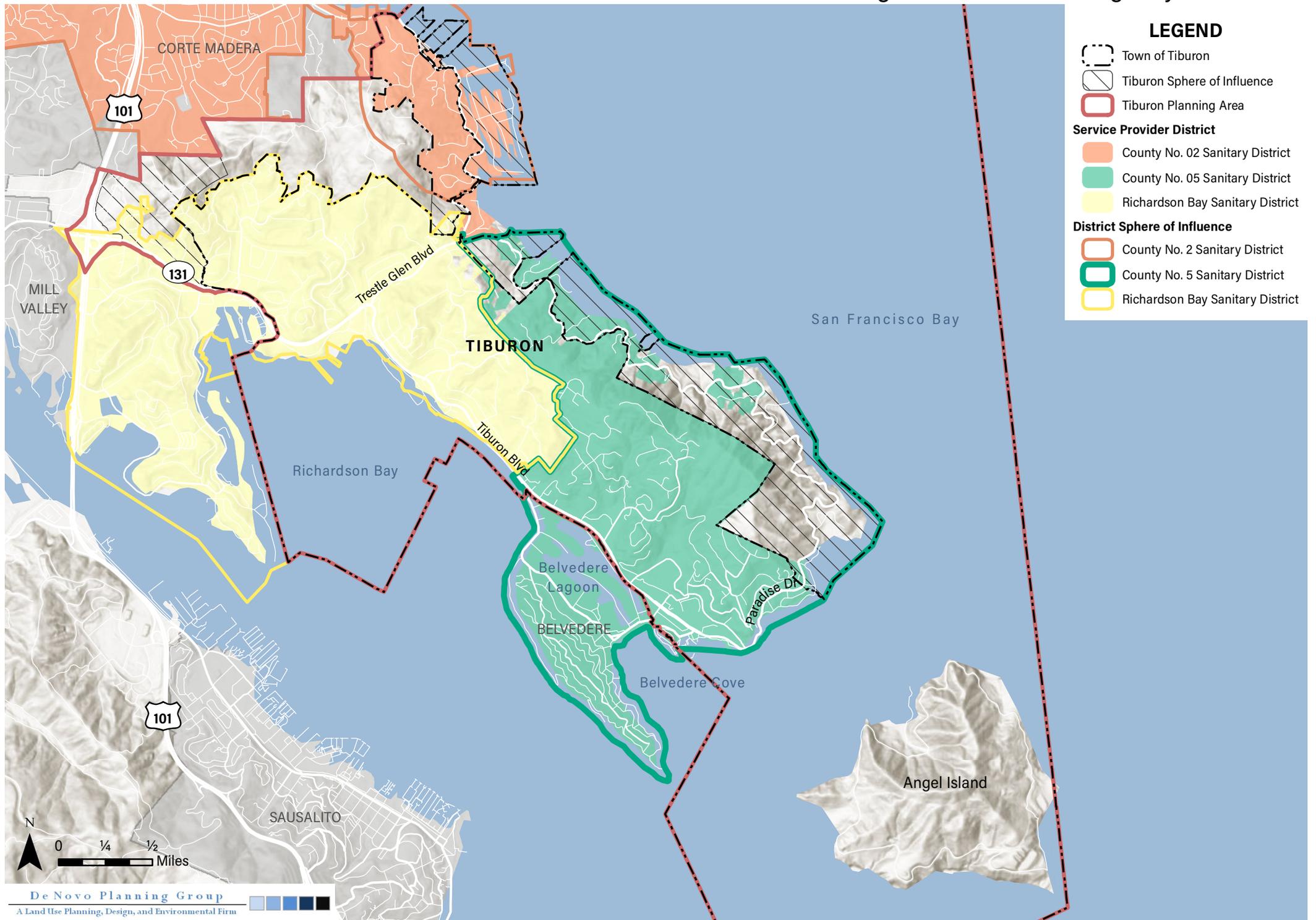
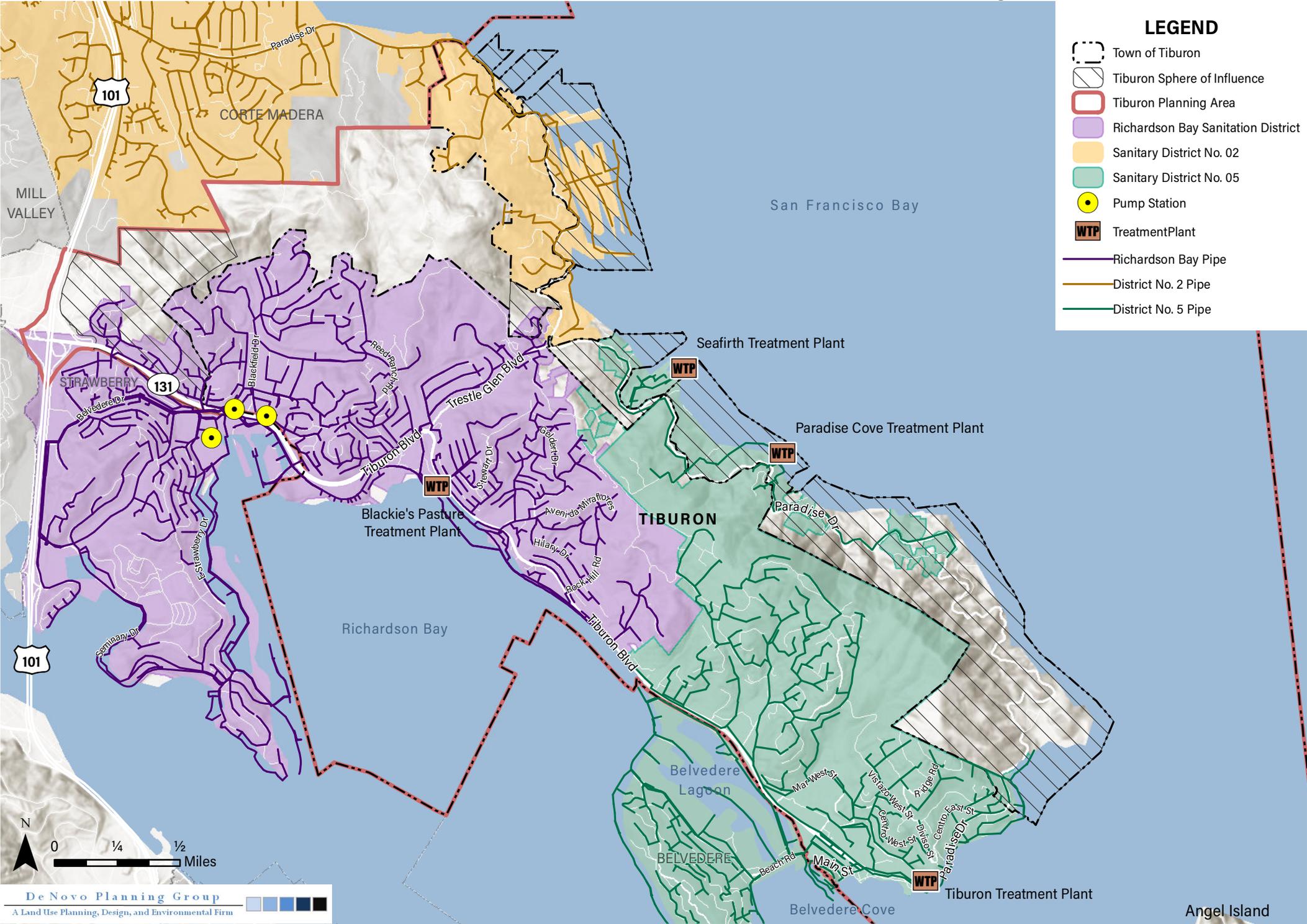


Figure 3: Wastewater Facilities



LEGEND

- Town of Tiburon
- Tiburon Sphere of Influence
- Tiburon Planning Area
- Richardson Bay Sanitation District
- Sanitary District No. 02
- Sanitary District No. 05
- Pump Station
- Treatment Plant
- Richardson Bay Pipe
- District No. 2 Pipe
- District No. 5 Pipe



Sources: ArcGIS Online World Hillshade Map Service; Marin GeoHub; MarinMap; Sanitation District 5. Map date: February 8, 2021

3. STORMWATER

The section provides a discussion of the stormwater/flood control systems that serve the Town of Tiburon. The Town's existing drainage system is comprised primarily of channelized creeks fed by surface runoff and underground storm drains. The Town maintains the system within incorporated areas. In the unincorporated parts of the Planning Area, the Marin County Flood Control and Water Conservation maintains major channels and creeks over which they hold land rights, while the County Department of Public Works maintains road drainage systems and several detention basins.

REGULATORY FRAMEWORK

FEDERAL

Clean Water Act

The Clean Water Act (CWA) regulates the water quality of all discharges into waters of the United States including wetlands, perennial and intermittent stream channels. Section 401, Title 33, Section 1341 of the CWA sets forth water quality certification requirements for "any applicant applying for a federal license or permit to conduct any activity including, but not limited to, the construction or operation of facilities, which may result in any discharge into the navigable waters." Section 404, Title 33, Section 1344 of the CWA in part authorizes the U.S. Army Corps of Engineers to:

- Set requirements and standards pertaining to such discharges: subparagraph (e); Issue permits "for the discharge of dredged or fill material into the navigable waters at specified disposal sites": subparagraph (a);
- Specify the disposal sites for such permits: subparagraph (b);
- Deny or restrict the use of specified disposal sites if "the discharge of such materials into such area will have an unacceptable adverse effect on municipal water supplies and fishery areas": subparagraph (c);
- Specify type of and conditions for non-prohibited discharges: subparagraph (f);
- Provide for individual State or interstate compact administration of general permit programs: subparagraphs (g), (h), and (j);
- Withdraw approval of such State or interstate permit programs: subparagraph (i);
- Ensure public availability of permits and permit applications: subparagraph (o);
- Exempt certain Federal or State projects from regulation under this Section: subparagraph (r); and,
- Determine conditions and penalties for violation of permit conditions or limitations: subparagraph (s).
- Section 401 certification is required prior to final issuance of Section 404 permits from the U.S. Army Corps of Engineers.

The Water Board is responsible for implementing the Clean Water Act and does so through issuing NPDES permits to cities and counties through regional water quality control boards. Federal regulations allow two permitting options for stormwater discharges (individual permits and general permits). The Water Board elected to adopt a Statewide General Permit (Water Quality Order No. 2013-001-DWQ-DWQ).

Federal Emergency Management Agency

The Town is a participant in the National Flood Insurance Program (NFIP), a Federal program administered by the Federal Emergency Management Agency (FEMA). Participants in the NFIP must satisfy certain mandated floodplain management criteria. The National Flood Insurance Act of 1968 has adopted as a desired level of protection, an expectation that developments should be protected from floodwater damage of the Intermediate Regional Flood (IRF). The IRF is defined as a flood that has an average frequency of occurrence on the order of once in 100 years, although such a flood may occur in any given year. Communities are occasionally audited by the Department of Water Resources to insure the proper implementation of FEMA floodplain management regulations. The Town adopted the Model Floodplain Management Ordinance within the Town in order to maintain eligibility within the National Flood Insurance Program.

Coastal Zone Management Act

The Coastal Zone Management Act (CZMA) was passed in 1972. This act, administered by the National Oceanic and Atmospheric Administration, provides for the management of the nation's coastal resources, including the Great Lakes. The goal is to "preserve, protect, develop, and where possible, to restore or enhance the resources of the nation's coastal zone."

The CZMA outlines three national programs: the National Coastal Zone Management Program, the National Estuarine Research Reserve System, and the Coastal and Estuarine Land Conservation Program (CELCP). The National Coastal Zone Management Program aims to balance competing land and water issues through state and territorial coastal management programs, the reserves serve as field laboratories that provide a greater understanding of estuaries and how humans impact them, and CELCP provides matching funds to state and local governments to purchase threatened coastal and estuarine lands or obtain conservation easements.

National Pollutant Discharge Elimination System

National Pollutant Discharge Elimination System (NPDES) permits are required for discharges of pollutants to navigable waters of the United States, which includes any discharge to surface waters, including lakes, rivers, streams, bays, the ocean, dry stream beds, wetlands, and storm sewers that are tributary to any surface water body. NPDES permits are issued under the Federal Clean Water Act, Title IV, Permits and Licenses, Section 402 (33 USC 466 et seq.)

The RWQCB issues these permits in lieu of direct issuance by the EPA, subject to review and approval by the EPA Regional Administrator. The terms of these NPDES permits implement pertinent provisions of the Clean Water Act and the Act's implementing regulations, including pre-treatment, sludge management, effluent limitations for specific industries, and anti-degradation. In general, the discharge of pollutants is to be eliminated or reduced as much as practicable so as to achieve the Clean Water Act's goal of "fishable and swimmable" navigable (surface) waters. Technically, all NPDES permits issued by the RWQCB are also Waste Discharge Requirements issued under the authority of the Clean Water Act.

These NPDES permits regulate discharges from publicly owned treatment works, industrial discharges, stormwater runoff, dewatering operations, and groundwater cleanup discharges. NPDES permits are issued for five years or less and are therefore to be updated regularly. To expedite the permit issuance process, the Water Board has adopted several general NPDES permits, each of which regulates numerous discharges of similar types of wastes. The Water Board has issued general permits for stormwater runoff from industrial and construction sites statewide. Stormwater discharges from industrial and construction activities in the San Francisco Bay Region can be covered under these general permits, which are administered jointly by the Water Board and RWQCB. Tiburon is within the jurisdiction of the San Francisco Bay RWQCB.

The Water Board and RWQCBs enforce State of California statutes that are equivalent to or more stringent than the Federal statutes. RWQCBs are responsible for establishing water quality standards and objectives that protect the beneficial uses of various waters. In 2003, smaller (less than 100,000 population) municipalities and unincorporated counties were required to obtain coverage under a statewide NPDES Municipal General Stormwater Permit (Phase II Permit) issued by the State Water Resources Control Board. In Marin County, the County and all Marin's municipalities, including Tiburon, are subject to the conditions of the regulations described in the current 2013 Phase II Permit. The Marin County Permittees are currently subject to National Pollutant Discharge Elimination System (NPDES) Permit No. CAS000004, issued by Order No. WQ 2018-0007-EXEC on March 13, 2019, which pertains to stormwater runoff discharge from storm drains and watercourses within their jurisdictions.

STATE

Department of Water Resources

The Department of Water Resources' (DWR) major responsibilities include preparing and updating the California Water Plan to guide development and management of the State's water resources, planning, designing, constructing, operating, and

maintaining the State Water Resources Development System, protecting and restoring the Sacramento-San Joaquin Delta, regulating dams, providing flood protection, assisting in emergency management to safeguard life and property, educating the public, and serving local water needs by providing technical assistance. In addition, the DWR cooperates with local agencies on water resources investigations; supports watershed and river restoration programs; encourages water conservation; explores conjunctive use of ground and surface water; facilitates voluntary water transfers; and, when needed, operates a State drought water bank.

California Water Code

California's primary statute governing water quality and water pollution issues with respect to both surface waters and groundwater is the Porter-Cologne Water Quality Control Act of 1970 (Division 7 of the California Water Code) (Porter-Cologne Act). The Porter-Cologne Act grants the Water Board and each of the RWQCBs power to protect water quality and is the primary vehicle for implementation of California's responsibilities under the Federal Clean Water Act. The Porter-Cologne Act grants the Water Board and the RWQCBs authority and responsibility to adopt plans and policies, to regulate discharges to surface and groundwater, to regulate waste disposal sites and to require cleanup of discharges of hazardous materials and other pollutants. The Porter-Cologne Act also establishes reporting requirements for unintended discharges of any hazardous substance, sewage, or oil or petroleum product.

Each RWQCB must formulate and adopt a water quality control plan (Basin Plan) for its region the regional plans are to conform to the policies set forth in the Porter-Cologne Act and established by the Water Board in its State water policy. The Porter-Cologne Act also provides that a RWQCB may include within its regional plan water discharge prohibitions applicable to particular conditions, areas, or types of waste.

The Water Code Section 13260 requires all dischargers of waste that may affect water quality in waters of the state to prepare and provide a water quality discharge report to the RWQCB. Section 13260a-c is as follows:

(a) Each of the following persons shall file with the appropriate regional board a report of the discharge, containing the information that may be required by the regional board:

(1) A person discharging waste, or proposing to discharge waste, within any region that could affect the quality of the waters of the state, other than into a community sewer system.

(2) A person who is a citizen, domiciliary, or political agency or entity of this state discharging waste, or proposing to discharge waste, outside the boundaries of the state in a manner that could affect the quality of the waters of the state within any region.

(3) A person operating, or proposing to construct, an injection well.

(b) No report of waste discharge need be filed pursuant to subdivision (a) if the requirement is waived pursuant to Section 13269.

(c) Each person subject to subdivision (a) shall file with the appropriate regional board a report of waste discharge relative to any material change or proposed change in the character, location, or volume of the discharge.

Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary

The watershed of the Bay-Delta Estuary provides drinking water to two-thirds of the State's population and water for a multitude of other urban uses, and it supplies some of the State's most productive agricultural areas, both inside and outside of the Estuary. The Bay-Delta Estuary itself is one of the largest ecosystems for fish and wildlife habitat and production in the United States.

The Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary (Basin Plan) includes a summary of beneficial water uses, water quality objectives needed to protect the identified beneficial uses, and implementation measures. The Basin Plan establishes water quality standards for all the ground and surface waters of the region. The term “water quality standards,” as used in the Federal Clean Water Act, includes both the beneficial uses of specific water bodies and the levels of quality that must be met and maintained to protect those uses. The Basin Plan includes an implementation plan describing the actions by the RWQCB and others that are necessary to achieve and maintain the water quality standards.

The RWQCB regulates waste discharges to minimize and control their effects on the quality of the region’s ground and surface water. Permits are issued under a number of programs and authorities. The terms and conditions of these discharge permits are enforced through a variety of technical, administrative, and legal means. Water quality problems in the region are listed in the Basin Plan, along with the causes, where they are known. For water bodies with quality below the levels necessary to allow all the beneficial uses of the water to be met, plans for improving water quality are included. The Basin Plan reflects, incorporates, and implements applicable portions of a number of national and statewide water quality plans and policies, including the California Water Code and the Clean Water Act.

LOCAL

San Francisco Bay Conservation and Development Commission (BCDC) San Francisco Bay Plan (Bay Plan)

The San Francisco Bay Conservation and Development Commission (BCDC) is a California state planning and regulatory agency with regional authority over the San Francisco Bay, the Bay’s shoreline band, and the Suisun Marsh. BCDC was created in 1965 and is the nation’s oldest coastal zone agency.

Its mission is to protect and enhance San Francisco Bay and to encourage the Bay’s responsible and productive use for this and future generations. State law requires sponsors of projects that propose to fill or extract materials from the Bay to apply for a BCDC permit. In addition to minimizing any fill required for an appropriate project and ensuring that the project is compatible with the conservation of Bay resources, BCDC is tasked with requiring maximum feasible public access within the Bay’s 100-foot shoreline band. In addition, BCDC leads the Bay Area’s ongoing multi-agency regional effort to address the impacts of rising sea level on shoreline communities and assets.

The San Francisco Bay Plan (Bay Plan) was completed and adopted by the BCDC in 1968 and has been updated regularly with the most recent revisions approved by BCDC in 2019. Essential parts of the Bay Plan include policies to guide future uses of the Bay and shoreline, and the maps that apply these policies to the present Bay and shoreline. The Bay Plan addresses the following matters as specifically required by the law:

1. The results of the Commission's detailed study of the Bay;
2. The comprehensive plan adopted by the Commission for the conservation of the water of San Francisco Bay and the development of its shoreline;
3. The Commission's recommendation of the appropriate agency to maintain and carry out the Bay Plan;
4. The Commission's estimate of the approximate amount of money that would be required to maintain and carry out the provisions of the Plan for the Bay;
5. Other information and recommendations the Commission deemed desirable.

The Bay Area Plan includes findings and policies related to hydrology/ water quality. The hydrology/ water quality section of the Bay Area Plan includes policies associated with the implementation of programs for controlling pollution, including stormwater management plans, Total Maximum Daily Load implementation plans, construction site stormwater runoff and

erosion, sediment controls, establishing best management practices, such as site planning or structural controls, new technologies, project siting criteria, and operating methods.

