



City of San Bruno



2023 Water & Sewer Rate Study

February 2023



BARTLE WELLS ASSOCIATES
INDEPENDENT PUBLIC FINANCE ADVISORS

DRAFT

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Prepared by:



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February 23, 2023

City of San Bruno
567 El Camino Real
San Bruno, CA 94066

Attn: Matthew Lee, Public Works Director

Re: 2023 Water & Sewer Rate Study

Bartle Wells Associates is pleased to submit the attached *2023 Water & Sewer Rate Study*. The study develops long-term financial projections for the City's water and sewer utilities and recommends rates designed to fund the City's projected costs of providing water and sewer service. The proposed rates are phased in over the next five years to fund water and sewer utility operations and support adequate funding for rehabilitation and replacement of aging water and sewer system infrastructure.

After two years of no water or sewer rate increases, the report recommends the City resume its historical practice of implementing gradual annual rate increases to keep revenues aligned with projected funding needs. The report recommends a series of overall 6% annual water rate increases and 5% annual sewer rate increases in each of the next five years. Proposed rates also include some minor adjustments to the water and sewer rate structures designed to keep the City's rates aligned with the costs of providing service.

San Bruno's water and sewer rates are both currently in the middle range compared to other regional agencies in San Mateo County and are projected to remain in the middle range with implementation of the proposed rate increases.

I enjoyed working with the City on this assignment and appreciate the ongoing collaboration, input and assistance received from City staff. Please contact me anytime if you have questions about this report or other issues related to utility rates and finance.

BARTLE WELLS ASSOCIATES

Alex Handlers, CIPMA
Principal/Vice-President

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1 BACKGROUND, OBJECTIVES & PROPOSED RATES

1.1 Background

The City of San Bruno is located approximately 12 miles south of downtown San Francisco in San Mateo County, California. The City encompasses roughly 5.5 square miles and has a population of approximately 43,000. The City was incorporated in 1914 and is a General Law City. The City provides water and sewer service to residential, commercial, institutional, and light industrial accounts in and adjacent to the City. The City's water and sewer utilities are self-supporting enterprises that rely predominantly on revenues from water and sewer rates to fund the costs of providing service.

The City has provided good financial stewardship via adoption of gradual annual water and sewer rate increases most years for the past 20 years. These increases have put the water and sewer enterprises on a much stronger financial footing, helped keep rates aligned with the costs of providing service and supported a significant increase in funding for rehabilitation and replacement of aging water and sewer system infrastructure.

The City last conducted water and sewer rate studies in 2017 leading to adoption of 5 years of 5% annual water and sewer rate increases effective July 1, 2017 through 2021. However, the City cancelled the final 5% water and sewer rate increases that had been scheduled to become effective July 1, 2021 and has subsequently been able to defer raising rates. Current rates have been in effect since July 1, 2020.

San Bruno's water and sewer rates are both currently in the middle range compared to other regional agencies in San Mateo County. The City's combined water and sewer charges for a typical single family home were the median, with half of other agencies either higher or lower than San Bruno, based on a survey of 19 regional agencies. With the proposed rate increases, the City's water and sewer bills are projected to remain in the middle range. Many other regional agencies have adopted or are anticipating rate increases in upcoming years. The City bill's customers via a combined bi-monthly bill that includes water rates, sewer rates, and garbage rates.

1.2 Water System Overview

The City owns and operates a water system that includes 5 groundwater wells, 8 water storage tanks and pump stations, and roughly 120 miles of water main pipelines. Most of the City's water pipelines are original metal pipes with a life expectancy of about 50 years. Many of these pipelines are 70 to 100 years old and subject to leaks and breaks. Over the past 5 years, the City has averaged about 100 water main breaks per year. The City's aging water infrastructure requires significant rehabilitation and replacement. The City has been proactively addressing its capital improvement needs but needs to continue its long-term programs to replace aging infrastructure.

The City's water supply includes local groundwater production, which typically accounts for roughly 2/3rds of total supply, and wholesale water purchased from the San Francisco Public Water Commission (SFPUC), which accounts for roughly 1/3rd of water supply. A small amount of water purchased from the North Coast County Water District.

1.3 Sewer System Overview

The City owns and operates a sewer collection system that includes roughly 90 miles of sewer pipelines (comprised of approximately 2,415 pipe segments) and 6 sewer pump stations. Wastewater is conveyed to the South San Francisco - San Bruno Water Quality Control Plant (WQCP) for treatment and effluent disposal via the North Bay System Unit. The WQCP is jointly owned by San Bruno and the City of South San Francisco pursuant to a Joint Powers Agreement and is located in and operated by South San Francisco. San Bruno owns approximately 25% of the capacity in the WQCP.