Marin County Stormwater Pollution Prevention Program

The Marin County Stormwater Pollution Prevention Program (MCSTOPPP) is a joint effort of Marin's cities, towns, and unincorporated areas to prevent stormwater pollution, protect and enhance water quality in creeks and wetlands, preserve beneficial uses of local waterways, and comply with State and Federal regulations. Each MCSTOPPP member agency implements a local stormwater pollution prevention program and funds the countywide MCSTOPPP, which provides for the coordination and consistency of approaches between the local stormwater programs and documents their efforts in annual reports. The annual reports include information on illegal discharge detection and elimination, street and storm drain cleaning, municipal and creek maintenance, stormwater and creek protection controls for development projects, business inspections, and public outreach, education, and participation. While MCSTOPPP provides guidance for compliance with NPDES permitting, permit compliance is administered by the specific municipality in which the project is proposed.

Bay Area Stormwater Management Agencies Post Construction Manual

The MCSTOPPP has approved the most recent version of the Bay Area Stormwater Management Agencies (BASMAA) Post Construction Manual as the applicable California Storm Water Quality Association Best Management Practices Handbook for projects within MCSTOPPP. The BASMAA Post Construction Manual is to assist applicants for development approvals to prepare submittals that demonstrate their project complies with the NPDES permit requirements. This manual is designed to facilitate the review of applications and promote integrated Low Impact Development (LID) designs. LID design aims to mimic pre-project site hydrology as well as protect water quality. Runoff from roofs and impervious paved areas is dispersed to landscaped areas or routed to bioretention facilities distributed throughout the site. Bioretention facilities infiltrate some runoff and feature underdrains to convey treated stormwater to storm drains.

Tiburon Storm Drain Master Plan

The Tiburon Storm Drain Master Plan established a comprehensive study of the existing drainage system throughout the Town of Tiburon. The study involved the research and review of available background materials and information, examination of regional storm drain video footage, and the creation of base maps for field investigation. The Plan includes watershed areas outside of Town boundaries which, due to topography, contribute to the Town's drainage system. Preparation of the Storm Drainage Master Plan is part of the Town of Tiburon's ongoing efforts to compile data, analyze, and upgrade its existing, aging storm drainage system. Field observations were catalogued, and data was formulated for input into 44 separate hydrologic/hydraulic models representing the watersheds and drainage systems of Tiburon to identify structural and material failures.

Town of Tiburon General Plan

The existing Town of Tiburon General Plan identifies the following goals and policies related to stormwater quality, drainage and erosion (for additional policies and information specifically related to flooding see Section 4 Flooding of the *Hazards and Safety Existing Conditions Report*):

Open Space and Conservation Element

Policies

OSC-52. Water quality should be maintained or enhanced in order to promote the continued environmental health of natural waterway habitats.

OSC-53. The Town shall continue to be an active member agency of the Marin County Stormwater Pollution Prevention Program (MCSTOPPP) to reduce pollution being conveyed through storm water systems to the Bay and to comply with federal and state water quality regulations.

OSC-54. The Town shall promote the adoption and implementation of Start at the Source-Design Guidance Manual for Stormwater Quality Protection and the most recent follow-up publication Using Site Design Techniques to Meet Development Standards for Stormwater Quality: A Companion Document, both of which apply to new development and redevelopment projects. These documents stress the incorporation of runoff and other pollutant source controls into the project design process.

Safety Element

Policies

SE-12: On-site detention of stormwater runoff shall be utilized to ensure that post-development peak flow rates from a site resulting from both the two-year and 100-year design rainstorms are not increased by new subdivisions or other permitted development projects.

SE-13: To the extent that new subdivisions are responsible for exceeding the capacity of any existing stormwater drainage system, the applicant shall be responsible for the cost of improvements to the system such that the capacity is not exceeded upon project completion.

SE-14: To offset the increased demand on the capacity, operation, and sustainability of the Town storm drain system, the Town shall expend its Stormwater Runoff Impact Fees to upgrade, enhance, and/or rehabilitate the Town's public storm drain system.

Implementing Programs

SE-b: The Town shall require project applicants for new development to prepare a hydraulic and geomorphic assessment of on-site and downstream drainageways that are affected by project area runoff. Characteristics pertinent to channel stability would include bank erosion, excessive bed scour or sediment deposition, bed slope adjustments, lateral channel migration or bifurcation, and the condition of riparian vegetation. In the event existing channel instabilities were noted, the applicant could either propose their own channel stabilization program or defer to the mitigations generated during the Town's environmental review. Any proposed stabilization measures shall anticipate any project-related changes to the drainageway flow regime.

Town of Tiburon Municipal Code

Chapter 13D Flood Damage Prevention Ordinance. This chapter outlines specific requirements for new developments within floodplain areas that serve to minimize public and private losses due to flood conditions. In order to accomplish its purposes, this chapter includes methods and provisions for:

1. Restricting or prohibiting uses which are dangerous to health, safety, and property due to water or erosion hazards, or which result in damaging increases in erosion or flood heights or velocities;
2. Requiring that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;
3. Controlling the alteration of natural floodplains, stream channels, and natural protective barriers, which help accommodate or channel floodwaters;
4. Controlling filling, grading, dredging and other development which may increase flood damage; and
5. Preventing or regulating the construction of flood barriers which will unnaturally divert floodwaters or which may increase flood hazards in other areas.

Chapter 13E Water Efficient Landscape. As mandated under State Government Code Section 65595(c), certain new construction, remodel, and rehabilitation projects that include landscape and irrigation improvements are required to comply with water-efficient landscape requirements and monitoring of water usage for irrigation. The purpose of this chapter is to

comply with this state mandate regarding water-efficient landscaping. The ordinance contains provisions that include but are not limited to, the following:

5. The application and monitoring of a "maximum applied water allowance" that is established for applicable projects.
6. The review of required landscape and irrigation plans, specifications and supportive documents prepared for applicable projects for compliance with water-efficient landscape restrictions, including limitations on the type and amount of landscape materials and plant species.
7. The review, inspection and approval of landscape and irrigation that is installed for applicable projects to ensure compliance with the approved landscape and irrigation plans and specifications.
8. The post-installation monitoring of water usage for irrigation by applicable projects.

Chapter 14A Drainage Areas. This chapter is enacted for the purpose of establishing drainage fees to defray the actual or estimated costs of constructing planned drainage facilities for the removal of surface and storm waters from local or neighborhood drainage areas.

Chapter 17 Harbor and Waterways. This chapter establishes additional standards and regulations related to zoning, parks and recreation and the obstruction, diverting, etc., of watercourses within the Town of Tiburon.

Chapter 20A Urban Runoff Pollution Prevention. The purpose of this chapter is to establish the legal authority required by section E.6.a of the phase II stormwater permit and to ensure the future health, safety and general welfare of the citizens of the Town of Tiburon and to protect and enhance watercourses, fish and wildlife habitat by:

1. Minimizing discharges other than storm runoff to storm drains or watercourses to the maximum extent practicable;
2. Responding to the discharge of spills, preventing and controlling the discharge of spills to storm drains or watercourses and prohibiting dumping or disposal of materials other than stormwater;
3. Reducing pollutants in stormwater discharges to the maximum extent practicable;
4. Requiring operators of construction sites, new or redeveloped land, and industrial and commercial facilities to install, implement, or maintain appropriate best management practices ("BMPs").
5. Requiring development projects to maintain or reduce the volume, velocity, peak flow rate and duration of runoff as compared to the pre-development stormwater runoff and preventing stormwater pollution whenever possible, through stormwater management controls and ensuring that these management controls are properly maintained.
6. Authorizing the town to take the foregoing and all other actions specified by Section E.6.a of the Phase II Small Municipal Separate Storm Sewer System National Pollutant Discharge Elimination System Permit, Water Quality Order No. 2013-0001—DWQ, General Permit No. CAS000004 ("Phase II Stormwater Permit") and subsequent revisions and amendments thereto.
7. The intent of this chapter is to protect and enhance the water quality of our watercourses, water bodies, and wetlands in a manner pursuant to and consistent with the Clean Water Act, the Porter-Cologne Water Quality Control Act (California Water Code section 13000 et seq.), and the phase II stormwater permit and subsequent revisions and amendments thereto.

EXISTING CONDITIONS

STORMWATER FLOWS AND STORM DRAINS

The Tiburon storm drain system is a combination of pipe and open drainage channel (ditch) systems, which includes over 344 sections of pipes, several natural and enhanced channels and ditches within and flowing into Town boundaries not owned or maintained by the Town of Tiburon, the Pamela Court and Leland Pump Stations, and tidal and tidal outfalls into the Richardson Bay and San Francisco Bay. The storm drain system co-mingles with Caltrans and unincorporated Marin

County drainage channels, as well as the drainage systems of the cities of Belvedere, Corte Madera, and Mill Valley²⁴. Figure 4 identifies the stormwater facilities that serve the Town and Planning Area.

Located on a peninsula, the Tiburon Planning Area consists of multiple watersheds generally draining to Richardson Bay on the south side, Raccoon Strait to the east, and San Francisco Bay to the north. The Tiburon Planning Area is located within the Richardson Bay Watershed²⁵, which encompasses several sub-watersheds, including: the Angel Island-San Francisco Bay Estuaries sub, Arroyo Corte Madera Del Presidio-Frontal San Francisco Bay Estuaries, and Larkspur Creek-Frontal San Francisco Bay Estuaries. According to the Tiburon Storm Drainage Master Plan, the Town is drained by multiple smaller sub-watersheds on the north, west, east, and south sides of the Peninsula, which primarily discharge into Richardson Bay or San Francisco Bay through tidal outfalls.

The following are descriptions of the identified watersheds in the Tiburon Storm Drainage Master Plan that contribute to the Town's storm drain system.

Belveron A and B Watersheds: Both Belveron A and B Watersheds outlet into Richardson Bay through Blackie's Pasture, a park traversed by drainage pathways defined by vegetated open channel, culvert and underground pipe storm drain system. Belveron A Watershed encompasses approximately 59 acres of mostly residential development within the lower portion of Reed Ranch Road and is bounded by Jefferson Drive to the east and Southridge West (road) to the west. Belveron A Watershed discharges to Richardson Bay through the western culvert and open channel system through Blackie's Pasture.

The westerly draining portion of Trestle Glen Boulevard (west of Hacienda Drive) is situated along the valley of the Belveron B Watershed. The Belveron B Watershed encompasses approximately 195 acres of open space, vegetated hillside, and residential development. Drainage from Trestle Glen Boulevard discharges through the eastern vegetated channel flowing through Blackie's Pasture.

Blackfield/West Creek Watershed: The Blackfield/West Creek Watershed encompasses the westernmost portion of the Town limits. This approximately 244-acre watershed accepts drainage from both unincorporated Marin County along the upper ridge lines and from the City of Mill Valley along the western boundary. A portion of the storm drain system draining the Cypress Hollow Drive area appears to be located under Bay Vista Drive in the City of Mill Valley. Blackfield Road parallels the north-south flowing West Creek which is under the jurisdiction of Marin County Flood Control and Water Conservation District. Flows in West Creek upstream of the Tiburon Boulevard crossing may be influenced by inflow from the Pamela Court Pump Station under large events.

Cecilia Watershed: The Cecilia Watershed lies adjacent to the Leland/East Creek Watershed, receiving flows from the Cayford Circle hilltop and Southridge West Hilltop. The approximately 40-acre watershed drains to Richardson Bay, crossing Tiburon Boulevard near the intersection with Cecilia Way via a 36-inch diameter culvert.

Downtown 1/4, 2, 3, 5, and 6 Watersheds: The Downtown 1/4 Watershed utilizes two outlets to drain its approximately 36 acres to Richardson Bay. Flow entering inlet DT719 splits with flows moving either to the northwest to the outlet near the intersection of Mar West and Tiburon Boulevard or southeast towards the outlet at Main Street and Tiburon Boulevard, near several Downtown outlets.

The Downtown 2 Watershed encompasses approximately 1.3 acres and outlets to the northwest of the City of Belvedere at the intersection of Main Street and Beach Road. The Downtown 3, 5, and 6 Watersheds all outlet in the vicinity of the

²⁴ CSW/Stuber-Stroeh Engineering Group. 2008. Tiburon Storm Drainage Master Plan

²⁵ Marin County Stormwater Pollution Prevention Program. September 2017. Storm Water Resource Plan Functionally Equivalent Document. [page 3-12]

intersection of Main Street and Tiburon Boulevard. The areas drained by the Downtown 3, 5, and 6 Watersheds are approximately 4.6 acres, 1.2 acres, and 2.0 acres, respectively.

East End Watersheds: The East End Watershed group consists of nine separate watersheds located along the eastern-most tip of the Tiburon Peninsula. All outlets for the East End group are located easterly of the downtown area, northeast of the intersection of Tiburon Boulevard and Paradise Boulevard. The areas drained by the East End Watersheds are approximately 1.1 acres known as East End 1, approximately 1.7 acres known as East End 2, approximately 24.1 Acres known as East End 3, approximately 1.2 acres known as East End 4, approximately 8.9 acres known as East End 5, approximately 46.1 acres known as East End 6, approximately 5.3 acres known as East End 7, approximately 1.1 acres known as East End 8, and approximately 4.8 acres known as East End 9.

Leland/East Creek Watersheds: The Leland/East Creek Watershed lies adjacent and to the east of the Blackfield/West Creek Watershed. This approximately 253-acre watershed is comprised of residential and open space area which drains into the north-south flowing East Creek (parallel to Leland Street) which is under the jurisdiction of the Marin County Flood Control and Water Conservation District. Flows in East Creek upstream of the Tiburon Boulevard crossing may be influenced by inflow from the Leland Pump Station under large events.

Lyford Watershed: The approximately 197-acre Lyford Watershed drains a portion of the hillside to the south of Mount Tiburon Road to an outlet midway between the intersections of Tiburon Boulevard with Lyford Drive and Ned's Way. A large portion of the flow generated within the watershed travels beneath Reed Elementary School. The outlet of Lyford Watershed, after crossing Tiburon Boulevard, flows into the Lagoon adjacent to the Town of Belvedere via 36-inch diameter culvert.

Madsen Watershed: The approximately 1.5-acre Madsen Watershed is located on the northeastern slope of Tiburon, north of the Old Landing Watersheds. Storm water flows enter the storm drain system primarily at the entrance of Mateo Drive, as well as at an additions storm drain located further uphill along Mateo Drive; however, the uphill portion of Mateo Drive discharges into Old Landing Watersheds. In general, discharge from the Madsen Watershed enters San Francisco Bay near the Paradise Cay Yacht Harbor.

Upper Mar West and Lower Mar West (Mar West-Raccoon) Watersheds: The Upper Mar West and Lower Mar West (Mar West-Raccoon) Watersheds are related by an outlet weir and conduit overflow structure located in the lake adjacent to the Tiburon Peninsula Club on Mar West Boulevard. The number of inlet structures for the two watersheds precluded modeling them together, although technically they share the same outlet into Richardson Bay. The entire Upper Mar West Watershed drains to the lake and is released via outlet weir and conduit structure into the Lower Mar West (Mar West-Raccoon) Watershed. The outlet for the combined system is located near the Downtown 6 Watershed outlet.

Upper Mar West Watershed encompasses approximately 191-acres, including the lake near the Peninsula Club. The Lower Mar West (Mar West-Raccoon) Watershed drains approximately 72 acres. The lower "Raccoon Lake" within the Lower Mar West (Mar West-Raccoon) Watershed outlets via weir and conduit structure into the lower portion of the Lower Mar West system. A very small watershed contributes to the lake and the outlet weir appears to discharge only under very large events.

Miraflores Watershed: The Miraflores Watershed envelopes approximately 133 acres and outfalls to Richardson Bay to the southwest of the Pine Terrace subdivision. The watershed of mostly steep slopes is almost entirely developed. The lower portion of the watershed includes the lower section of Avenida Miraflores and Del Mar Middle School.

Old Landing Watersheds: Old Landing Watersheds 1 and 2 drain a combined approximately 128 acres on the northeast slope of the Tiburon Peninsula, and drain into San Francisco Bay. Old Landing 1 envelopes approximately 40 acres, and Old Landing 2 consists of approximately 88 acres. In both cases, much of the contributing watershed is undeveloped with areas of residential single family low-density housing.

Rock Hill Watersheds: The Rock Hill Watersheds A through G were previously described in the Tiburon Drainage Master Plan (Bala & Strandgaard, 1975). These watersheds are generally steep with small areas of relatively flat terrain adjacent to Tiburon Boulevard.

The outfall from Rock Hill A Watershed is located near the westerly corner of the Belvedere Tennis Club and drains approximately 40 acres. Rock Hill B Watershed outlets at the southeast edge of the Belvedere Tennis Club and drains approximately 51 acres. The outfall from Rock Hill C Watershed is located approximately 650 feet south southwest of the intersection of Tiburon Boulevard and Rock Hill Drive and drains approximately 11 acres.

Rock Hill D Watershed outfalls approximately 350 feet northwest of the intersection of Tiburon Boulevard and Gilmartin Drive and drains approximately 58 acres. The outfall from Rock Hill E Watershed is located approximately 150 feet southwest of the intersection of Tiburon Boulevard and Gilmartin Drive and drains approximately 11 acres. Rock Hill F outlets approximately 220 feet west of the intersection of Tiburon Boulevard and San Rafael Avenue and drains approximately 8 acres. The outlet for the Rock Hill G Watershed is approximately 250 feet to the southwest of Tiburon Boulevard and San Rafael Avenue and drains approximately 74 acres.

Seafirth Watershed: Seafirth Watershed consists of approximately 23 acres of residential development along Seafirth Road. The watershed lies on the northeastern slope of the Tiburon Peninsula and drains to San Francisco Bay.

Stewart Watershed: The Stewart Watershed encompasses approximately 25 acres. Stewart Drive and several cul-de-sacs drain to a main trunk line along lower Stewart Drive. The watershed outlets into Richardson Bay immediately east of Blackie's Pasture. Stewart is one of the only watersheds completely drained by a closed pipe system instead of a pipe and open drainage channel (ditch) system.

Sugarloaf Watersheds: Five small drainage systems at the top of Sugarloaf Hill collect water from ridge line development and outlet onto Tiburon's northeast slope. Combined, Sugarloaf A, B, C, D, and E watersheds encompass approximately 3.5 acres.

Taylor Watersheds: The Taylor Watersheds include four individual areas surrounding and including parts of Taylor Road at the northernmost point of the northeastern side of the Tiburon Peninsula. Whereas Taylor 1 outlets directly to San Francisco Bay, Taylor 2, 3, and 4 outlet into swales which eventually reach the bay without additional pipes except those which may cross beneath Paradise Boulevard. The Taylor Watersheds encompasses approximately 36.6 acres, including 27.1 acres known as Taylor 1, 1.3 acres known as Taylor 2, 2.6 acres known as Taylor 3, and 5.6 acres known as Taylor 4.

The Tiburon Department of Public Works is responsible for the maintenance and improvement of all public infrastructure owned and managed by the Town. In addition to normal maintenance operations, they are a key agency in responding to emergencies involving infrastructure as well as weather related events and other disasters that have the potential for adverse impacts to public health or the environment.

Areas not owned or maintained by the Town include those maintained by the Marin County Department of Public Works, Marin County Parks Department and Open Space District, and the Reed Union School District. Marin County Department of Public Works maintains West Creek and East Creek and operates the Pamela Court and Leland Pump Stations, which are the only pump stations within the Town's storm drain system. The Pamela Court Pump Station adjoins West Creek and Leland Pump Stations adjoins East Creek and collects flood waters from a flat area encompassing Pamela Court, lower Blackfield Drive, Harriet Way, and the Cove Shopping Center, and discharge into the East and West Creeks immediately upstream of the Tiburon Boulevard culvert crossings. Additionally, Marin County Parks Department and Marin County Open Space District maintain some upland areas which contribute to the Tiburon storm drainage system, Caltrans maintains several

ditches along the Tiburon Boulevard right-of-way, and Reed Union School District maintains the storm drain systems which traverse school district property²⁶.

According to the Tiburon Storm Drainage Master Plan, of the 344 pipe sections analyzed in the plan, 249 pipe sections were determined to have insufficient capacity to pass a 25-year frequency storm event. Additionally, 116 sections (approximately 17,000 feet of pipe) require cleaning or cleaning and re-inspecting, and 58 pipe sections necessitate replacement due to structural and material failures. In June 2020, the Town of Tiburon Public Works Department completed a storm drain rehabilitation project, which consisted of the cleaning and repairing of corrugated metal pipe, lining of pipes with cured in-place liners, miscellaneous repairs, minor concrete, and other similar actions on various streets in Tiburon to improve stormwater drainage²⁷.

The Town's storm drains do not connect to the sewer system, and all stormwater that flows into a storm drain system flows directly into the neighboring bays. As discussed previously, The SFBRWQCB requires all municipalities within Marin County (and the County itself) to develop restrictive surface water control standards for new development projects as part of the municipal regional NPDES Permit. Known as "Provision C.3," new development or redevelopment projects that disturb one or more acres of land area must contain and treat stormwater runoff from the site.

FLOODING AND FLOODPLAIN MAPPING

Tiburon is responsible for maintaining the flood control system within the incorporated area. In the unincorporated parts of the Planning Area, responsibility for storm drain maintenance lies with the Marin County Flood Control and Water Conservation District. FEMA identifies Special Flood Hazard Areas (SFHA). FEMA publishes Flood Insurance Rate Maps that depict floodplains. Flooding and flood hazards are addressed in greater detail in Section 4 of the *Hazards and Safety Existing Conditions Report*. The FEMA 100-year flood plain is shown on Figure 4 in Section 4 of the *Hazards and Safety Existing Conditions Report*.

REFERENCES

Bay Area Stormwater Management Agencies Association. 2019. BASAA Post-Construction Manual. Available at: <https://hx9.6b8.myftpupload.com/wp-content/uploads/2020/09/basmaa-postconstruction-manual.pdf>

CSW/Stuber-Stroeh Engineering Group. May 2008. Tiburon Storm Drainage Master Plan

Regional Water Quality Control Board. Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary. December 2018.

San Francisco Bay Conservation and Development Commission. San Francisco Bay Plan. January 2008.

Marin County Stormwater Pollution Prevention Program. September 2017. Storm Water Resource Plan Functionally Equivalent Document. Available at: <https://hx9.6b8.myftpupload.com/wp-content/uploads/2020/09/marin-county-swrp-2017-final.pdf>

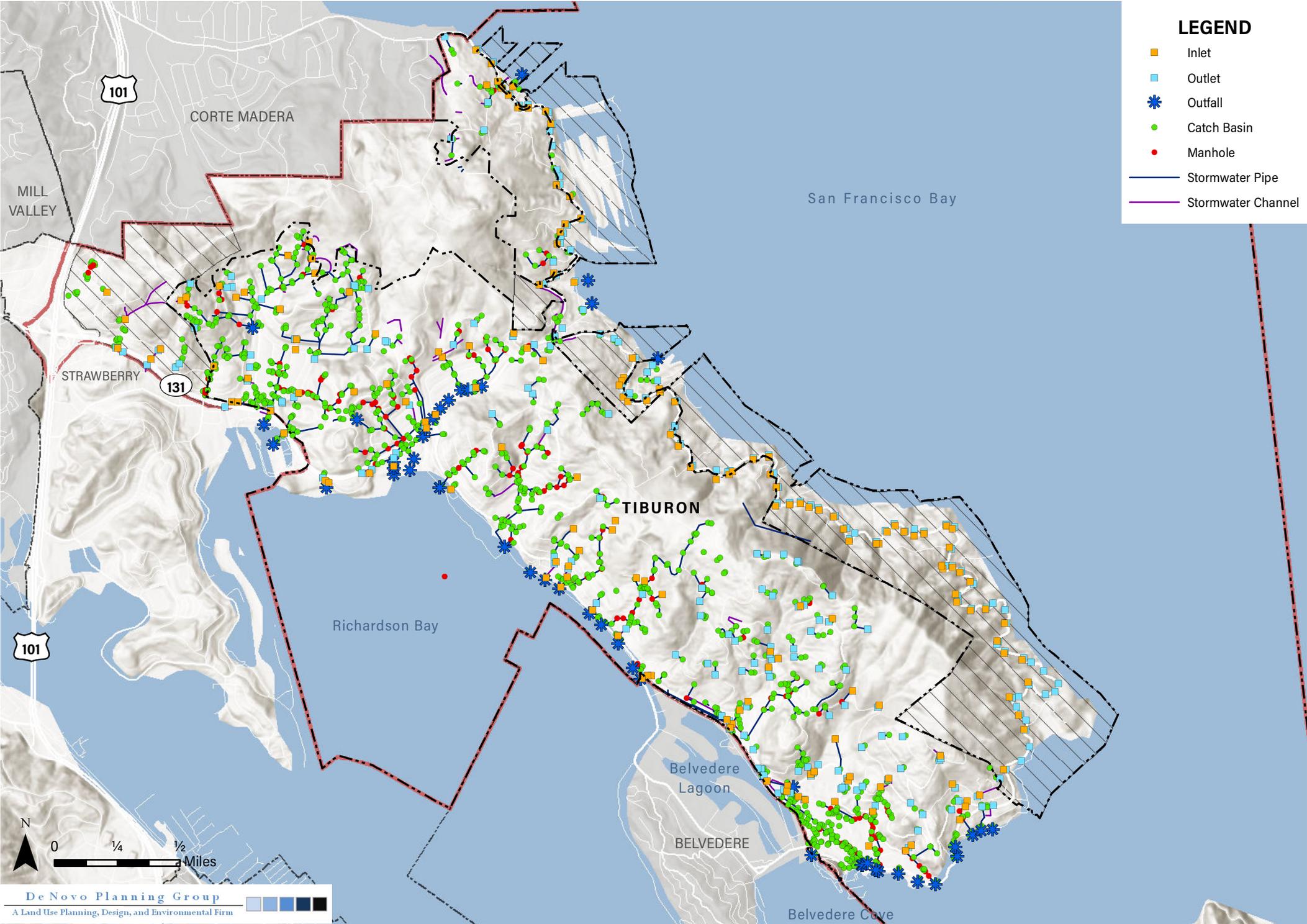
Town of Tiburon. As Amended Through February 3, 2016. Town of Tiburon General Plan. Available: <https://www.townoftiburon.org/206/General-Plan>

²⁶ CSW/Stuber-Stroeh Engineering Group. 2008. Tiburon Storm Drainage Master Plan [page 9-10]

²⁷ Town of Tiburon Town Council Meeting. (2020). 'Agenda Item CC-3: Accept the 2020 Storm Drain Rehabilitation Project as Complete and File a Notice of Completion with the County of Marin. July 15, 2020.

Town of Tiburon Town Council Meeting. (2020). 'Agenda Item CC-3: Accept the 2020 Storm Drain Rehabilitation Project as Complete and File a Notice of Completion with the County of Marin. July 15, 2020. Available at: https://townoftiburon.granicus.com/MetaViewer.php?view_id=5&clip_id=385&meta_id=19584

Figure 4: Stormwater Facilities



LEGEND

- Inlet
- Outlet
- Outfall
- Catch Basin
- Manhole
- Stormwater Pipe
- Stormwater Channel

Sources: ArcGIS Online World Hillshade Map Service; MarinMap. Map date: February 8, 2021.

4. SOLID WASTE

This section describes the Town of Tiburon's solid waste collection services, waste disposal facilities, solid waste generation rates, and regulatory requirements.

KEY TERMS

Class I landfill: A landfill that accepts for disposal 20 tons or more of municipal solid waste daily (based on an annual average); or one that does not qualify as a Class II or Class III municipal solid waste landfill.

Class II landfill: A landfill that (1) accepts less than 20 tons daily of municipal solid waste (based on an annual average); (2) is located on a site where there is no evidence of groundwater pollution caused or contributed by the landfill; (3) is not connected by road to a Class I municipal solid waste landfill, or, if connected by road, is located more than 50 miles from a Class I municipal solid waste landfill; and (4) serves a community that experiences (for at least three months each year) an interruption in access to surface transportation, preventing access to a Class I landfill, or a community with no practicable waste management alternative.

Class III landfill: A landfill that is not connected by road to a Class I landfill or a landfill that is located at least 50 miles from a Class I landfill. Class III landfills can accept no more than an average of one ton daily of ash from incinerated municipal solid waste or less than five tons daily of municipal solid waste.

Transfer station: A facility for the temporary deposition of some wastes. Transfer stations are often used as places where local waste collection vehicles will deposit their waste cargo prior to loading into larger vehicles. These larger vehicles will transport the waste to the end point of disposal or treatment.

REGULATORY FRAMEWORK

FEDERAL

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA) was enacted in 1976 to address the huge volumes of municipal and industrial solid waste generated nationwide. After several amendments, the current Act governs the management of solid and hazardous waste and underground storage tanks (USTs). RCRA was an amendment to the Solid Waste Disposal Act of 1965. RCRA has been amended several times, most significantly by the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRA is a combination of the first solid waste statutes and all subsequent amendments. RCRA authorizes the Environmental Protection Agency (EPA) to regulate waste management activities. RCRA authorizes states to develop and enforce their own waste management programs, in lieu of the Federal program, if a state's waste management program is substantially equivalent to, consistent with, and no less stringent than the Federal program.

STATE

Sanitary District Act of 1923

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

California Integrated Waste Management Act (AB 939, SB 1322, and SB 1016)

The California Integrated Waste Management Act of 1989 (AB 939 and SB 1322) requires every city and county in the state to prepare a Source Reduction and Recycling Element to its Solid Waste Management Plan that identifies how each jurisdiction will meet the mandatory state waste diversion goals of 25 percent by 1995 and 50 percent by 2000. To help achieve this, the act requires that each jurisdiction prepare a source reduction and recycling element to be submitted to the Department of Resources Recycling and Recovery (CalRecycle). AB 939 also established a goal for all California counties to provide at least 15 years of ongoing landfill capacity. The purpose of AB 939 and SB 1322 is to “reduce, recycle, and re-use solid waste generated in the state to the maximum extent feasible.” The term “integrated waste management” refers to the use of a variety of waste management practices to safely and effectively handle the municipal solid waste stream with the least adverse impact on human health and the environment. The Act has established a waste management hierarchy, as follows: Source Reduction; Recycling; Composting; Transformation; and Disposal.

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

Organic Waste Methane Emissions Reduction Act (SB 1383)

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

AB 341 (75 Percent Solid Waste Diversion)

AB 341 requires CalRecycle to issue a report to the Legislature that includes strategies and recommendations that would enable the state to divert 75 percent of the solid waste generated in the state from disposal by January 1, 2020, requires businesses that meet specified thresholds in the bill to arrange for recycling services by January 1, 2012, and also streamlines various regulatory processes.

SB 1374 (Construction and Demolition Waste Materials Diversion)

Senate Bill 1374 (SB 1374), Construction and Demolition Waste Materials Diversion Requirements, requires that jurisdictions summarize their progress realized in diverting construction and demolition waste from the waste stream in their annual AB 939 reports. SB 1374 required the CIWMB to adopt a model construction and demolition ordinance for voluntary implementation by local jurisdictions.

AB 2176 (Montanez, Chapter 879, Statutes of 2004)

This law requires the largest venue facilities and events (as defined) in each city and county to plan and implement solid waste diversion programs, and annually report the progress of those upon the request of their local government. In turn, local jurisdictions must report to the CIWMB waste diversion information for the top 10 percent of venues and events by waste generation.

A large event is defined as:

1. *Serves an average of more than 2,000 individuals per day of operation (both people attending the event and those working at it—including volunteers—are included in this number); and*
2. *Charges an admission price or is run by a local agency.*

The bill specifically includes public, nonprofit, or privately owned parks, parking lots, golf courses, street systems, or other open space when being used for an event, including, but not limited to, a sporting event or a flea market in addition to events that meet both of the above.

A large venue is defined as:

A permanent facility that annually seats or serves an average of more than 2,000 individuals within the grounds of the facility per day of operation (both people attending the event and those working at it—including volunteers too—are included in this number).

Venues include, but are not limited to airports, amphitheaters, amusement parks, aquariums, arenas, conference or civic centers, fairgrounds, museums, halls, horse tracks, performing arts centers, racetracks, stadiums, theaters, zoos, and other public attraction facilities.

AB 1826 (Mandatory Commercial Organics Recycling)

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

Marin Sanitary Service offers two organics recycling programs that allow businesses to comply with the requirements of AB 1826: The Food 2 Energy Program and Commercial Compost Program. The Food 2 Energy program diverts organic food waste from local restaurants, delis, food vendors, and grocery stores and converts the material into biogas through anaerobic digestion that is used as a power source for the CSMA WWTP. The Commercial Compost Program provides commercial compostable carts for businesses that generate organic material, including food scraps, food-soiled paper, and plant/landscape trimmings, that are turned into organic compost at the Redwood Landfill.

California Integrated Waste Management Board Model Ordinance

Subsequent to the Integrated Waste Management Act, additional legislation was passed to assist local jurisdictions in accomplishing the goals of AB 939. The California Solid Waste Re-use and Recycling Access Act of 1991 (Section 42900-42911 of the Public Resources Code) directs the California Integrated Waste Management Board (CIWMB) to draft a “model ordinance” relating to adequate areas for collecting and loading recyclable materials in development projects. The model ordinance requires that any new development project, for which an application is submitted on or after September 1, 1994, include “adequate, accessible, and convenient areas for collecting and loading recyclable materials.” For subdivisions of single family detached homes, recycling areas are required to serve only the needs of the homes within that subdivision.

California Solid Waste Reuse and Recycling Access Act of 1991

The California Solid Waste Reuse and Recycling Access Act requires development projects to set aside areas for collecting and loading recyclable materials. This act required CalRecycle to develop a model ordinance for adoption by any local agency

to provide adequate areas for the collection and loading of recyclable materials as part of development projects. Local agencies are required to adopt the model or an ordinance of their own that establishes standards, including space allocation, for the collection and loading of recyclable materials.

California Green Building Standards Code (CALGreen)

CALGreen became mandatory on January 1, 2011; the most recent 2019 CALGreen became effective on January 1, 2020. CALGreen requires the diversion of at least 50 percent of the construction waste generated during most new construction projects (CALGreen Sections 4.408 and 5.408) and some additions and alterations to nonresidential building projects.

As of January 1, 2020, in all jurisdictions including those without a construction and debris ordinance requiring the diversion of 65 percent of construction waste, the owners/builder of construction projects within the covered occupancies are required to divert 65 percent of the construction waste materials generated during the project. Additionally, CALGreen allows a disposal reduction option that can be met when the project's disposal rate is less than 2.0 pounds per square foot for non-residential and high rise residential, or less than 3.4 pounds per square foot for low-rise residential.

LOCAL

Marin Hazardous and Solid Waste Joint Powers Authority (Zero Waste Marin)

In response to the California Integrated Waste Management Act, Marin County's public agencies formed the Marin Hazardous and Solid Waste Joint Powers Authority, also known as Zero Waste Marin. Zero Waste Marin was formed in 1996 and is comprised of the cities and towns of Belvedere, Corte Madera, Fairfax, Larkspur, Mill Valley, Novato, Ross, San Anselmo, San Rafael, Sausalito, and Tiburon, and the County of Marin. The goal of Zero Waste Marin is to help residents and businesses in Marin County meet the County's goal of 94 percent diversion from landfills by 2025 by reducing and recycling their solid waste and safely disposing of hazardous wastes. Zero Waste Marin ensures the County's compliance with State recycling mandates and provides information on household hazardous waste collection, recycling, composting, and waste disposal. The Marin County Department of Public Works/Waste Management administers Zero Waste Marin, and the AB 939 Local Task Force provides citizen and industry review.

Marin Countywide Integrated Waste Management Plan

The California Integrated Waste Management Act of 1989 (AB 935) requires each county to prepare and adopt a Countywide Integrated Waste Management Plan (CIWMP). In April 1998, Zero Waste Marin, private waste haulers, and facility operators developed the Marin Countywide Integrated Waste Management Plan, which implements recycling programs necessary to meet the State's 25 percent and 50 percent recycling mandates. Waste reduction and disposal facilities in the county that require solid waste facility permits must conform to policies and siting criteria in the CIWMP. The CIWMP includes, by reference, source reduction and recycling elements, household hazardous waste elements, and non-disposal facility elements as well as a plan that describes countywide diversion programs and landfill disposal needs. The elements must be reviewed every five years and revised if necessary. The latest five-year review report for the CIWMP was submitted by Zero Waste Marin in March 2018.

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

Town of Tiburon Municipal Code

Chapter 26 Solid Waste Storage, Collection and Disposal. The purpose of this chapter of the Tiburon Municipal Code is to prevent actual or potential public health hazards and nuisances by the regulation of the accumulation, collection and disposal of solid waste.

Town of Tiburon General Plan

The existing Tiburon General Plan includes the following goals and policies related to solid waste:

Open Space and Conservation Element

Policies

OSC-59. The Town shall continue to meet or exceed diversion targets set by the state.

OSC-60. The Town shall require as a condition of approval of use permits that businesses prepare and implement waste management plans to maximize recycling, where appropriate.

Implementing Programs

OSC-n. Recycling bins shall be placed adjacent to refuse cans on the Town's public property, with special emphasis on high traffic areas, such as Shoreline Park and Richardson Bay Lineal Park.

OSC-o. The Town shall continue to be an example and a resource for the community in recycling by continuing programs such as the construction debris program, household battery program and by reducing the waste of resources in conducting the Town's business.

EXISTING CONDITIONS

The Town of Tiburon is a member agency of Zero Waste Marin. As the regional agency, Zero Waste Marin reports diversion progress to CalRecycle on a countywide basis.

WASTE COLLECTION SERVICES

Tiburon is served by the Mill Valley Refuse Service, a privately owned company that provides residential and commercial garbage, recycling and yard waste collection services under a Town franchise agreement. Mill Valley Refuse Service began operation as the Mill Valley Garbage Company in 1906, and has served Mill Valley and other southern Marin communities continuously since then, including Almonte, Alto, Belvedere, Corte Madera, Homestead, Mill Valley, Strawberry, Tiburon, and surrounding Marin County areas.

WASTE DISPOSAL FACILITIES

Approximately 19 solid waste sites exist in Marin County with one active disposal site, Redwood Landfill, located north of Novato. The remaining sites are closed or inactive and no longer receive solid waste. Additional active sites in Marin County include the:

- Marin Sanitary Service Transfer Station (large volume transfer/processing facility);
- Marin Sanitary Service (inert Debris Type A processing operation);
- Bolinas-Stinson Resource Recovery Project (green material composting operation);
- West Marin Compost (agricultural material composting operation);
- Central Marin Sanitation Agency (limited volume transfer operation);
- West Marin Compost Project (green material composting operation); and
- WM Earthcare of Marin (composting facility [mixed]).

In 2019, Zero Waste Marin disposed of 241,254 tons of solid waste to 19 different waste disposal facilities all over California. Currently, the Redwood Landfill in Marin County and the Potrero Hills Landfill in Solano County accept the most solid waste generated from the Zero Waste Marin. The following provides an overview of the Redwood Landfill and Potrero Hills Landfill, as well as a breakdown of the amount of solid waste disposed at the other landfills in California from Zero Waste Marin communities in 2019.

Redwood Landfill

In 2019, the Redwood Landfill accepted approximately 50.7 percent (or 122,303 tons) of the solid waste generated by the Zero Waste Marin. The landfill is operated by Waste Management and is located on a 420-acre site at 8950 Redwood Highway north of Novato and east of US-101. Approximately 220 acres are dedicated to landfill operations, and the remaining 200 acres support composting, recycling, and reuse services as well as open space and a freshwater lagoon for migratory waterfowl. A plant was constructed in 2017 that converts landfill gas to clean, renewable electricity for use by Marin Clean Energy customers. Waste Management also operates the largest composting facility in Marin County and offers recycled compost and mulch as WM EarthCare products. The landfill is licensed as a Class III nonhazardous disposal facility. It has a maximum permitted throughput of 2,300 tons/day and a remaining capacity of 26 million tons. The estimated closure date is 2036.

Potrero Hills Landfill

In 2019, the Potrero Hills Landfill accepted approximately 42.2 percent (or 101,891 tons) of the solid waste generated by the Zero Waste Marin. This landfill accepts approximately 41 percent of the waste generated by the county. The landfill is operated by Waste Connections Company and is located on a 526-acre site at 3675 Potrero Hills Lane, a few miles south of Suisun City in the hills of Suisun Marsh in Solano County. A compost facility and a landfill-gas-to-energy plant is also operated at this site. The landfill has a maximum permitted throughput of 4,330 tons/day and a remaining capacity of 13,872,000 tons. The closure date is estimated to be February 14, 2048.