Similar to the water system, the City's aging sewer infrastructure requires significant rehabilitation and replacement. Over the past decade, the City has rehabilitated and rebuilt its sewer pump stations but needs to continue its long-term sewer mainline replacement program. To minimize impact and maximize efficiency, the City replaces both water and sewer pipelines concurrently. The City is also contractually responsible to fund its share of infrastructure improvements to the Water Quality Control Plant.

1.4 Capital Improvement Funding Needs

While the City has completed a significant amount of capital improvements over the past decade, in recent years some projects were temporarily delayed due to staffing limitations and other factors including time needed for planning, design and permitting. These deferred costs helped enable the City to cancel its water and sewer rate increases that were scheduled to go into effect in 2021 and pass along the savings to customers via no rate increases for the past 2 years. However, the City has been proceeding with its capital program and has a number of large projects in design which will soon require funding.

Both water and sewer enterprises are facing substantial capital improvement funding needs in upcoming years. The City currently anticipates funding roughly \$85 million of water system capital improvements and roughly \$71 million of wastewater system capital improvements over the next 5 years. The improvements are needed to address existing deficiencies, rehabilitate and/or replace aging infrastructure that has reached the end of its useful life, and support safe and reliable service.

Water capital improvements planned for the next 5 years include the replacement and seismic upgrade of 3 older water storage tanks as well as replacement of aging water pipelines and various other improvements to wells, pressure regulating stations, and pump stations. Wastewater capital improvements primarily consist of rehabilitation and replacement of aging sewer pipelines but also include pump station improvements and San Bruno's share of capital improvements to the Water Quality Control Plant.

1.5 Policy Goals & Objectives

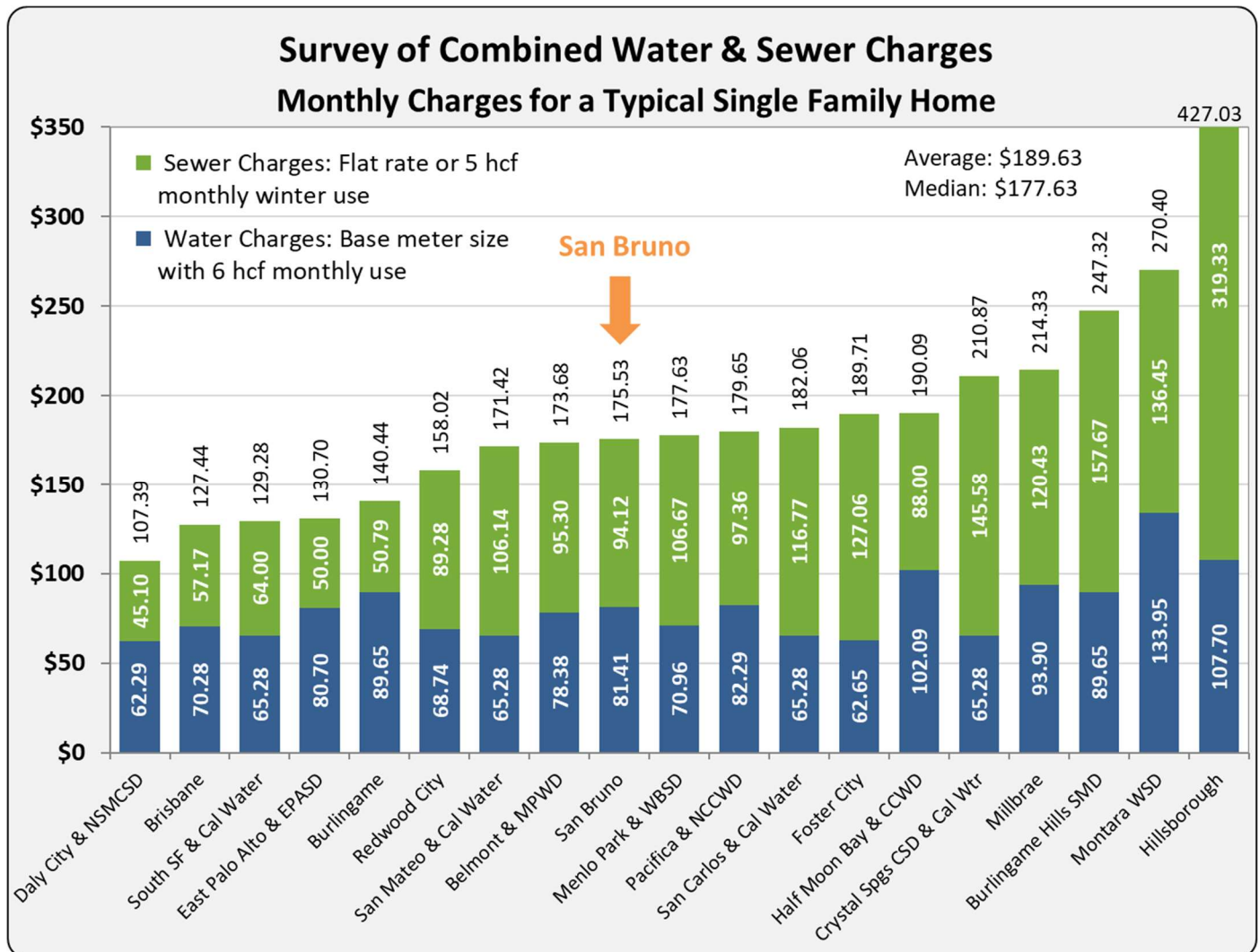
Key policy goals and objectives of the water and sewer rate studies include:

1. Develop water and sewer rates that:
 - a. recover the City's costs of providing water and sewer service
 - b. are fair and equitable to all customers
 - c. are easy to understand and implement
 - d. comply with the legal requirements of Proposition 218 and other California law
 - e. provide adequate funding for capital improvement needs including near-term funding priorities and long-term rehabilitation and replacement of aging infrastructure
2. Recommend rates that maintain long-term financial sustainability of the water and sewer utilities and put the water and sewer enterprises on course for balanced budgets.
3. Aim for steady, gradual annual rate increases to help minimize the annual impact on customers and mitigate the potential for larger, periodic rate spikes.
4. Maintain a prudent level of fund reserves.

1.6 Regional Water & Sewer Rate Survey

The chart on the following page compares the combined water and sewer bills for a typical single family home to those of other agencies in San Mateo County. Rates can vary widely from agency to agency due to a wide range of factors. The City's combined water and sewer rates for a typical home are in the middle range compared to other regional agencies.

Figure 1 – Combined Single Family Residential Water & Sewer Rate Survey



1.7 Proposed Water & Sewer Rates

The tables on the following pages show schedules of proposed water and sewer rates. Consistent with the City's historical practices, the proposed rates are phased in gradually over the next 5 years. Proposed rates account for both overall rate increases as well as some relatively minor rate structure adjustments to keep rates aligned with the cost of providing service. As proposed, water rate increases would become effective on January 1 of each year, when water is low, and sewer rate increases would continue to become effective on July 1 at the beginning of each fiscal year.

Table 1 – Proposed Water Rates

Proposed Water Rates							
	Current	Proposed Rates Effective On or After					
	Water	Jan-1	Jan-1	Jan-1	Jan-1	Jan-1	
	Rates	2024	2025	2026	2027	2028	
Overall Rate Increase Target		6%	6%	6%	6%	6%	
MONTHLY SERVICE CHARGES							
Fixed monthly charge based on meter size.							
Meter Size							
3/4-inch	\$25.58	\$27.11	\$28.73	\$30.45	\$32.27	\$34.22	
1-inch	42.63	45.18	47.88	50.75	53.78	57.03	
1-1/2 inch	85.27	90.37	95.77	101.50	107.57	114.07	
2-inch	136.43	144.59	153.23	162.40	172.11	182.51	
3-inch	255.80	271.10	287.30	304.50	322.70	342.20	
4-inch	426.33	451.83	478.83	507.50	537.83	570.33	
6-inch	852.67	903.67	957.67	1,015.00	1,075.67	1,140.67	
8-inch	1,364.27	1,445.87	1,532.27	1,624.00	1,721.07	1,825.07	
10-inch	1,961.13	2,078.43	2,202.63	2,334.50	2,474.03	2,623.53	
QUANTITY CHARGES							
Billed based on metered water consumption (\$ per hundred cubic feet or hcf)							
a) Single-Family Residential							
	Bi-Monthly Use						
Tier 1	0 - 10 hcf	\$9.01	\$9.57	\$10.16	\$10.79	\$11.46	\$12.18
Tier 2	11 - 20 hcf	10.78	11.42	12.09	12.80	13.56	14.36
Tier 3	> 20 hcf	14.33	15.12	15.95	16.83	17.75	18.72
b) All Other Accounts	All Use	10.11	\$10.68	\$11.28	\$11.91	\$12.58	\$13.27

Accounts served by water procured from NCCWD are also charged a Differential Cost of Supply Charge reflecting the higher cost of water procured from this source.