Other Landfills

Table 12 identifies the other landfills in California that accepted waste from Zero Waste Marin in 2019 (latest year in CalRecycle records), in decreasing tonnage amounts:

TABLE 12: OTHER LANDFILLS ACCEPTING MARIN COUNTY WASTE – 2019

LANDFILL	LOCATION	SOLID WASTE ACCEPTED (TONS)
Keller Canyon	City of Pittsburg	10,984
Altamont Landfill & Resource Recovery	City of Livermore	2,900
Monterey Peninsula	City of Marina	1,909
Recology Hay Road	City of Vacaville	807
Corinda Los Trancos (Ox Mountain)	City of Half Moon Bay	88
Newby Island Sanitary	City of Milpitas	86
Kirby Canyon Recycling and Disposal Facility	City of Morgan Hill	80
Vasco Road Sanitary	City of Livermore	70
Fink Road	Stanislaus County	61
Kiefer Landfill	Sacramento County	21
Forward	City of Manteca	13
Guadalupe Sanitary	City of San Jose	13
Azusa Land Reclamation County	City of Azusa	10
Foothill Sanitary	San Joaquin County	6
Clean Harbors Buttonwillow LLC	Kern County	6
Yolo County Central	City of Woodland	2
John Smith Road Landfill	San Benito County	1

SOURCE: CALRECYCLE DATABASE: JURISDICTION DISPOSAL BY FACILITY (2019)

HAZARDOUS WASTE DISPOSAL

Marin Household Hazardous Waste Facility located at 565 Jacoby Street in San Rafael is open Tuesday to Saturday for residential drop-off and Tuesday and Wednesday by appointment only for commercial drop-off. The facility is available to the residents of Marin County communities except for residents of the City of Novato, which has its own facility. Proof of

residency is required to use this facility. Table 13 shows examples of hazardous waste accepted. Approximately 61 percent of the collected hazardous waste material is recycled and three percent is reused, while only two percent is landfilled²⁸.

TABLE 13: HAZARDOUS WASTE ACCEPTED

HOME & GARDEN PRODUCTS	AUTOMOTIVE CARE PRODUCTS	PAINT & PAINT RELATED PRODUCTS	PERSONAL CARE PRODUCTS	MISC. PRODUCTS
Liquid cooking oils Detergents Ammonia and tile cleaners Tub cleaners Bleach-base cleaners Window cleaner Over cleaners Polishes Air fresheners Fertilizers Herbicides Fungicides Pesticides Insecticides Rodenticide	Motor oil Oil filters Gasoline Diesel Antifreeze Brake fluid Transmission fluid Car batteries Car waxes and polishes	Latex paint Oil based paint Aerosol paint cans Solvents Adhesives Paint removers Wood preservatives Wood finishes Roofing tar Putty, caulk, and glues	Hypodermic, intravenous and pen needles Beauty products in aerosol cans Hair color kits Hair sprays Nail polishes Nail removers Perfumes	Roof shingles Floor tiles Ceiling tiles Siding and insulation Light bulbs Household batteries Electronic products Mercury-containing devices Pool chemicals Photo chemicals Road flares Fire extinguishers Propane and butane gas cylinders CO ₂ cylinders

SOURCE: MARIN HOUSEHOLD HAZARDOUS WASTE FACILITY RESIDENTIAL AND COMMERCIAL CUSTOMER GUIDELINES

The following materials are not accepted at the Marin Household Hazardous Waste Facility:

- Appliances (e.g., toasters, blenders, air conditioners, refrigerators, etc.);
- Business equipment;
- Medication;
- Hair products (e.g., hair dryers, flat irons, etc.);
- Tapes and CDs;
- Explosives or Ammunition;
- E-cigarettes;
- Toys of any kind; and
- Sharps (i.e., needles and syringes) from businesses.

SOLID WASTE GENERATION RATES AND VOLUMES

The California Department of Resources Recycling and Recovery (CalRecycle) tracks and monitors solid waste generation rates on a per capita basis. Per capita solid waste generation rates and total annual solid waste disposal volumes for Zero Waste Marin between 2015 and 2019 are shown in Table 13.

²⁸ Marin Household Hazardous Waste Facility, 2020. About the Marin HHW Facility. Available at: <https://marinhhw.com/about-marin-hhw/>

TABLE 13: ZERO WASTE MARIN SOLID WASTE GENERATION RATES

YEAR	POPULATION		EMPLOYMENT		TOTAL DISPOSAL TONNAGE (TONS/YEAR)
	WASTE GENERATION RATE (LBS/PERSON/DAY)	REPORTING YEAR POPULATION	WASTE GENERATION RATE (LBS/EMPLOYEE/DAY)	REPORTING YEAR EMPLOYMENT	
2015	4.0	258,972	9.3	111,124	188,115.60
2016	4.6	263,150	10.5	114,965	223,481.46
2017	4.7	263,262	10.7	115,944	232,015.10
2018	5.2	262,803	11.9	115,777	250,496.11
2019	5.0	262,879	11.4	115,700	241,275.81

SOURCE: CAL RECYCLE. ACCESSED: JANUARY 2021

The per capita waste generation rate and per employee waste generation rate both increased from 4.0 to 5.2 lbs/person/day and 9.3 to 11.9 lbs/employee/day over the 2015 to 2018 period, respectively, and the total annual disposal tonnage in the Zero Waste Marin service area increased by 62,380.51 tons over the 2015 to 2018 time span. From 2018 to 2019, the per capita and per employee waste generation rates both decreased from 5.2 to 5.0 lbs/person/day and 11.9 to 11.4 lbs/employee/day. Additionally, the total annual disposal tonnage in the Zero Waste Marin service area decreased by 9,220.3 tons in 2019. With the passage of SB 1016, the per capita disposal rate is used to determine the diversion progress of a jurisdiction and not the jurisdictional diversion rates. Therefore, a population increase resulting in the generation of more overall waste does not affect the jurisdiction’s ability to meet its waste goals. The Zero Waste Marin’s waste disposal rate targets are shown in Table 3.

TABLE 14: ZERO WASTE MARIN WASTE DISPOSAL RATE TARGETS (POUNDS/DAY)

YEAR	POPULATION		EMPLOYMENT	
	TARGET	ACTUAL	TARGET	ACTUAL
2015	7.6	4.0	17.3	9.3
2016	7.6	4.6	17.3	10.5
2017	7.6	4.7	17.3	10.7
2018	7.6	5.2	17.3	11.9
2019	7.6	5.0	17.3	11.4

SOURCE: CAL RECYCLE. ACCESSED: JANUARY 2021

The target rate on the above table represents a 50 percent diversion rate. In accordance with AB 939, which required municipalities to aggressively pursue MSW source reduction and recycling, Zero Waste Marin continues to meet and exceed all AB 939 goals. Zero Waste Marin has set a goal of 94 percent diversion from landfills by 2025, which would greatly reduce the need for landfill disposal. The current diversion rate for 2018 is 66 percent, which is down from 75 percent in 2014. Zero Waste Marin also provides grants to its member agencies to develop and implement programs that work toward the zero-waste goal. The various solid waste management actions adopted by Zero Waste Marin include, but are not limited to, recycling and yard waste programs for residents and businesses, public education and public outreach awareness events, and school recycling and composting.

REFERENCES

CalRecycle. 2015-2019. Jurisdiction Diversion/Disposal Rate Summary. Available at: <<http://www.calrecycle.ca.gov>. Accessed June 2019.

CalRecycle. 2019. Jurisdiction Disposal and Alternative Daily Cover (ADC) Tons by Facility. Available at: <https://www2.calrecycle.ca.gov/LGCentral/DisposalReporting/Destination/DisposalByFacility>

CalRecycle. 2021. Facility/Site Summary Details: Available at: <http://www.calrecycle.ca.gov/SWFacilities/Directory>

CalRecycle. 2022. SWIS Facility/Site Activity Details. Available at: <https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/3054?siteID=1727>

Marin Household Hazardous Waste Facility. 2021. About the Marin HHW Facility. Available at: <https://marinhhw.com/about-marin-hhw/>

Mill Valley Refuse. 2021. About Mill Valley Refuse Service. Available at: <https://www.millvalleyrefuse.com/support/about-us/>

Redwood Landfill. 2019. Solid Waste Facility Permit. Facility Number: 21-AA-0001. Issued October 16, 2014.

Town of Tiburon. As Amended Through February 3, 2016. Town of Tiburon General Plan. Available: <https://www.townoftiburon.org/206/General-Plan>

5. ELECTRICITY AND NATURAL GAS

REGULATORY FRAMEWORK

STATE

Public Utilities Commission

The California Public Utilities Commission (PUC) is the primary State agency that regulates privately owned public utilities in California. These utilities include telecommunications, electricity, natural gas, water, railroad, rail transit, and passenger transportation companies. A primary role of the PUC is to authorize utility rate changes. It also establishes service standards and safety rules, monitors the safety of utility and transportation operations, prosecutes unlawful marketing and billing activities, and oversees the merger and restructure of utility corporations.

Bioenergy Action Plan – Executive Order #S-06-06

Executive Order #S-06-06 establishes targets for the use and production of biofuels and biopower and directs State agencies to work together to advance biomass programs in California while providing environmental protection and mitigation. The executive order establishes the following target to increase the production and use of bioenergy, including ethanol and biodiesel fuels made from renewable resources: produce a minimum of 20 percent of its biofuels within California by 2010, 40 percent by 2020, and 75 percent by 2050. The executive order also calls for the State to meet a target for use of biomass electricity, including biomass cogeneration facilities.

Senate Bill 1078 – Renewable Portfolio Standard

Established in 2002, SB 1078 required energy service providers (ESPs) to increase their existing purchases of renewable energy by 1 percent of sales per year such that 20 percent of their retail sales, as measured by usage, are procured from eligible renewable resources (including biomass cogeneration) by December 31, 2010. This is known as the Renewable Portfolio Standard (RPS) Program.

Executive Order #S-14-08

On November 17, 2008, California's then Governor Arnold Schwarzenegger signed Executive Order # S-14-08, which sets a target that all retail sellers of electricity shall serve 33 percent of their load with renewable energy by 2020.

Executive Order #S-21-09

In September 2009, California Governor Arnold Schwarzenegger signed an executive order directing the State's Air Resources Board to adopt regulations increasing California's RPS to 33 percent by 2020. The RPS will apply to investor-owned utilities, publicly owned utilities, direct access providers, and community choice aggregators, including Marin Energy Authority.

Senate Bill 350 – Clean Energy and Pollution Act of 2015

Prior to SB 350, existing law establishes the California RPS Program, which is codified in the Public Utilities Act, with the target to increase the amount of electricity generated per year from eligible renewable energy resources to an amount that equals at least 33 percent of the total electricity sold to retail customers per year by December 31, 2020. Established in 2015, SB 350 accelerated the RPS Program by mandating a 50 percent RPS by 2030. SB 350 includes interim annual RPS targets with three-year compliance periods and requires 65 percent of RPS procurement to be derived from long-term contracts of 10 or more years.

Senate Bill 100 – California RPS Program: Emissions of Greenhouse Gases

Established in 2018, SB 100 revised the California RPS Program goal of achieving the 50 percent renewable resources target by December 31, 2026, to instead achieve a 60 percent target by December 31, 2030. Additionally, SB 100 requires that retail sellers and local publicly owned electric utilities procure a minimum quantity of electricity products from eligible renewable energy resources so that the total kilowatt-hours of those products sold to their retail end-use customers achieve 44 percent of retail sales by December 31, 2024, 52 percent by December 31, 2027, and 60 percent by December 31, 2030.

Assembly Bill 2188 - Solar Permitting Efficiency Act

Assembly Bill (AB) 2188, enacted in California in 2015, required local governments to adopt a solar ordinance by September 30, 2015, creating a streamlined permitting process that conforms to the best practices for expeditious and efficient permitting of small residential rooftop solar systems. The act is designed to lower the cost of solar installations in California and further expand the accessibility of solar to more California homeowners. The bulk of the time and cost savings associated with a streamlined permitting process comes from the use of a standardized eligibility checklist and a simplified plan. This bill also shortens the number of days for those seeking Homeowner's Association (HOA) approval for a written denial of a proposed solar installation.

Title 24

Title 24, Part 6, of the California Code of Regulations is also known as California's Energy Efficiency Standards for Residential and Nonresidential Buildings. Title 24 was established in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. The 2019 Energy Efficiency Standards were effective on January 1, 2020. Included as part of the 2019 Building Energy Efficiency Standards are rooftop solar power requirements. These requirements mandate that all new homes under three stories high install solar panels, and those solar systems must be sized to net out the annual kilowatt-hour energy usage of the dwelling. The updated Standards also incentivize "demand-responsive technologies," including battery storage and heat pump water heaters.

Title 24, Part 11, of the California Code of Regulations establishes CalGreen, which became mandatory in 2011. CalGreen addresses five areas of green building: 1) planning and design, 2) energy efficiency, 3) water efficiency and conservation, 4) material conservation and resources efficiency, and 5) environmental quality. The mandatory requirements are separated into non-residential and residential projects. CalGreen also includes two optional tiers: Tier 1 and Tier 2. The tiers employ higher thresholds that jurisdictions may adopt or that projects may meet voluntarily.

LOCAL

Marin Climate and Energy Partnership

Created in 2007, the Marin Climate and Energy Partnership is a countywide partnership between Tiburon and 10 other Marin cities and towns, Marin County, the Transportation Authority of Marin, Marin Water, and Marin Clean Energy. The mission of the Marin Climate & Energy Partnership is to develop a countywide partnership that allows partner members to work collaboratively, share resources, and secure funding to discuss, study, and implement overarching policies and programs, ranging from emission reduction strategies to adaptation, contained in each agency's climate action plan. Additionally, the Marin Climate & Energy Partnership collects data and reports progress in meeting each partner member's individual greenhouse gas emission target and assists in updating climate action plans. Additionally, the Marin Climate and Energy Partnership partners with Resilient Neighborhoods to educate and motivate Marin residents to lead a more sustainable lifestyle by teaching them strategies to improve home energy efficiency, shift to renewable energy, reduce transportation emissions, conserve water, and reduce waste.

Town of Tiburon General Plan

The existing Tiburon General Plan includes the following goals and policies related to energy and natural gas:

Open Space and Conservation Element

Policies

OSC-61. The Town shall continue to pursue opportunities to improve energy efficiency and reduce resource consumption in Town-owned facilities and operations.

OSC-62. The Town shall apply green building principles to the design, construction, and operation of new Town and Town-sponsored facilities to provide long-term cost savings and to serve as an example for the community.

OSC-63. The Town shall integrate energy efficiency, conservation, and other green building design incentives into the zoning permit and building permit processes.

Town of Tiburon Municipal Code

Chapter 12 Underground Utility Districts. This chapter of the municipal code requires all new extensions of existing utility distribution facilities, including but not limited to electric, communication and cable television lines to be installed underground. Additionally, the chapter requires that all electrical and communication service laterals to new residential and commercial buildings as well as remodeled structures to be reelected and placed underground. The chapter also outlines the responsibilities of the utility providers and property owners.

Article V of Chapter 13 Expedited Permit Process for Electric Vehicle Charging Stations. The purpose of this article is to provide an expedited, streamlined electric vehicle charging station permitting process that complies with section 65850.7 of the California Government Code in order to achieve timely and cost-effective installations of electric vehicle charging stations. This article encourages the installation of electric vehicle charging stations by removing unreasonable barriers and minimizing costs of installation.

Article VII of Chapter 13 Expedited Permit Process for Small Residential Rooftop Solar Systems. The purpose of this article is to provide an expedited, streamlined solar permitting process that complies with the Solar Rights Act and AB 2188 (Chapter 521, Statutes 2014, California Government Code section 65850.5) in order to achieve timely and cost-effective installations of small residential rooftop solar energy systems. This article encourages the use of solar systems by removing unreasonable barriers, minimizing costs to property owners and the town and expanding the ability of property owners to install solar energy systems.

Town of Tiburon Climate Action Plan

In April 2011, the Town of Tiburon adopted a Climate Action Plan (CAP) to compile existing and potential strategies (i.e., actions, projects, and programs) that the Town's government operations and the community can take to address climate change. The CAP provides a brief background on what climate change is and its potential impacts and focuses on the efforts Tiburon can take to reduce its greenhouse gas emissions and mitigate, to the extent feasible at the local level, the potential impacts of climate change. The Town identified the following recommended actions related to green buildings, energy efficient and renewable energy as a means for reducing greenhouse gas emissions from electricity and natural gas:

1. Adopt energy efficiency requirements for residential projects under 3,500 square feet.
2. Consider adopting standards similar to the Marin Green BERST model green building ordinance.
3. Provide incentives to development projects that exceed adopted green building standards.
4. Develop a town-wide green building promotional campaign. Educate Town staff and policy makers about best practices; provide checklists and specification guidelines for contractors; post green building information on the Town's website.

5. Require energy efficiency audits for residences and businesses during major remodeling projects.
6. Consider methods to inform property owners of recommended energy upgrades at time of property sale, such as weather-stripping doors and windows and stopping air leaks.
7. Support efforts of PG&E and the Marin Energy Authority to maximize residential and business subscription rates for energy efficiency programs and to promote conservation and renewable energy use.
8. Support efforts of Marin Clean Energy to increase the renewable content of the electricity provided to Tiburon residents and businesses.
9. If available, participate in a countywide or regional property assessment district financing program to assist homeowners in funding installation of energy efficiency upgrades and renewable energy systems.
10. Adopt policies and incentives to encourage residents and businesses to install solar and renewable energy systems, including solar panels to generate electricity and solar water heating systems, and to construct solar ready buildings.
11. Complete energy efficiency upgrades to Town facilities as recommended by the Marin Energy Management Team.
12. Replace streetlights and parking lot lights with energy-efficient technologies, such as LED lighting.
13. Install additional photovoltaic panels at Town facilities, if feasible.
14. Design new and remodeled public facilities to meet LEED Silver requirements, or its equivalent, and, at a minimum, to not require any additional energy use over existing facilities.
15. Prioritize purchases of products and services with superior environmental performance and purchase energy-efficient office equipment and appliances.
16. Implement operational policies to reduce energy use and conserve resources, such as setting the printer's default option to duplex printing and shutting off computers and imaging equipment at night whenever feasible.
17. Consider purchasing Marin Clean Energy Deep Green 100 percent renewable electricity for all Town operations.
18. Achieve further carbon reductions by purchasing carbon offsets or participating in programs such as ClimateSmart, after maximizing GHG reductions through conservation, energy efficiency and renewable energy measures.

EXISTING SETTING

PACIFIC GAS AND ELECTRIC COMPANY (PG&E)

The Pacific Gas and Electric Company (PG&E) provides electrical and natural gas service to residences and businesses throughout the Town of Tiburon. As a privately owned public utility, PG&E has a service area that covers most of northern and central California. PG&E generates electric power from many sources, including hydroelectric powerhouses, Diablo Canyon Power Plant (active until 2025) and a few small fossil-fired power plants. In 2019, PG&E's electrical power mix included 29 percent renewable, 44 percent nuclear, and 27 percent large hydroelectrical power sources²⁹. PG&E also purchases power from independent power producers. Generation sources from these producers can range from large fossil power plants to smaller renewable and cogeneration plants. After the power is produced or bought, it goes into PG&E's electric transmission and distribution systems to get to the homes and businesses of PG&E's customers. PG&E's infrastructure is in place to distribute natural gas and electricity to Tiburon and PG&E typically can accommodate new developments upon request.

There are no existing PG&E power line corridors mapped within the Tiburon Planning Area. The nearest PG&E power corridors are <100-volt electric transmission lines generally running along the US Highway 101 Corridor³⁰. Additionally, a PG&E natural gas transmission pipeline generally runs along the US Highway 101 Corridor before separating into two pipelines near the US Highway 101 Tamalpais Drive Interchange. One of the natural gas transmission pipelines continues to the southwest into the City of Mill Valley while the other continues to the southeast generally along Madera Del Presidio

²⁹ PG&E. 2020. PG&E's 201 Electric Power Mix. Available at: https://www.pge.com/pge_global/common/pdfs/your-account/your-bill/understand-your-bill/bill-inserts/2020/1220-PowerContent-ADA.pdf

³⁰ PG&E. Economic Development Site Tool. Available at: https://www.pge.com/en_US/large-business/services/economic-development/opportunities/sitetool.page

Drive in Corte Madera and through Ring Mountain before entering the northwest corner of the Planning Area along Reedland Woods Way³¹. The natural gas transmission pipeline continues in the Planning Area along Blackfield Drive until it terminates near the intersection of Via Los Altos and Blackfield Drive.

MCE COMMUNITY CHOICE AGGREGATION

On February 10, 2009, the Tiburon Town signed into the Marin Energy Authority Joint Powers Agreement, electing to join MCE Clean Energy. MCE's mission is to address climate change by reducing energy-related GHG emissions with clean energy and energy efficiency at cost-competitive rates while offering economic and workforce benefits and creating more equitable communities. As California's first Community Choice Aggregation (CCA) program, MCE is a public, not-for-profit electricity provider that gives all PG&E electric customers (residential, commercial, and municipal) the choice of having 60 percent to 100 percent of their electricity supplied from renewable sources, such as solar, wind, bioenergy, geothermal, and hydroelectric. According to MCE's Operational Integrated Resource Plan, MCE provides electricity service to more than 480,000 customer accounts and more than one million residents and businesses in 34 member communities across four Bay Area counties: Contra Costa, Napa, Marin and Solano. The local electric utility, PG&E, will continue to provide energy delivery, metering and billing services as before. California law gives ratepayers the option to opt-out of MCE and return to PG&E energy service if desired.

MCE does not have any local facilities or projects within the Tiburon Planning Area. The nearest MCE facility is the Cost Plus Plaza project in Larkspur located approximately 2.17 miles north of the Planning Area. The Cost Plus Plaza project involved the installation of solar panels on the rooftop of the Larkspur Cost Plus World Market, which provides 265 kW and powers 90 homes annually³².

REFERENCES

MCE. FAQs. Available: <https://www.mcecleanenergy.org/faq/>.

MCE. Energy Sources: Local Renewables. Available at: <https://www.mcecleanenergy.org/local-projects/#CostPlus>

MCE. 2020. Operational Integrated Resource Plan 2021 – 2030. Available at: https://www.mcecleanenergy.org/wp-content/uploads/2020/10/MCE-Operational-Integrated-Resource-Plan_2021.pdf

Marin Energy Authority. As amended through November 2020. Marin Energy Authority Joint Powers Agreement. Available at: <https://www.mcecleanenergy.org/wp-content/uploads/2020/12/MCE-JPA-Agreement-37-Communities.pdf>

PG&E. Economic Development Site Tool. Available at: https://www.pge.com/en_US/large-business/services/economic-development/opportunities/sitetool.page

PG&E. Gas Transmission Pipeline Tool. Available at: https://www.pge.com/en_US/safety/how-the-system-works/natural-gas-system-overview/gas-transmission-pipeline/gas-transmission-pipelines.page

PG&E. 2019. PG&E's 2018 Electric Power Mix. Available at: <http://www.energyhousecalls.com/newsletter/californias-climate-commitment/evhandout-power-mix-pie-chart-2018/>

Town of Tiburon. As Amended Through February 3, 2016. Town of Tiburon General Plan. Available: <https://www.townoftiburon.org/206/General-Plan>

³¹ PG&E. Gas Transmission Pipeline Tool. Available at: https://www.pge.com/en_US/safety/how-the-system-works/natural-gas-system-overview/gas-transmission-pipeline/gas-transmission-pipelines.page

³² MCE. Energy Sources: Local Renewables webpage. Available at: <https://www.mcecleanenergy.org/local-projects/#CostPlus>

6. PUBLIC SAFETY

This section addresses the provision of public safety services in the Town of Tiburon, including fire protection, law enforcement, and other local safety provisions. It should be noted that discussions of Tiburon's emergency response plans, procedures, and evacuation routes are provided in the *Hazards and Safety Existing Conditions Report*. The *Hazards and Safety Existing Conditions Report* also addresses Tiburon's evacuation readiness and specific hazards in the Tiburon Planning Area, including hazardous materials and waste, wildfires, and flooding.

REGULATORY FRAMEWORK

STATE

California Occupational Safety and Health Administration

In accordance with California Code of Regulations Title 8 Sections 1270 "Fire Prevention" and 6773 "Fire Protection and Fire Equipment" the California Occupational Safety and Health Administration (Cal/OSHA) has established minimum standards for fire suppression and emergency medical services. The standards include, but are not limited to, guidelines on the handling of highly combustible materials, fire hose sizing requirements, restrictions on the use of compressed air, access roads, and the testing, maintenance, and use of all firefighting and emergency medical equipment.

The State of California passed legislation authorizing the Office of Emergency Services (OES) to prepare a Standard Emergency Management System (SEMS) program, which sets forth measures by which a jurisdiction should handle emergency disasters. Non-compliance with SEMS could result in the State withholding disaster relief from the non-complying jurisdiction in the event of an emergency disaster.

Emergency Response/Evacuation Plans

The State of California passed legislation authorizing the Office of Emergency Services (OES) to prepare a Standard Emergency Management System (SEMS) program, which sets forth measures by which a jurisdiction should handle emergency disasters. Non-compliance with SEMS could result in the State withholding disaster relief from the non-complying jurisdiction in the event of an emergency disaster.

California Fire Protection Code

The California Fire Code contains regulations relating to construction and maintenance of buildings and the use of premises. Topics addressed in the Code include fire department access, fire hydrants, automatic sprinkler systems, fire alarm systems, fire and explosion hazards safety, hazardous materials storage and use, provisions to protect and assist first responders, industrial processes, and many other general and specialized fire safety requirements for new existing buildings and premises.

International Fire Code

The International Fire Code (2015) with the State of California Amendments contains regulations relating to construction, maintenance, and use of buildings. Topics addressed in the California Fire Code include fire department access, fire hydrants, automatic sprinkler systems, fire alarm systems, fire and explosion hazards safety, hazardous materials storage and use, provisions intended to protect and assist fire responders, industrial processes, and many other general and specialized fire-safety requirements for new and existing buildings and the surrounding premises. The Fire Code contains specialized technical regulations related to fire and life safety.

California Health and Safety Code

State fire regulations are set forth in Sections 13000 et seq. of the California Health and Safety Code. This includes regulations for building standards (as also set forth in the California Building Code), fire protection and notification systems,

fire protection devices such as extinguishers and smoke alarms, high-rise building and childcare facility standards, and fire suppression training.

NFPA 1710

The NFPA 1710 Standards are applicable to urban areas and where staffing is comprised of career Firefighters. According to these guidelines, a career fire department needs to respond within six minutes, 90 percent of the time with a response time measured from the 911 call to the time of arrival of the first responder.

The standards are divided as follows:

- Dispatch time of one minute or less for at least 90 percent of the alarms
- Turnout time of one minute or less for EMS calls (80 seconds for fire and special operations response)
- Fire response travel time of four minutes or less for the arrival of the first arriving engine company at a fire incident and eight minutes or less travel time for the deployment of an initial full alarm assignment at a fire incident
- Eight minutes or less travel time for the arrival of an advanced life support (ALS) (4 minutes or less if provided by the fire department)

LOCAL

Marin County Community Wildfire Protection Plan

The Marin County Community Wildfire Protection Plan (CWPP), adopted in 2016, is an advisory document prepared by FIREsafe Marin in collaboration with stakeholder agencies pursuant to the Healthy Forests Restoration Act. The CWPP is a countywide strategic plan with action items to reduce fire hazard in the County, especially in areas of concern, which mostly fall within Marin's WUI boundary. The CWPP assists in protecting human life and reducing property loss from wildfire throughout Marin County. The CWPP describes wildfire risk, hazard, and recommendations for improving wildfire preparedness at the County level, achieving the following:

- Outlines community characteristics that relate to wildfire risk and hazard including climate, weather, vegetation, and population;
- Describes the fire environment, including the description of the County WUI and regional weather;
- Accesses wildfire hazard and risk at the County level;
- Describes existing and proposed community outreach that is integral to improving wildfire preparedness;
- Identifies mitigation strategies that could be applied to address wildfire hazards and risk; and
- Describes the CWPP as a living document to be updated periodically.

The CWPP is accompanied by appendices that address specific areas and projects by agency to meet strategic goals. The lists of projects include past, current, and/or planned projects from the 2015 Marin Unit Fire Plan and are intended to provide a starting point for identifying and prioritizing a more complete, countywide list of future fuel reduction and outreach projects.

Tiburon Fire Protection District

The Tiburon Fire Protection District (TFPD) was established in April of 1941 and is an autonomous Special District as defined under the Fire Protection District Law of 1987, Health and Safety Code, Section 13800, of the State of California. A five-member Board of Directors, elected by their constituents and each serving a four-year term, governs the TFPD. The TFPD service area encompasses approximately 5.5 square miles, providing structural fire and emergency medical response to the Town of Tiburon, the City of Belvedere, and unincorporated residential and wildland areas on the peninsula, as well as parts of the San Francisco Bay to Angel Island State Park.

TFPD Ordinance No. 129

In November 2019, the TFPD adopted Ordinance No. 129 adopting and modifying the 2019 California Fire Code and Appendix A of the 2018 International Wildland-Urban Interface Code. The Ordinance contained amendments to the California Fire Code and included requirements for Wildland-Urban Interface fire areas to address the local climatic, geographic, and topographic conditions that impact fire prevention efforts, and the frequency, spread, acceleration, intensity, and size of fire involving buildings in the community. Additionally, TFPD Ordinance No. 129 provided for the issuance of permits for hazardous uses or operations and defined the powers and duties of the Community Risk Reduction and Fire Prevention Bureau and officers.

Southern Marin Fire Protection District

The Southern Marin Fire Protection District (SMFPD) is an independent fire district as defined in the California Administrative Code, (Fire Protection District Law of 1987 - Health & Safety Code Section 13800, et seq.) and provides fire protection and emergency medical services to the northwestern corner of the Tiburon Planning Area. The SMFPD was created in 1999 by Marin County LAFCO with the consolidation of the Alto-Richardson Bay Fire Protection District and the Tamalpais Fire Protection District. In June 2012, the City of Sausalito was also annexed into the SMFPD by a vote of the citizens of Sausalito, and, more recently, the SMFPD signed a Shared Services Agreement in January 2020 with the City of Mill Valley, which consolidated the mid and upper management teams of both organizations into a single team with a single Fire Chief serving both agencies.

SMFPD Ordinance

The SMFPD Ordinance adopts the 2019 California Fire Code and Appendix A of the 2018 International Wildland-Urban Interface Code. The Ordinance contains amendments to the California Fire Code and includes requirements for Wildland-Urban Interface fire areas to address the local climatic, geographic, and topographic conditions that impact fire prevention efforts, and the frequency, spread, acceleration, intensity, and size of fire involving buildings in the community. Some of the requirements are related to hazardous vegetation and fuel management, defensible space, fire flow requirements for buildings, fire hydrant locations and distribution, and minimum widths and clearances for fire access roads. The Ordinance was approved by the SMFPD Board of Supervisors in November 2019.

Southern Marin Emergency Medical Paramedic System

Southern Marin Emergency Medical Paramedic System (SMEMPS) was established in October 1980 to better serve the Emergency Medical Service (EMS) needs of residents and visitors in southern Marin County. Prior to 1980, EMS delivery was provided by firefighters that were certified as Emergency Medical Technicians. Realizing that a better system was possible, the local jurisdictions came together and formed a Joint Powers Authority. The intent was to create a system that would provide paramedic service to the community and, on average, SMEMPS serves an average of 2,650 patients each year. The member agencies currently include the SMFPD, TFPD, City of Belvedere, City of Mill Valley, City of Sausalito, and the County of Marin.

Town of Tiburon Municipal Code

Chapter 14B Public Facilities Development Fees. This chapter of the Tiburon Municipal Code outlines the development fees that are needed in order to finance public facilities to ensure that each new development, development project, or construction project contributes its fair share of the costs of public facility improvements.

Town of Tiburon General Plan

The current Town of Tiburon General Plan identifies the following policy framework related to public safety:

Safety Element

Goals

SE-A: To maintain a safe and healthy community.

SE-D: To encourage disaster preparedness planning for effective emergency response and to protect public safety.

Policies

SE-1: The Town shall permit development only in those areas where potential danger to the health, safety, and welfare of the residents of the community can be avoided or adequately mitigated.

SE-16: The Town shall work cooperatively with the local Fire Districts and other agencies to ensure the safe delivery of emergency services and the effective evacuation of the community in the event of a disaster.

SE-17: New development shall provide sufficient water supply and equipment for fire suppression to ensure that the requirements for minimum fire flow and the size, type and location of water mains and hydrants set forth in the Uniform Fire Code and by local ordinance are met.

SE-18: New development within areas of insufficient peak load water supply shall contribute to the construction of a new, or upgrading of an existing, water delivery system to meet requirements for minimum fire-flow.

SE-19: The Town shall work with the Fire Districts and other agencies to provide, enhance, and maintain adequate access, including secondary access, to all areas within the Planning Area.

SE-20: The Town shall require provision of defensible space in all projects where fire hazard is possible. Ongoing maintenance of defensible space buffers in new development projects shall be assured in a form satisfactory to the Town and the Fire Districts prior to construction of improvements.

SE-21: The Town shall maintain an adequate and cost-effective police service to serve and protect the community.

SE-22: The Police Department shall continue to implement community policing and crime prevention programs to strengthen relationships between the Department and the community.

SE-23: In cooperation with other public agencies and appropriate public-interest organizations, the Town shall ensure that it is prepared to effectively respond to any emergency or disaster, including hazardous material releases.

SE-24: The Town shall make provisions to continue essential public services during and after emergencies and natural and other disasters.

Implementing Measures

SE-a: Where possible, the Town should advise the residents of the Tiburon Planning Area of ways that they can reduce geologic, fire and flooding hazards.

SE-c: Through the application review process, the Town shall continue to require review by the appropriate Fire District for fire prevention considerations.

SE-d: As part of an Open Space Management program, the Town shall develop a plan, including funding sources and/or other opportunities, such as volunteer groups, for reducing fire hazards and maintaining fire roads on Town-owned open space.

SE-e: The Town shall continue to review and update the *Emergency Operations Plan* to ensure that it remains up to date.

SE-g: The Town shall use its best efforts to disseminate emergency preparedness information to the community.

EXISTING CONDITIONS - FIRE PROTECTION

Fire protection and emergency medical services in Tiburon are provided by the TFPD and the SMFPD. As shown on Figure 5, the TFPD serves approximately 75 percent of the Tiburon Planning Area while the SMFPD provides fire-related services to approximately 25 percent of residents located in the northwest corner of the Planning Area.

TIBURON FIRE PROTECTION DISTRICT

As previously stated, the TFPD was established in April of 1941 and provides structural fire and emergency medical response services to the Town of Tiburon, the City of Belvedere, and unincorporated residential and wildland areas on the peninsula, as well as parts of the San Francisco Bay to Angel Island State Park. Within the boundaries of TFPD are large single-family homes, multi-family residential complexes, numerous small businesses, public facilities, open space, and trails³³.

The TFPD provides a full range of services to the Tiburon peninsula, including:

- Community Risk Reduction Bureau – Code enforcement, plan reviews, annual business inspections, and summer defensible space program for homeowners;
- Public Education – Fire and burn prevention programs in schools, CPR, First Aid, and Community Disaster Preparedness classes;
- Emergency Medical Services;
- Fire Protection;
- Hazardous Materials Response;
- Fire Investigation; and
- Participation in Marin County and California Mutual Aid System.

As of June 30, 2020, TFPD has thirty-two employees (24 career safety, 3 administrative personnel, 2 prevention personnel and 3 firefighter trainees) staffing two stations, which include structure engines, wildland engines and support units. The Fire Chief oversees the general operations of the District in accordance with the policy direction of the Board of Directors. The Fire Chief is supported by a Deputy Fire Marshal, a Finance Officer, an Executive Assistant, and three Battalion Chiefs, each serving as the District's Training, Logistics, or Operations Officers (TFPD, 2020).

The TFPD is a member of the Southern Marin Emergency Medical Paramedic System Joint Powers Authority, which provides emergency medical care and paramedic services to southern Marin County through a joint effort with five other member agencies. Currently, the TFPD has a total of eight paramedics with one paramedic at both stations 24/7. If needed, additional ambulances, paramedics or rescue services are requested through the Countywide Mutual Aid System³⁴. Additionally, the TFPD is a member of the Marin Emergency Radio Authority (MERA) which is a countywide public safety and emergency radio system that allows emergency response agencies to communicate effectively with each other.

The TFPD owns, operates, and maintains two fire stations with one concurrently used as its administrative building within the Tiburon Planning Area (Fire Station 10 and 11). TFPD fire station locations within Tiburon are shown in Figure 6. Each fire station has personnel covering three shifts over a 24-hour period. Incident call types include fire, overpressure rupture, rescue/emergency medical response, hazardous materials/condition, service calls, good intention calls, false alarm, severe weather/natural disaster, and other calls. Table 14 identifies the total number of incidents and average response time of TFPD per incident in the 2019 – 2020 fiscal year.

³³ Tiburon Fire Protection District. 2020 Comprehensive Annual Financial Report. Available at: <https://www.tiburonfire.org/wp-content/uploads/2020/12/CAFR-2020.pdf>

³⁴ Tiburon Fire Protection District. 2020 Comprehensive Annual Financial Report. Available at: <https://www.tiburonfire.org/wp-content/uploads/2020/12/CAFR-2020.pdf>

TABLE 14: TIBURON FIRE PROTECTION DISTRICT – EMERGENCY RESPONSE BY INCIDENT TYPE

INCIDENT TYPE	NUMBER OF CALLS	AVERAGE RESPONSE TIME (EXCLUDES MUTUAL AID)	AVERAGE RESPONSE TIME (INCLUDES MUTUAL AID)
Fire	47	6:17	11:28
Overpressure Rupture	2	6:20	6:20
Rescue/EMS Call	1,192	6:01	6:59
Hazardous Materials/Condition	43	7:37	9:04
Service Call	238	6:33	6:31
Good Intent	60	6:23	6:56
False Alarm	198	6:36	6:46
Severe Weather/Natural Disaster	6	4:38	23:59
Other Types of Incidents	1	7:58	7:58
Total Calls	1,787	--	--

SOURCE: TIBURON FIRE PROTECTION DISTRICT COMPREHENSIVE ANNUAL FINANCIAL REPORT FISCAL YEAR 2019-2020

The TFPD’s current response time goal is to maintain an overall response time of 8 minutes or less, 90 percent of the time. Under normal conditions, there are six full time professional emergency responders that can be deployed for an emergency within the boundaries of the District. As shown in Table 14, the TFPD’s average response time excluding mutual aid is below 8 minutes for all incident types; however, TFPD’s average response time when mutual aid is included exceeds 8 minutes for fire, hazardous materials, and severe weather/natural disaster incidents. According to the TFPD Comprehensive Annual Financial Report Fiscal Year 2019-2020, 72 percent of all the calls in the fiscal year were responded to in under 8 minutes and 61 percent were responded to in under 7 minutes.

The Insurance Service Office (ISO), an advisory organization, classifies fire service in communities from 1 to 10, indicating the general adequacy of coverage. Communities with the best systems for water distribution, fire department facilities, equipment and personnel and fire alarms and communications, receive a rating of 1. The TFPD has been awarded a Public Protection Classification (PPC) Class of 1 by the ISO, putting the TFPD among the top 0.3 percent of communities nationwide³⁵.

TFPD Fire Stations

Fire Station 10 is located at 4301 Paradise Drive in Tiburon and provides emergency medical and fire protection/suppression services to Tiburon and surrounding unincorporated areas along Paradise Drive. Fire Station 10 contains a variety of apparatuses that serve the community ranging from support vehicles to paramedic trucks, including one Type 1 Fire Engine, one ambulance, one reserve ambulance, and one 4x4 utility pickup truck.

Fire Station 11 is located at 1679 Tiburon Boulevard in Tiburon and provides emergency medical and fire protection/suppression services to Belvedere, Tiburon, and unincorporated areas within the Tiburon Planning Area. Fire Station 11 serves as an alternate Emergency Operations Center (EOC) location for the Town of Tiburon and the City of Belvedere. During a major emergency or disaster, the EOC provides a central location of authority and information with face-to-face coordination among personnel. Fire Station 11 also contains a variety of apparatuses that serve the community ranging from support vehicles to paramedic trucks, including one Reserve Type 1 Engine, one Type 3 Engine, one Type 3 Reserve Engine, 1 Medium-Duty Rescue Unit, one B/C Command Vehicle, one Prevention Vehicle, one Fire Chief SUV, one Utility 4x4 Pickup Truck, and one Staff Car.

³⁵ Tiburon Fire Protection District. 2020 Comprehensive Annual Financial Report. Available at: <https://www.tiburonfire.org/wp-content/uploads/2020/12/CAFR-2020.pdf> [page xi]

SOUTHERN MARIN FIRE PROTECTION DISTRICT

As previously stated, the SMFPD is an independent fire district that provides fire protection and emergency medical services to the City of Sausalito, Tamalpais Valley, Homestead Valley, Almonte, Alto Bowl, Strawberry, the western 1/4 of the Town of Tiburon (Bel Aire/Blackfield/Reed Heights), and the National Park areas of Fort Baker and the Marin Headlands³⁶. The SMFPD divides their operational service area into three zones: Zone 1 (City of Sausalito, G.G.N.R.A. Headlands) served by Southern Marin Fire Station 1, Zone 4 (Tamalpais Valley and Homestead Valley) served by Southern Marin Fire Station 4, and Zone 9 (Alto/Strawberry/Tiburon Area) served by Southern Marin Fire Station 9. Each of these zones are protected by one type I engine with each of the zones cross-staffing at least one specialty piece of equipment such as a Rescue, Fire Boat and Ladder Truck.

The SMFPD has 54 full time employees including a Fire Chief, a Deputy Fire Chief, two Battalion Chiefs, a Deputy Fire Marshal, nine Fire Captains, 18 Paramedic Engineers, 18 Engineers, three administrative staff and one Fire Inspector³⁷. The SMFPD operates out of three stations with a minimum staffing of 15 personnel on duty at all times, as well as an administrative office where administrative and prevention staff are organized. Incident call types include fire, overpressure rupture, rescue/emergency medical response, hazardous materials/condition, service calls, good intention calls, false alarm, severe weather/natural disaster, and other calls. Table 15 identifies the total number of calls per incident in the SMFPD service area.

TABLE 15: SOUTHERN MARIN FIRE PROTECTION DISTRICT – TOTAL INCIDENTS

INCIDENT TYPE	NUMBER OF CALLS	PERCENT OF TOTAL
Fire	70	1.58%
Overpressure Rupture, Explosion – No Fire	2	0.05%
Rescue and Emergency Medical Service	2,581	58.42%
Hazardous Materials/Condition (No Fire)	170	3.85%
Service Call	484	10.96%
Good Intent Call	730	16.52%
False Alarm/False Call	361	8.17%
Severe Weather/Natural Disaster	17	0.38%
Other/Special Incident Type	14	0.32%
Total Calls	4,429	100%

SOURCE: SOUTHERN MARIN FIRE PROTECTION DISTRICT PRELIMINARY BUDGET FISCAL YEAR 2020/2021

In 2016, the SMFPD conducted a Fire and Emergency Medical Services Deployment Analysis to assist in setting service delivery objectives according to National Fire Protection Association (NFPA) Standard 1710. One recommendation included adoption of deployment measure policies. These policies addressed distribution of fire stations, multiple-unit effective response force for serious emergencies, hazardous materials responses, and technical rescue³⁸. Each policy contained the following standards:

1. **Distribution of Fire Stations** – First-due unit arrives within 9 minutes and 30 seconds of receipt of call 90 percent of the time
2. **Effective Response Force** – Minimum response of one ladder truck, four engines, one medic unit, and one Battalion Chief arrive within 11 minutes and 30 seconds from receipt of 9-1-1 call 90 percent of the time

³⁶ Southern Marin Fire Protection District. 2020. Preliminary Budget Fiscal Year 2020/2021. Available at: <https://www.southernmarinfire.org/document-library/file/documents/financial/budgets/20%2021%20BUDGET%20PACKAGE%20DRAFT.pdf>

³⁷ Southern Marin Fire Protection District. District Overview. Available at: <https://www.southernmarinfire.org/about/district-overview>

³⁸ Southern Marin Fire Protection District 2016 Fire and Emergency Medical Services Deployment Analysis. Available at: <https://www.southernmarinfire.org/admin/document-library/file/deployment-analysis/Vol%201%20-%20So%20Marin%20FPD%20Executive%20Summary%20Final%20%2809-22-16%29.pdf>

3. **Hazardous Materials Response** – First unit’s travel time is 6 minutes or less 90 percent of the time
4. **Technical Rescue** – First unit arrives in 8 minutes or less 90 percent of the time and initiates rescue within a total response time of 11 minutes and 30 seconds, 90 percent of the time.

In 2017, 2018, and 2019, the SMFPD met these standards 100 percent of the time³⁹. Additionally, according to the findings of the SMFPD’s 2016 Fire and Emergency Medical Services Deployment Analysis, the current locations for the SMFPD’s fire engines and stations are adequate to meet the needs of the District and relocating or adding a fire station in the service area is not necessary or a cost-effective investment. However, the study did recommend that the SMFPD focus on reducing crew turnout times to fall consistently below 2 minutes. Compliance reports for 2017-2019 show that the SMFPD has achieved this objective.

As previously stated, ISO routinely conducts assessments of each fire agency in the United States, with a goal to re-assess fire agencies once every five years. In 2016, the District received the findings from the ISO, which awarded them a PPC Class of 1 putting the SMFPD among the top 0.3 percent of communities nationwide.

SMFPD Fire Stations

Southern Marin Fire Station #1 is located at 333 Johnson Street in downtown Sausalito and primarily provides emergency medical and fire protection/suppression services to the City of Sausalito, Golden Gate National Recreation Area, and unincorporated Marin County. The Southern Marin Fire Station #1 contains a variety of apparatus that serve the community ranging from support vehicles to paramedic trucks, including an Engine, a Paramedic Ambulance and our Dive Tender Unit. The crews there cross-staff the Fireboat, an Inflatable Rescue Boat, and are members of the Dive Team. Five personnel operate from this station daily.

Southern Marin Fire Station #4 is located at 309 Poplar Avenue in Mill Valley provides emergency medical and fire protection/suppression services to the unincorporated Tamalpais Valley and Homestead Valley communities in Marin County. The Southern Marin Fire Station #4 contains a variety of apparatus that serve the community ranging from support vehicles to paramedic trucks, including a Type 1 (all risk) Engine, a Type 3 (Wildland) Engine, Ladder Truck and a Paramedic Ambulance. Five personnel operate from this station daily.

Southern Marin Fire Station #9 is located at 308 Reed Boulevard in Mill Valley and provides emergency medical and fire protection/suppression services to the Strawberry area, the Alto Bowl, and the northwestern corner of Tiburon Planning Area. The Southern Marin Fire Station #9 serves as the Battalion Chief offices and contains a variety of apparatus that serve the community ranging from support vehicles to paramedic trucks, including an Engine, Paramedic Medium Rescue, and a California RTF Swift Water Rescue Unit. Five personnel operate from this station.

FIRE CONCERNS

Wildland fire hazards exist in varying degrees throughout the Tiburon Peninsula and probably pose the greatest threat to public safety and property of all other potential hazards. The fire season generally lasts from five to six months but has been elongated due to climate change. Urban fires can be a serious problem in older areas of the Tiburon Planning Area, such as Downtown Tiburon. In some older areas, narrow (or no) spaces between buildings can provide opportunities for structural fires to leap from one building to another as well as create barriers to firefighters seeking access between structures. Additionally, the majority of Tiburon is located within either a “Wildland-Urban Interface”, “Wildland-Urban Intermix”, or Wildfire Influence fire hazard zone, which are considered areas to be at greater risk of wildfires. Many homes in Tiburon have been built within these zones on steep slopes. These slopes are often steep, located in rugged terrain, and have very few access routes, making it difficult for firefighters to suppress fires. Additional information related to local wildfire threats is included in Section 3.0 of the *Hazards and Safety Existing Conditions Report*.

³⁹ City of Sausalito. 2020. City of Sausalito Revised General Plan EIR [page 3.13-4].

EXISTING CONDITIONS - POLICE PROTECTION

TIBURON POLICE DEPARTMENT

The Tiburon Police Department (TPD) is responsible for providing law enforcement services in the Town, including patrol, administration, support personnel, investigations, training, parking enforcement and crime prevention program. The TPD is located at 1155 Tiburon Boulevard, as shown on Figure 6.

Similar to other cities and towns, the TPD relies on the Marin Sheriff's Office for search and rescue services and long-term holding facilities and County Animal Control for animal service. Additionally, the TPD is a member and partner of the Marin County Major Crimes Task Force whose objective is to investigate and prevent the illegal activity of highly-mobile mid to upper-level drug dealers and suppliers and to disrupt and dismantle their criminal narcotic enterprises operating in Marin County⁴⁰. The TPD also contracts with the Sheriff's Office for dispatch services. The TPD's 2020/21 budget is approximately \$3.75 million.

Organization

The TPD consists of two divisions: The Department Services Division and the Police/Emergency Operation Center Facility Division⁴¹. In total, the TPD consists of 17 full time employees, including 13 sworn members and four civilian personnel, who are supported by four part-time Reserve Police Officers and volunteers. In addition to the Chief, the team is comprised of four Sergeants, eight Police Officers, one Emergency Services Coordinator, and three Police Service Aides⁴². The TPD's 13 sworn police officers served approximately 9,540 Tiburon Residents⁴³ in 2020, or approximately 1 sworn officer for every 734 residents.

Department Services Division

The Department Services Division includes patrol, administration, support personnel, investigations, training, parking enforcement and crime prevention program. TPD coordinates with other Town departments, government agencies and has developed a partnership with the community in planning and implementing safe school programs, neighborhood and business awareness, safe pedestrian and traffic flow on Tiburon's streets and emergency preparedness programs. TPD promotes community-oriented policing and understands that it is the community itself that can best say what it needs from its Police Department and the Police and the community must work together to accomplish jointly set goals through cooperative efforts. Table 16 identifies miscellaneous statistics for the Department Services Division, including the total number of parking tickets, traffic violations, and calls for service from 2018 to 2020.

TABLE 16: TOTAL CALLS FOR SERVICE – TIBURON POLICE DEPARTMENT

	2018	2019	2020
Parking Tickets	1,111	1,251	1,444
Traffic Violations/Stops	64	100	69
Calls for Service	10,071	11,079	10,238

SOURCE: TIBURON POLICE DEPARTMENT CRIMINAL/INCIDENT STATISTICS 2018, 2019, 2020

The Department Services Division also is responsible for ensuring the safety of our community who use Tiburon roadways by enforcing both the California Vehicle Code (CVC) and the Tiburon Municipal Code. Table 17 identifies the traffic collision/accident statistics in the TPD service area for 2018 and 2019 (most recent reporting years).

⁴⁰ Marin County Sheriff's Department. 2015. Marin County Major Crimes Task Force 2015 Annual Report

⁴¹ Town of Tiburon. 2020. Municipal Budget Fiscal Year 2020-21. [page 42]

⁴² Town of Tiburon. December 2020. Chief of Police Job Announcement Brochure. [page 5]

⁴³ California Department of Finance. May 2020. E-5 Report

TABLE 17: TIBURON POLICE DEPARTMENT TRAFFIC UNIT STATISTICS

TRAFFIC COLLISION STATISTICS	2018	2019	% CHANGE
Non-Injury Accidents	19	20	5.3%
Injury Accidents	9	13	44.4%
Fatality Traffic Accidents	0	0	--
Hit and Run – Non-Injury	9	0	-100.0%
Hit and Run – Injury	1	9	800.0%
DUI Injury/Fatality	0	0	--
Total Number of Accidents	38	42	10.5%
<i>Total Persons Injured</i>	<i>11</i>	<i>13</i>	<i>18.2%</i>

SOURCE: TIBURON POLICE DEPARTMENT CRIMINAL/INCIDENT STATISTICS 2019

Police/Emergency Operation Center Facility Division

The Police/Emergency Operations Center Facility Division serves as the primary Emergency Operations Center for the entire Tiburon Peninsula. Belvedere contributes 12.5 percent of the funds needed to maintain this function.

FBI CRIME STATISTICS

The FBI Uniformed Crime Reporting (UCR) Program encompasses approximately 14,000 law enforcement agencies nationwide. Participating agencies voluntarily provide crime data to the Department of Justice to generate a standardized and reliable set of crime statistics. The Tiburon Police Department is committed to providing accurate crime statistics to the DOJ and maintains criminal/incident statistics for each year which contains a breakdown of the total amount of Part 1 and Part 2 crimes occurred within the service area in a given year. By FBI definition, Part 1 Crime is comprised of the following violent and property crimes: Murder, Rape, Robbery, Aggravated Assault, Burglary, Larceny, Vehicle Theft and Arson. Part 2 crimes are less serious in nature and are tracked, however; only arrest information for these crimes is reported to the Federal Bureau of Investigations. Table 18 identifies the total Part 1 crimes in the Tiburon Planning Area.

TABLE 18: TIBURON PART 1 CRIME STATISTICS (2018-2020)

CATEGORY/CRIME	2018	2019	2020
Homicide	0	0	0
Rape	0	0	0
Robbery	2	0	1
Assault/Battery	10	3	10
Domestic Violence	7	6	7
Assaulting Police	1	0	0
<i>Subtotal Violent Crimes</i>	<i>20</i>	<i>9</i>	<i>18</i>
Burglary	15	12	12
Motor Vehicle Theft	0	3	2
Larceny	63	66	60
Arson	0	0	0
<i>Subtotal Property Crimes</i>	<i>78</i>	<i>81</i>	<i>74</i>
Total Part 1 Crimes	98	90	92

SOURCE: TIBURON POLICE DEPARTMENT CRIMINAL/INCIDENT STATISTICS 2018, 2019, 2020

As shown in Table 18, total Part 1 Crimes reported has slightly decreased by approximately 6.1 percent from 98 in 2018 to 92 in 2020. The majority of Part 1 Crimes committed in Tiburon consist of property crimes with an average of 63 larceny and 13 burglary crimes reported each year between 2018 to 2020. Violent crimes in Tiburon typically make up only 10 to 20 percent of the total Part I Crimes reported with an average of 7 assault/battery charges and 7 domestic violence crimes reported each year between 2018 to 2020. From 2019 to 2020, Tiburon experienced an 8.6 percent decrease in total property crimes from 81 in 2019 to 74 in 2020, but a 100 percent increase in violent crimes from 9 in 2019 to 19 in 2020.

Table 19 identifies the total Part 2 crimes, as reported by the TPD Criminal/Incident Statistic Reports for 2018 – 2020.

TABLE 19: TIBURON PART 2 CRIME STATISTICS (2018-2020)

CATEGORY/CRIME	2018	2019	2020
Child Abuse/Neglect	4	3	0
Defraud Innkeeper	0	0	2
Disturbing the Peace	8	5	1
Forgery	0	0	1
Fraudulent Documents/Checks	0	0	1
Fraud	22	16	12
Harassment/Harassing Calls	1		
Identity Theft	3	10	6
Indecent Exposure	1	0	1
Public Intoxication	6	0	2
Juvenile Problem	3	0	0
Narcotics Violation	4	0	8
Prowler	2	0	1
Sex Offenses	1	2	4
Threats	3	0	4
Town Ordinances	6	4	1
Trespassing	2	1	0
Vandalism	11	13	15
Warrants	7	7	7
Weapons	0	1	0
DUI	12	3	4
Driving on a Suspended License	4	7	6
Miscellaneous Misdemeanor	9	4	12
Miscellaneous Felony	0	9	0
Miscellaneous CVC Violation	12	25	25
Total Part 2 Crimes	131	110	113

SOURCE: TIBURON POLICE DEPARTMENT CRIMINAL/INCIDENT STATISTICS 2018, 2019, 2020

As shown in Table 19, total Part 2 Crimes reported has decreased by approximately 13.7 percent from 131 crimes reported in 2018 to 113 in 2020. The most common Part 2 Crimes reported in Tiburon each year are fraud, miscellaneous CVC violations, vandalism, miscellaneous misdemeanors, driving on a suspended license, and DUIs.

REFERENCES

California Department of Finance. May 2020. E-5 Report. Available at:
<https://www.dof.ca.gov/Forecasting/Demographics/Estimates/E-5/>

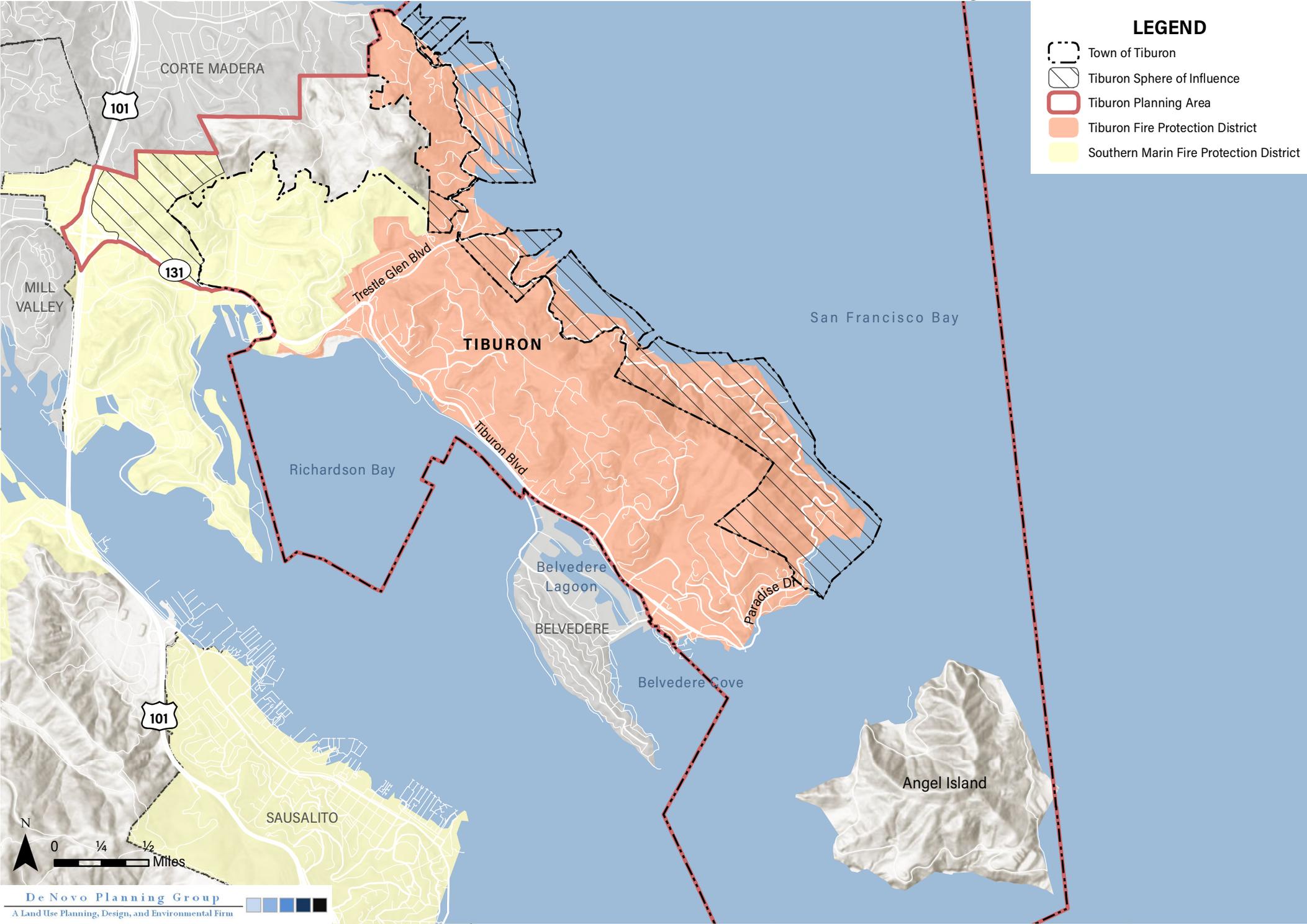
City of Sausalito. 2020. City of Sausalito Revised General Plan EIR. Available at: <https://m-group.app.box.com/s/6dx2uj3s8cdmgwvdv9innwh7t4cruthl>

Marin County Sheriff's Department. 2020. Marin County Major Crimes Task Force 2019 Annual Report. Available at:
<https://www.marinsheriff.org/assets/downloads/2019-MCTF-Annual-Report.pdf>

Southern Marin Fire Protection District. District Overview. Available at: <https://www.southernmarinfire.org/about/district-overview>

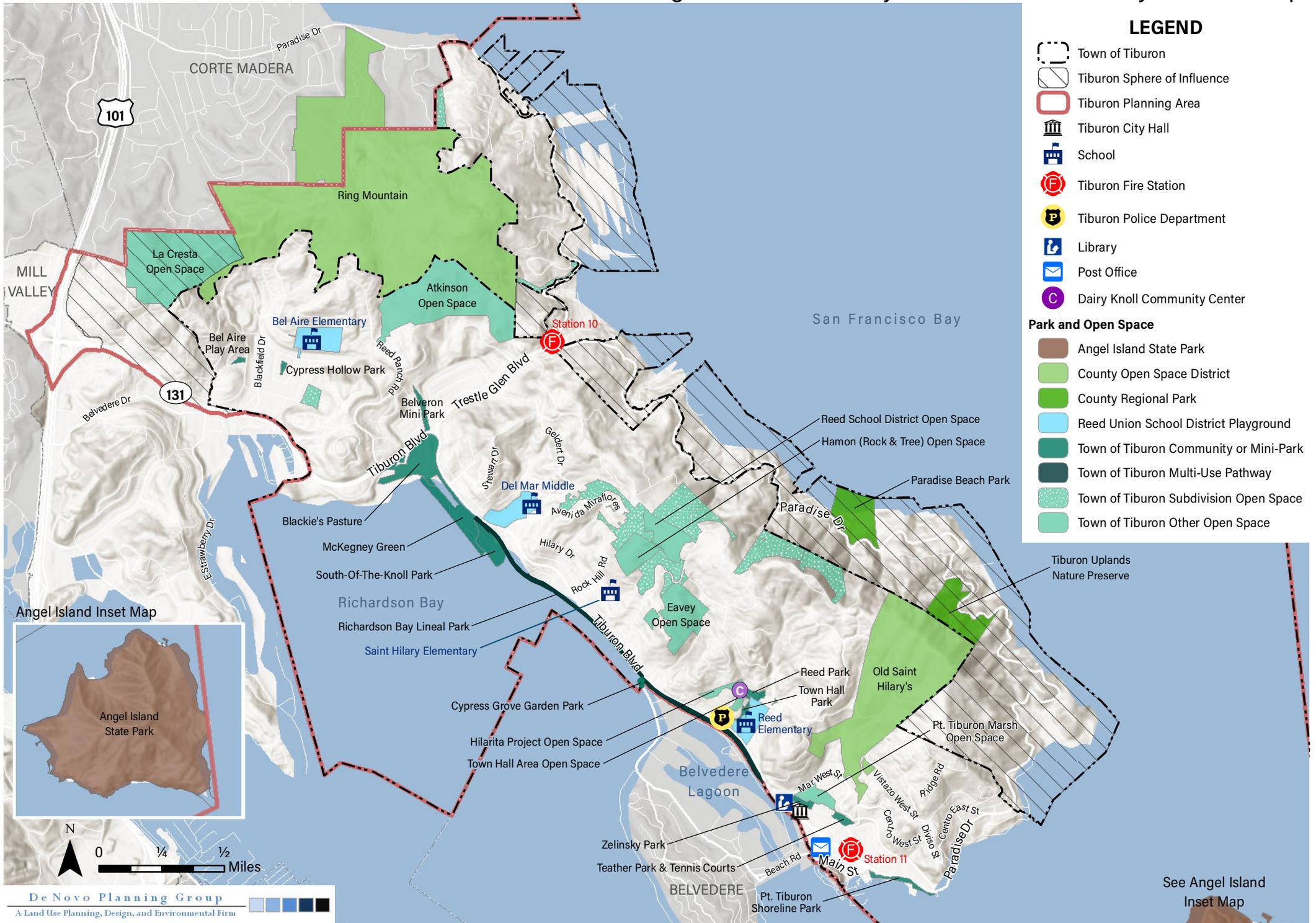
- Southern Marin Fire Protection District 2016 Fire and Emergency Medical Services Deployment Analysis. Available at: <https://www.southernmarinfire.org/admin/document-library/file/deployment-analysis/Vol%201%20-%20So%20Marin%20FPD%20Executive%20Summary%20Final%20%2809-22-16%29.pdf>
- Southern Marin Fire Protection District. 2020. Preliminary Budget Fiscal Year 2020/2021. Available at: <https://www.southernmarinfire.org/document-library/file/documents/financial/budgets/20%2021%20BUDGET%20PACKAGE%20DRAFT.pdf>
- Tiburon Fire Protection District. 2019. Ordinance No. 129. Available at: https://www.tiburonfire.org/wp-content/uploads/2019/12/Ordinance-_129-signed-11-13-19.pdf
- Tiburon Fire Protection District. 2020 Comprehensive Annual Financial Report. Available at: <https://www.tiburonfire.org/wp-content/uploads/2020/12/CAFR-2020.pdf>
- Tiburon Police Department. 2018. Tiburon Police Department 2018 Criminal/Incident Statistics.
- Tiburon Police Department. 2019. Tiburon Police Department 2019 Criminal/Incident Statistics.
- Tiburon Police Department. 2018. Tiburon Police Department 2020 Criminal/Incident Statistics.
- Town of Tiburon. As Amended Through February 3, 2016. Town of Tiburon General Plan. Available: <https://www.townoftiburon.org/206/General-Plan>
- Town of Tiburon. 2020. Municipal Budget Fiscal Year 2020-21. Available at: <https://www.townoftiburon.org/ArchiveCenter/ViewFile/Item/280>
- Town of Tiburon. December 2020. Chief of Police Job Announcement Brochure. Available at: <https://www.townoftiburon.org/DocumentCenter/View/2326/Chief-of-Police-Brochure>

Figure 5: Fire District Boundaries



Sources: ArcGIS Online World Hillshade Map Service; Marin GeoHub. Map date: February 8, 2021.

Figure 6: Public Safety, Parks, and Community Services Map



See Angel Island Inset Map

7. PARKS AND RECREATION

The Town of Tiburon Parks Maintenance Division of the Public Works Department provides year-round parks services and maintenance to ensure high-quality recreational facilities for the residents of the Tiburon Peninsula. Additionally, the Belvedere – Tiburon Recreational Department (The Ranch) is an independent agency responsible for the administration and operation of a diversified, year-round recreation programs for Tiburon Peninsula residents.

REGULATORY FRAMEWORK

STATE

Quimby Act

The Quimby Act (California Government Code Section 66477) states that “the legislative body of a city or county may, by ordinance, require the dedication of land or impose a requirement of the payment of fees in lieu thereof, or a combination of both, for park or recreational purposes as a condition to the approval of a tentative or parcel map.” Requirements of the Quimby Act apply only to the acquisition of new parkland and do not apply to the physical development of new park facilities or associated operations and maintenance costs. The Quimby Act seeks to preserve open space needed to develop parkland and recreational facilities; however, the actual development of parks and other recreational facilities is subject to discretionary approval and is evaluated on a case-by-case basis with new residential development.

LOCAL

Marin County Parks and Open Space Department

The Marin County Parks and Open Space Department manages an extensive park system of 190 miles of unpaved public trails and 19,300 acres of parkland, including regional and community parks, neighborhood parks, and 34 open space preserves. The Tiburon Planning Area consists of two regional parks maintained and managed by the Marin County Parks and Open Space District, including the Paradise Beach Park and the Tiburon Uplands Nature Preserve.

Marin County Parks and Open Space Department Strategic Plan

In June 2008, the Marin County Parks and Open Space District prepared a Strategic Plan, which serves as the County’s ten-year vision for its extensive park system. The Strategic Plan includes a needs assessment to better understand how residents’ park and recreation needs will evolve as the County’s population ages and examines the County’s park and open space system to identify current strengths and weaknesses. Based on these analyses, the Marin County Parks and Open Space District identified necessary park improvements and facilities to be built to meet the needs of the County residents. Specifically, the Strategic Plan earmarks \$1,427,800 for Paradise Park capital improvement projects, including \$1,177,500 for park renovations, \$220,000 for new park facilities/improvements, and \$30,250 for associated planning fees.

Belvedere – Tiburon Recreation Department (The Ranch)

The Town of Tiburon administers its recreation services through a joint powers agreement (JPA) with the City of Belvedere. In June of 1975, the JPA established the Belvedere-Tiburon Joint Recreation Committee. In 2013, the title of the JPA was changed to The Ranch. The Ranch has a governing committee that is made up of 9 members: four appointed by the City of Belvedere; four appointed by the Town of Tiburon; one member appointed by, and a member of, the Reed Union School District. The purpose of establishing a separate public entity was to ensure that recreation services would be supported by participant fees rather than tax dollars.

Town of Tiburon Open Space Resource Management Plan

The purpose of the Town of Tiburon Open Space Resource Management Plan is to address the management of vegetation in the Town’s open space areas. The goals of the Tiburon Open Space Resource Management Plan are consistent with the

Marin County Open Space District with regard to management of vegetation, including reducing fire hazards on open space, reducing risk of wildfire, preserving native species (including special-status species and sensitive habitats), and controlling/reducing non-native species and weeds. Recommended management activities primarily address the methods available for management of vegetation and non-native species and to a lesser extent the management of trails, prevention of erosion, and protection of special-status species.

Town of Tiburon General Plan

The existing Tiburon General Plan includes the following goals and policies related to parks and recreation:

Parks and Recreation Element

Goals

PR-A: To provide sufficient land and facilities for a balanced system of parks and recreation opportunities that serve all ages.

PR-B: To anticipate population growth and to plan for and provide funds for the acquisition of adequate lands or installation of adequate facilities to address future parks and recreation needs of the community.

Policies

PR-1: Sufficient park land and recreational facilities shall be maintained over time. A ratio of 5.0 acres of park land per 1,000 persons is established for the Planning Area pursuant to the Quimby Act.

PR-2: The Town of Tiburon shall continue to require new parkland dedication and/or collection of in-lieu fees during the development review process.

PR-3: The Town shall continue to use park funds and any future in-lieu fees for improvement of existing and future parks and for parkland acquisition purposes.

PR-4: The Town shall pursue federal, state, county, and other funds to assist in the maintenance, improvement, and acquisition, of existing and/or future park facilities.

PR-5: The Town shall strive to adequately fund the ongoing maintenance of the park and recreation facilities under its ownership.

PR-6: The area known as Blackie's Pasture (see Diagram 8.4-1 [of the current General Plan]) shall be retained for passive, informal recreational use.

PR-7: Existing water recreation opportunities shall be maintained and may be enhanced where practicable, for example, by the establishment of a small watercraft launching facility available to the public.

PR-8: Additional public shoreline access from publicly accessible land, especially in areas where none currently exists, shall be encouraged.

PR-9: The Town shall continue to increase, enlarge, and enhance its network of public trails within the Tiburon Planning Area.

PR-10: Public convenience facilities such as restrooms, bicycle racks, drinking fountains, and trash receptacle are encouraged and may be provided by the State of California, the Town of Tiburon, and/or the local community.

PR-11: The Town shall continue to work cooperatively with the Belvedere/Tiburon Joint Recreation Committee.

PR-12: Recreation programming should be responsive to and serve the needs, interests, and desires of the entire community.

PR-13: Recreation programs should be offered on a year-round basis.

PR-14: Recreation programs should provide a majority of activities that are affordable to the community.

PR-15: The Town shall cooperate with the California Department of Parks and Recreation to ensure that Angel Island remains a unique state resource and that the village-like character of Downtown Tiburon is protected.

PR-16: The Town shall facilitate a positive, mutually beneficial relationship between the Angel Island administration and the Tiburon community.

Implementing Programs

PR-a: The Town should work with the Belvedere – Tiburon Recreation Department and the City of Belvedere to consider the long and short term need for additional parklands, sporting facilities, picnic facilities, play areas, and to develop a master plan for meeting the community's recreational programming and facility needs.

PR-b: The Town shall examine development applications for the existence and potential creation of easements and/or trails that connect or continue to allow public access to shoreline, recreation and open space areas; Town Staff shall monitor construction with a view toward the successful creation and/or maintenance of such easements and/or trails.

PR-c: The Town should explore the need and desirability for establishing a community center which would accommodate recreational and other needs for the entire community.

Town of Tiburon Municipal Code

Chapter 18 Parks, Open Space and Recreational Lands. This chapter of the Tiburon Municipal Code regulates and governs the use, operation, control and maintenance of those parks, open spaces, and recreational lands under the control of the town.

EXISTING CONDITIONS

TIBURON PUBLIC PARKS

The Parks Maintenance Division of the Tiburon Public Works Department maintains the Town's 12 parks as well as the multi-use path and the landscaped medians throughout Town⁴⁴. The primary source of funding for park maintenance comes from the Cypress Hollow Special Tax Assessment District, developer impact fees, and the General Fund. The Town currently maintains a park standard of five acres per 1,000 residents. The Town's 12 parks include community parks, mini-parks, and specialty facilities. In addition to the Town's 12 parks, two regional parks are located within the Tiburon Planning Area in unincorporated Marin County, which are maintained by the Marin County Parks and Open Space Department⁴⁵.

Community Parks

Community parks are developed primarily to meet the recreational needs of a large portion of the city. Community parks range in size according to purpose, and often feature one-of-a-kind community facilities or natural resources. For example, the Richardson Bay Lineal Park offers a multi-use path and amenities along the bay waterfront and open space/natural preservation areas, while Point Tiburon Shoreline Park features the Elephant Rock Fishing Pier and amenities along the bay waterfront. Community parks may also contain a greater variety of recreational facilities, such as swimming pools, community

⁴⁴ Town of Tiburon. 2020. Municipal Budget Fiscal Year 2020-2021. [page 50].

⁴⁵ Marin County Parks and Open Space Department. 2008. Strategic Plan.

centers, public rest rooms, bocce ball and horseshoe areas, trails, athletic fields, and pond fishing. Community parks located in the Tiburon Planning Area include the:

- Richardson Bay Lineal Park, which includes:
 - Blackie's Pasture;
 - McKegney Green;
 - South of Knoll Park;
 - Multi-Use Path; and
 - Cypress Grove Garden Park;
- Point Tiburon Shoreline Park, which includes:
 - Elephant Rock Fishing Pier;
- Reed Park; and
- Town Hall Park.

Mini-Parks

Mini-parks primarily serve a small portion of the city, usually within one-half mile radius of the park. Mini-parks are generally oriented toward the recreational needs of children and youth. For example, Cypress Hollow Park provides playground equipment while the Bel Aire Play Area is an unimproved green area for residents of the Bel Aire neighborhood to play. All of the City's mini-parks are located near collector streets in residential neighborhoods. Mini-parks in the Tiburon Planning Area include the:

- Belveron Mini-Park;
- Bel Aire Play Area;
- Cypress Hollow Park; and
- Zelinsky Park.

Specialty Facility

Specialty Facility primarily provide for specific recreational activities, such as the Teather Park Tennis Courts, which provides tennis court facilities for public use. The only specialty facility located in the Tiburon Planning Area is the Teather Park Tennis Courts.

Regional Parks

The Tiburon Planning Area also consists of several regional recreational areas and county park facilities, which includes both water-based, and passive recreational opportunities. For example, Tiburon Uplands Nature Preserve in unincorporated Marin County offers a hike through to Old Saint Hilary's Open Space Preserve and bay views from the higher elevations while the Paradise Beach Park provides fishing opportunities, a canoe/kayak launch, and spacious lawns and shady trees to enjoy panoramic views across the water to the East Bay⁴⁶.

Tiburon Park Facilities

As shown in Table 20, the Tiburon Planning Area consists of 94.1 acres of parkland. Of the 94.1 acres of parkland within the Planning Area, the Town currently manages approximately 56.7 acres. With an approximate population of 9,540 Tiburon Residents⁴⁷ in 2020, the Town's parkland totals approximately 5.9 acres of Town parkland per 1000 residents (excluding the

⁴⁶ Marin County Parks and Open Space Department. Parks & Preserves Location List. Available at: <https://www.marincountyarks.org/parkspreserves/sip-location-list>

⁴⁷ California Department of Finance. May 2020. E-5 Report

County's 18.6-acre Paradise Beach Park and 18.8-acre Tiburon Uplands Nature Preserve within the Planning Area). The location of parks within the Tiburon Planning Area is shown on Figure 6. Table 20 summarizes the park facilities within the Planning Area by acreage.

TABLE 20: SUMMARY OF LOCAL PARK FACILITIES IN THE PLANNING AREA

PARK NAME	ACRES	PARK TYPES
Richardson Bay Lineal Park		CP
<i>Blackie's Pasture</i>	15.5	CP
<i>McKegney Green</i>	11.6	CP
<i>South of Knoll Park and Playground</i>	6.5	CP
<i>Multi-Use Path</i>	11.3	CP
<i>Cypress Grove Garden Park</i>	0.1	CP
Pt. Tiburon Shoreline Park	2.3	CP
<i>Elephant Rock Fishing Pier</i>	-	CP
Reed Park	1.5	CP
Town Hall Park	1.8	CP
Belveron Mini Park	2.1	MP
Bel Aire Play Area	0.5	MP
Cypress Hollow Park	0.5	MP
Zelinsky Park	1.5	MP
Teather Park Tennis Courts	1.5	SP
Paradise Beach Park	18.6	RP
Tiburon Uplands Nature Preserve	18.8	RP
Total	94.1	--

CP = COMMUNITY PARK, MP = MINI-PARK, SP = SPECIAL PARK, RP = REGIONAL PARK

NOTE: 1) COUNTY OF MARIN FACILITY

SOURCES: MARINMAPS, 2021; DE NOVO PLANNING GROUP 2021

Angel Island

In addition to the parks on the Tiburon Peninsula, 726 of the 740 acres of Angel Island State Park are within the incorporated Town of Tiburon; the remaining 14 acres are located in the City and County of San Francisco. This historic park offers peninsula residents and visitors unique opportunities for hiking, biking, camping and boating in San Francisco Bay. The Ranch provides popular youth summer camps on Angel Island. Approximately 200,000 people visit Angel Island annually, almost all of them arriving by ferry.

BELVEDERE – TIBURON RECREATION DEPARTMENT (THE RANCH)

As previously stated, the Town of Tiburon administers its Recreation by way of a joint powers agreement (JPA) with the City of Belvedere. In 2013, the title of the JPA was changed to The Ranch. The Ranch offers a wide array of programs, providing classes and activities for toddlers through older adults. Approximately 70 percent of programming is for children, including the after-school academy program and summer camps. Special events, adult programs and other programs comprise approximately 30 percent of the programming. The Community Opinion Survey found that nearly half of the residents (47 percent) reported their households had attended a The Ranch program, class, or event⁴⁸.

⁴⁸ Town of Tiburon. 2011. Tiburon Peninsula Recreation Needs and Existing Condition Assessment Study [page 16]

Dairy Knoll serves as the local community center owned and operated by The Ranch, which is utilized for recreational programming. Additionally, The Ranch has facility use agreements for programming at multiple locations throughout Tiburon, including Reed Elementary School, Bel Aire Elementary School, Del Mar Middle School, Angel Island State Park, Paradise Park, Landmarks Art and Garden Center, and Tiburon Baptist Church⁴⁹.

Dairy Knoll

The Ranch at Dairy Knoll is located at 600 Ned’s Way in Tiburon and serves as the local community center owned and operated by The Ranch (formerly the Belvedere – Tiburon Recreation Department). The purpose of The Ranch at Dairy Knoll is to provide quality recreational and educational programs that inspire and enrich the lives of children and adults in the community while maintaining a self-supporting agency. This facility can accommodate up to 147 people in three separate private meeting rooms or one great room totaling 2,310 square feet. This site includes a spacious outdoor patio and picnic areas, ideal for team building activities or outdoor dining. This site can also accommodate bounce houses and children’s entertainers.

COMMERCIAL/PRIVATE RECREATION FACILITIES

In addition to public park facilities, the Planning Area is home to four commercial/private recreation facilities. These are private facilities that require membership for access and use. Neither the Town nor The Ranch has any role in influencing the recreational amenities or programs offered by these private facilities. Table 21 summarizes the commercial/private recreation facilities within the Planning Area and the recreational amenities provided.

TABLE 21: COMMERCIAL RECREATION FACILITIES

COMMERCIAL RECREATION FACILITY	RECREATIONAL AMENITIES
Corinthian Yacht Club	Boat members slips plus guest slips
Tiburon Peninsula Club	10 tennis courts, three swimming pools, fitness center
Belvedere Tennis Club	7 tennis courts, pool
Tiburon Yacht Club/Paradise Cay Yacht Harbor	Boat slips and Clubhouse

SOURCES: TOWN OF TIBURON PARKS AND RECREATION ELEMENT

OPEN SPACE AREAS

Open space and preservation of the natural environment are valued and defining characteristics of the Tiburon Peninsula. The Tiburon Peninsula consists of over 800 acres of protected and publicly owned open space land. Additionally, on the Peninsula, there are approximately 115 acres of private open space protected from development through easement or another legal instrument. These open space areas are generally not open to public use⁵⁰. As shown in Table 22, approximately 769 acres of open space land is located within the Planning Area. Figure 6 shows the location of open space areas within the Tiburon Planning Area and Table 22 summarizes the open space areas by acreage.

TABLE 22: SUMMARY OF LOCAL PARK FACILITIES

OPEN SPACE AREA	ACRES
Hamon (Rock & Tree) Open Space	10.5
Mt. Tiburon Subdivision Open Space	12.3
Hilarita Project Open Space	2.8
Cibrian Subdivision Open Space	3.8

⁴⁹ Marin County LAFCO. 2020. Tiburon Peninsula Municipal Services Review. [page 42]

⁵⁰ Town of Tiburon. 2011. Tiburon Peninsula Recreation Needs and Existing Condition Assessment Study [page 23-24]

OPEN SPACE AREA	ACRES
Ring Mountain ¹	389.1
La Cresta Open Space	65.3
Del Madera Subdivision Open Space	29.2
Miraflores Subdivision Open Space	17.2
Mateo Drive Subdivision Open Space	2.8
Town Hall Area Open Space	2.0
Eavey Open Space	21.3
El Marinero Subdivision Open Space	9.3
Reed School District Open Space	11.8
Atkinson Open Space	59.7
Highlands Subdivision Open Space	3.1
Old Saint Hilary's ¹	123.9
Pt. Tiburon Marsh Open Space	5.1
Total	769.1

NOTE: 1) COUNTY OF MARIN FACILITY

SOURCE: MARINMAPS GIS, 2021; DE NOVO PLANNING GROUP 2021

REFERENCES

California Department of Finance. May 2020. E-5 Report. Available at:

Marin County GIS Shapefile; Augmented by De Novo Planning Group 2021.

Marin County LAFCO. June 2020. Tiburon Peninsula Municipal Services Review. Available at:
<https://www.marinlafco.org/municipal-servi-ce-review-and-sphere-of-influence-update-reports>

Marin County Parks and Open Space Department. Parks & Preserves Location List. Available at:
<https://www.marincountyparks.org/parkspreserves/sip-location-list>

Marin County Parks and Open Space Department. 2008. Strategic Plan. Available at: https://www.marincountyparks.org/-/media/files/sites/marin-county-parks/projects-and-plans/guiding-documents/guidingdocuments_strategicplan2008.pdf?la=en

The Ranch. 2021. The Ranch About Us. Available at: http://www.theranchtoday.org/about_the_ranch.aspx

Town of Tiburon. 2011. Tiburon Peninsula Recreation Needs and Existing Condition Assessment Study.

Town of Tiburon. As Amended Through February 3, 2016. Town of Tiburon General Plan. Available:
<https://www.townoftiburon.org/206/General-Plan>

Town of Tiburon. 2020. Municipal Budget Fiscal Year 2020-2021. Available at:
<https://www.townoftiburon.org/ArchiveCenter/ViewFile/Item/280>

Town of Tiburon GIS Shapefiles, 2021. Augmented by De Novo Planning Group 2021.

8. CIVIC, SCHOOL, AND LIBRARY FACILITIES

REGULATORY FRAMEWORK

STATE

California Code of Regulations

The California Code of Regulations, Title 5 Education Code, governs all aspects of education within the State.

Leroy F. Greene School Facilities Act of 1998 (SB 50)

The “Leroy F. Greene School Facilities Act of 1998,” also known as Senate Bill No. 50 or SB 50 (Chapter 407, Statutes of 1998), governs a school district’s authority to levy school impact fees. This comprehensive legislation, together with the \$9.2 billion education bond act approved by the voters in November 1998 known as “Proposition 1A,” reformed methods of school construction financing in California. SB 50 instituted a new school facility program by which school districts can apply for State construction and modernization funds. It imposed limitations on the power of cities and counties to require mitigation of school facilities impacts as a condition of approving new development and provided the authority for school districts to levy fees at three different levels:

- **Level I** fees are the current statutory fees allowed under Education Code 17620. This code section provides the basic authority for school districts to levy a fee against residential and commercial construction for the purpose of funding school construction or reconstruction of facilities. These fees vary by district for residential construction and commercial construction and are increased biannually.
- **Level II** fees are outlined in Government Code Section 65995.5, allowing school districts to impose a higher fee on residential construction if certain conditions are met. These conditions include having a substantial percentage of students on multi-track year-round scheduling, having an assumed debt equal to 15–30 percent of the district’s bonding capacity (percentage is based on revenue sources for repayment), having at least 20 percent of the district’s teaching stations housed in relocatable classrooms, and having placed a local bond on the ballot in the past four years which received at least 50 percent plus one of the votes cast. A Facility Needs Assessment must demonstrate the need for new school facilities for unhoused pupils is attributable to projected enrollment growth from the construction of new residential units over the next five years.
- **Level III** fees are outlined in Government Code Section 65995.7. If State funding becomes unavailable, this code section authorizes a school district that has been approved to collect Level II fees to collect a higher fee on residential construction. This fee is equal to twice the amount of Level II fees. However, if a district eventually receives State funding, this excess fee may be reimbursed to the developers or subtracted from the amount of State funding.

The Kindergarten-Community College Public Education Facilities Bond Act of 2016 (Prop 51)

The Kindergarten-Community College Public Education Facilities Bond Act of 2016 was the first education-related bond measure to appear on the ballot since 2006. This act was approved by California voters in November 2016 and provided for a bond issued of \$9 billion with \$7.0 billion earmarked for K-12 school facilities and \$2 billion earmarked for community college facilities. The \$7.0 billion for K-12 school facilities was allocated as follows: \$3 billion for the construction of new school facilities, \$500 million for providing school facilities for charter schools, \$3 billion for the modernization of school facilities, and \$500 million for providing facilities for career technical education programs. The \$2 billion allocated to community college facilities was for acquiring, constructing, renovating, and equipping community college facilities.

California Department of Education

The California Department of Education (CDE) School Facilities Planning Division (SFPD) prepared a School Site Selection and Approval Guide that provides criteria for locating appropriate school sites in the State of California. School site and size recommendations were changed by the CDE in 2000 to reflect various changes in educational conditions, such as lowering of class sizes and use of advanced technology. The expanded use of school buildings and grounds for community and agency joint use and concern for the safety of the students and staff members also influenced the modification of the CDE recommendations.

Specific recommendations for school size are provided in the School Site Analysis and Development Guide. This document suggests a ratio of 1:2 between buildings and land. CDE is aware that in a number of cases, primarily in urban settings, smaller sites cannot accommodate this ratio. In such cases, the SFPD may approve an amount of acreage less than the recommended gross site size and building-to-ground ratio.

Certain health and safety requirements for school site selection are governed by State regulations and the policies of the SFPD relating to:

- Proximity to airports, high-voltage power transmission lines, railroads, and major roadways;
- Presence of toxic and hazardous substances;
- Hazardous facilities and hazardous air emissions within one-quarter mile;
- Proximity to high-pressure natural gas lines, propane storage facilities, gasoline lines, pressurized sewer lines, or high-pressure water pipelines;
- Noise;
- Results of geological studies or soil analyses; and
- Traffic and school bus safety issues.

LOCAL

Belvedere-Tiburon Library Agency

The communities of Belvedere and Tiburon have had seven libraries since 1895. The previous facility (in 1966) was in the building that now houses the Belvedere-Tiburon Post Office. Over time the small, under-funded and under-equipped county library became inadequate for the community. The land where the current community library sits at 1501 Tiburon Boulevard was donated by the Zelinsky family. The money was raised, a bond measure passed, and construction began in 1996. The new library opened in April of 1997 and in 2007 had over 63,000 items in its collection.

The Belvedere-Tiburon Library Agency (BTLA) was formed in July 1995 as the legal governing body of the new independent community library. Its seven-person board has three Trustees appointed by the City of Belvedere, three appointed by the Town of Tiburon, and one by the Reed Union School District. The BTLA is charged with all the responsibilities of personnel, collection of tax moneys, budget development, operation and expenditure of money for the Library's development, operation and maintenance.

Reed Union School District

The Reed Union School District (RUSD) is an elementary district located on the Tiburon Peninsula serving the southern Marin communities of Belvedere, Tiburon, and a portion of east Corte Madera. Its three school sites are located in Tiburon, including Reed Elementary School (Kindergarten – Second Grade); Bel Aire Elementary School (Third Grade – Fifth Grade); and Del Mar Middle School (Sixth Grade – Eighth Grade). Each school has received California Distinguished School awards.

Bel Aire was awarded the National Blue-Ribbon Award in 2015 and Honor Roll award in 2016. Del Mar was confirmed as a California Gold Ribbon School and Title I Achievement School in 2017⁵¹.

The RUSD Governance Team is comprised of five locally elected public officials entrusted with governing the community's public schools. In addition, the Superintendent also serves as a member of the district's governance team and has responsibilities to support Board operations and decision-making.

Level 1 Developer Fee Schedule for RUSD

In September 2015, the RUSD adopted the Level 1 Developer Fee Study to demonstrate the relationship between residential, commercial and industrial growth and the need for the modernization of school facilities in the RUSD. The Level 1 Developer Fee Study determined that the RUSD is justified in collecting up to \$2.38 per square foot for residential construction and up to \$0.54 per square foot of commercial/industrial construction with the exception of mini storage. The mini storage category of construction should be collected at a rate of \$0.06 per square foot.

Tamalpais Union High School District

The Tamalpais Union High School District (TUHSD) provides 9-12 education to 19 different communities in southern Marin County, including Bolinas, Belvedere, Corte Madera, Fairfax, Forest Knolls, Greenbrae, Kentfield, Lagunitas, Larkspur, Marin City, Mill Valley, Nicasio, Ross, San Anselmo, San Geronimo, Sausalito, Stinson Beach, Tiburon, and Woodacre. The TUHSD operates three comprehensive high schools (Tamalpais, Redwood, and Sir Francis Drake) and two continuation high schools (San Andreas and Tamiscal). The TUHSD Governance Team is comprised of five locally elected public officials entrusted with governing the community's public schools. In addition, the Superintendent also serves as a member of the district's governance team and has responsibilities to support Board operations and decision-making.

Town of Tiburon General Plan

The existing Tiburon General Plan includes the following goals and policies related to schools:

Downtown Element

Policies

DT-35: Support an appropriate expansion of the Belvedere-Tiburon Public Library adjacent to Zelinsky Park.

Implementing Programs

DT-u: Facilitate expansion of the Belvedere-Tiburon Public Library by employing streamlined permit review processes typically used for major public projects.

Parks and Recreation Element

Goals

PR-A: To provide sufficient land and facilities for a balanced system of parks and recreation opportunities that serve all ages.

PR-B: To anticipate population growth and to plan for and provide funds for the acquisition of adequate lands or installation of adequate facilities to address future parks and recreation needs of the community.

Implementing Program

PR-c: The Town should explore the need and desirability for establishing a community center which would accommodate recreational and other needs for the entire community.

⁵¹ Reed Union School District. 2019-2020. Reed Union School District Local Control Accountability Plan and Annual Update

EXISTING CONDITIONS – TOWN HALL

TOWN HALL

The Tiburon Town Hall includes the Town’s government offices (i.e., Administration and Finance Department, Community Development Department, and Public Works Department), the Town Council chambers, and the Tiburon Community Room. The Tiburon Town Hall acts as the central hub for government services and regularly posts Town announcements and notices of upcoming public hearings, accepts and processes business license applications, accepts and processes Planning/Building Division permit and project applications, and holds Tiburon Town Council Hearings on the first and third Wednesdays of the month within the Tiburon Council Chambers. The Tiburon Community Room is a meeting room suited for community gatherings, business meetings and workshops. The Tiburon Community Room is located in Tiburon Town Hall on the second floor at 1505 Tiburon Blvd, Tiburon, CA 94920.

EXISTING CONDITIONS - SCHOOLS

The Town of Tiburon is served by the RUSD and the TUSD.

REED UNION SCHOOL DISTRICT

As previously stated, the RUSD is an elementary district serving the southern Marin communities of Belvedere, Tiburon, and a portion of east Corte Madera. Its three school sites are located in Tiburon, including Reed Elementary School (Kindergarten – Second Grade); Bel Aire Elementary School (Third Grade – Fifth Grade); and Del Mar Middle School (Sixth Grade – Eighth Grade). Table 23 shows the student enrollment at the RUSD schools during the 2018-2019 through 2020-2021 school years and Figure 2 shows the locations of the RUSD schools.

TABLE 23: RUSD STUDENT ENROLLMENT

SCHOOL	2018 – 2019 STUDENT ENROLLMENT	2019 – 2020 STUDENT ENROLLMENT	2020-2021 STUDENT ENROLLMENT
Reed Elementary School	363	330	310
Bel Aire Elementary School	459	429	396
Del Mar Middle School	540	543	410
Total RUSD Enrollment	1,362	1,320	1,116

SOURCES: RUSD SCHOOL ACCOUNTABILITY REPORT CARD, 2020, 2021; DATAQUEST, 2022

RUSD schools share the services of a psychologist, a speech and language therapist, an Information Services Coordinator and assistant, part-time aides for limited English-speaking students, a part time school nurse, and a district health specialist. Instructional Aides provide assistance in the elementary classrooms at Reed and Bel Aire Elementary Schools. Each school is assigned a Special Education Resource Specialist, art, music, and P.E. teachers, as well as a technology facilitator. Bel Aire and Reed Elementary Schools have Reading Specialists to oversee intervention literacy programs and work collaboratively with the Resource Teachers in the Learning Center to provide services for all students in need. Additionally, Spanish is taught in Grades 3-8 and parent-paid school bus transportation is available to and from all three sites.

Once students graduate from Del Mar Middle School, RUSD graduates attend high school in the Tamalpais Union High School District, as well as private schools in Marin County and San Francisco.

TAMALPAIS UNION HIGH SCHOOL DISTRICT

As previously stated, the TUHSD provides 9-12 education to 19 different communities in southern Marin County, including the Town of Tiburon. The TUHSD operates three comprehensive high schools (Tamalpais, Redwood, and Sir Francis Drake) and two continuation high schools (San Andreas and Tamiscal). Redwood High School serves the Town of Tiburon residents, which is located at 395 Doherty Drive in Larkspur.

Redwood High School

Redwood High School is a 57-acre campus which has 74 classrooms, 5 portable buildings, a student center (multipurpose room), a library, an administration building, two gym buildings, a theater, an arts/technology building, swimming pool, and athletics fields. The original campus was built in 1960. Modernization improvements were completed from 2003 through 2007, a gymnasium and swimming pool were added in 2008, and an art/photography building was completed in 2013. Table 24 shows the student enrollment at Redwood High School during the 2018-2019 and 2019-2020 school years.

TABLE 24: REDWOOD HIGH SCHOOL STUDENT ENROLLMENT

GRADE LEVEL	2018 – 2019 STUDENT ENROLLMENT	2019 – 2020 STUDENT ENROLLMENT	2020-2021 STUDENT ENROLLMENT
Grade 9	543	522	507
Grade 10	497	534	512
Grade 11	441	468	508
Grade 12	447	423	459
Total	1,928	1,947	1,986

SOURCES: REDWOOD HIGH SCHOOL ACCOUNTABILITY REPORT CARD, 2020 AND 2021; DATAQUEST, 2022

EXISTING CONDITIONS - LIBRARY SERVICES

The Belvedere – Tiburon Library is owned and operated by the Belvedere-Tiburon Library Agency and is a branch of the Marin County Library system. The existing 10,500 square foot (11,990 square feet including a mechanical mezzanine area) Belvedere – Tiburon Library opened up in 1997 and is located at 1501 Tiburon Boulevard in Tiburon⁵². As of January 2021, the Belvedere – Tiburon Library had over 107,800 items in its collection⁵³. The library offers a variety of programming for all ages particularly children, teens, and senior citizens. Additionally, the library houses adult and children's Spanish language materials, and bilingual staff are on hand. The library contains items in a variety of formats, including book, e-books, large print books, audiobooks, DVDs, blue-ray discs, video cassettes, streaming videos, magazines and journals, newspapers, and music CDs. Access to the internet is also available.

In June 2010, the Town of Tiburon released a Draft Environmental Impact Report (EIR) for the expansion of the Belvedere – Tiburon Library. The proposed project would expand the existing Belvedere-Tiburon Public Library through the construction of a two-story addition. The existing 10,500 square foot (sf) Library (11,990 sf including a mechanical mezzanine area) would be expanded to 28,500 sf (29,990 sf including the mechanical mezzanine area) in floor area. The project would also include lighting and landscaping improvements, including the installation of a Town Plaza and Zelinsky Promenade/Garden Plaza extending from Tiburon Boulevard to Zelinsky Park, restoration of the existing Zelinsky Park area, landscaping, installation of a Story Time Area and Staff Patio, and 52 new parking spaces⁵⁴. The Tiburon Town Council approved the Belvedere – Tiburon Library Expansion project at its August 1, 2012 meeting⁵⁵. The expansion is underway and is planned to be completed in 2022.

⁵² Town of Tiburon. 2010. Belvedere – Tiburon Library Expansion Project Draft Environmental Impact Report [page II-1]

⁵³ MARINet. 2021. MARINet Library Database. Available at: https://marinet.bibliocommons.com/v2/search?custom_edit=false&query=branch%3A%22Belvedere+Tiburon%22&searchType=bl&suppress=true

⁵⁴ Town of Tiburon. 2010. Belvedere – Tiburon Library Expansion Project Draft Environmental Impact Report [page II-1]

⁵⁵ Belvedere – Tiburon Library. 2021 Belvedere – Tiburon Library Expansion. Available at: <https://www.beltiblibrary.org/about-us/library-expansion>

REFERENCES

- Belvedere – Tiburon Library. 2021 Belvedere – Tiburon Library Expansion. Available at:
<https://www.beltriblibrary.org/about-us/library-expansion>
- DataQuest. 2022. California Department of Education DataQuest. Available at: <https://dq.cde.ca.gov/dataquest/>
- MARINet. 2021. MARINet Library Database. Available at:
https://marinet.bibliocommons.com/v2/search?custom_edit=false&query=branch%3A%22Belvedere+Tiburon%22&searchType=bl&suppress=true
- Reed Union School District. September 2015. Level I Developer Fee Study for Reed Union School District. Available at:
<https://www.reedschools.org/cms/lib/CA01001640/Centricity/Domain/466/Level%20I%20Developer%20Fee%20Study%20091015%20%20%2010.28.16.pdf>
- Reed Union School District. 2019-2020. Reed Union School District Local Control Accountability Plan and Annual Update. Available at: <https://www.reedschools.org/Page/1584>
- Reed Union School District. 2019. Bel Aire Elementary School 2017-2018 School Accountability Report Card. Available at:
<https://www.reedschools.org/cms/lib/CA01001640/Centricity/Domain/200/2018%20Bel%20Aire%20SARC%20Revised%201.22.19.pdf>
- Reed Union School District. 2020. Bel Aire Elementary School 2018-2019 School Accountability Report Card. Available at:
https://www.reedschools.org/cms/lib/CA01001640/Centricity/Domain/115/19%20SARC_Reed%20Union%20SD_Bel%20Aire%20Revised%2001.21.2020.pdf
- Reed Union School District. 2019. Del Mar Middle School 2017-2018 School Accountability Report Card. Available at:
<https://www.reedschools.org/cms/lib/CA01001640/Centricity/Domain/200/2018%20Del%20Mar%20SARC%20Revised%201.22.19.pdf>
- Reed Union School District. 2020. Del Mar Middle School 2018-2019 School Accountability Report Card. Available at:
https://www.reedschools.org/cms/lib/CA01001640/Centricity/Domain/115/19%20SARC_Reed%20Union%20SD_Del%20Mar%20Revised%2001.21.2020.pdf
- Reed Union School District. 2019. Reed Elementary School 2017-2018 School Accountability Report Card. Available at:
<https://www.reedschools.org/cms/lib/CA01001640/Centricity/Domain/200/2018%20Reed%20SARC%20Revised%201.22.19.pdf>
- Reed Union School District. 2020. Reed Elementary School 2018-2019 School Accountability Report Card. Available at:
https://www.reedschools.org/cms/lib/CA01001640/Centricity/Domain/115/19%20SARC_Reed%20Union%20SD_Reed%20Revised%2001.21.2020.pdf
- Reed Union School District. 2021. Available: <https://www.reedschools.org/domain/115>
- Tamalpais Union High School District. 2020. Redwood High School 2018-2019 School Accountability Report Card. Available at: <https://www.tamdistrict.org/cms/lib/CA01000875/Centricity/Domain/3/2019%20RHS%20SACR.pdf>
- Tamalpais Union High School District. 2021. Redwood High School 2019-2020 School Accountability Report Card. Available at: <https://www.tamdistrict.org/cms/lib/CA01000875/Centricity/Domain/3/2019%20RHS%20SACR.pdf>
- Town of Tiburon. As Amended Through February 3, 2016. Town of Tiburon General Plan. Available:
<https://www.townoftiburon.org/206/General-Plan>

Town of Tiburon. 2010. Belvedere – Tiburon Library Expansion Project Draft Environmental Impact Report.