Note: One hundred cubic feet (hcf) is equivalent to approximately 748 gallons.

Table 2 – Proposed Sewer Rates

Proposed Sewer Rates						
	Current Sewer Rates	Proposed Sewer Rates Effective On or After				
		July 1 2023	July 1 2024	July 1 2025	July 1 2026	July 1 2027
Overall Rate Increase Target %		5%	5%	5%	5%	5%
MONTHLY SERVICE CHARGES						
<i>Fixed monthly charge per account</i>						
Single Family Residential	\$32.27	\$33.96	\$35.74	\$37.61	\$39.59	\$41.66
All Other Customers (Charge Based on Water Meter Size)						
<u>Meter Size</u>						
3/4-inch	\$32.27	\$33.96	\$35.74	\$37.61	\$39.59	\$41.66
1-inch	53.78	56.60	59.57	62.69	65.98	69.43
1-1/2 inch	107.57	113.20	119.14	125.38	131.95	138.87
2-inch	172.11	181.13	190.62	200.61	211.12	222.19
3-inch	322.70	339.61	357.41	376.14	395.85	416.60
4" & Larger	537.83	566.02	595.68	626.90	659.76	694.33
QUANTITY CHARGES						
<i>Billed per hundred cubic feet (hcf)</i>						
Residential	\$12.37	\$12.98	\$13.61	\$14.28	\$14.97	\$15.71
Commercial						
C-1 Light Commercial	11.50	12.05	12.63	13.23	13.87	14.53
C-2 Medium Commercial	12.37	12.98	13.61	14.28	14.97	15.71
C-3 Heavy Commercial	17.61	18.54	19.51	20.54	21.62	22.76
C-4 Special Commercial	22.86	24.11	25.42	26.81	28.27	29.82
Governmental	12.37	12.98	13.61	14.28	14.97	15.71
Industrial						
I-1 Light Industrial	12.37	12.98	13.61	14.28	14.97	15.71
I-2 Industrial Flow	8.88	9.27	9.68	10.10	10.54	11.01
COD per lb ³	0.68	0.72	0.77	0.82	0.87	0.93
SS per lb	1.41	1.49	1.58	1.68	1.78	1.88

1 Residential accounts are billed based on average metered water use from two bi-monthly billing periods from January through April. All other accounts are billed based on total metered use.

2 Non-residential accounts are billed based on metered water use during each billing period.

3 Based on South San Francisco WQCP wastewater loadings of COD 728 mg/l and BOD 358 mg/l. UPDATE

Note: One hundred cubic feet (hcf) is equivalent to approximately 748 gallons.

2 LEGAL REQUIREMENTS & RATE METHODOLOGY

2.1 Constitutional Rate Requirements

The California Constitution includes two key articles that directly govern or impact the City's water and sewer rates: Article 10 and Article 13D. The rates developed in this study were designed to comply with both of these constitutional mandates as well as various provisions of the California law that support and add further guidance for implementing these constitutional requirements. In accordance with the constitutional provisions, the proposed rates are designed to a) recover the City's cost of providing water and sewer service, b) equitably recover revenues in proportion to the cost for serving each customer, and c) promote conservation and discourage waste.

2.1.1 Article 10, Section 2

Article 10, Section 2 of the California Constitution was established by voter-approval in 1976 and requires public agencies to maximize the beneficial use of water, prevent waste, and encourage conservation. Section 2 states that:

It is hereby declared that because of the conditions prevailing in this State the general welfare requires that the water resources of the State be put to beneficial use to the fullest extent of which they are capable, and that the waste or unreasonable use or unreasonable method of use of water be prevented, and that the conservation of such waters is to be exercised with a view to the reasonable and beneficial use thereof in the interest of the people and for the public welfare.

2.1.2 Article 13D, Section 6

Proposition 218 was adopted by California voters in 1996 and added Articles 13C and 13D to the California Constitution. Article 13D, Section 6 governs property-related charges, which the California Supreme Court subsequently ruled includes ongoing utility service charges such as water, sewer, and garbage rates. Article 13D, Section 6 establishes a) procedural requirements for imposing or increasing property-related charges, and b) substantive requirements for those charges. Article 13D also requires voter approval for new or increased property-related charges but exempts rate increases for water, sewer, and garbage services from requiring voter approval as these rates support essential services.

The substantive requirements of Article 13D, Section 6 require the City's water and sewer rates to meet the following conditions:

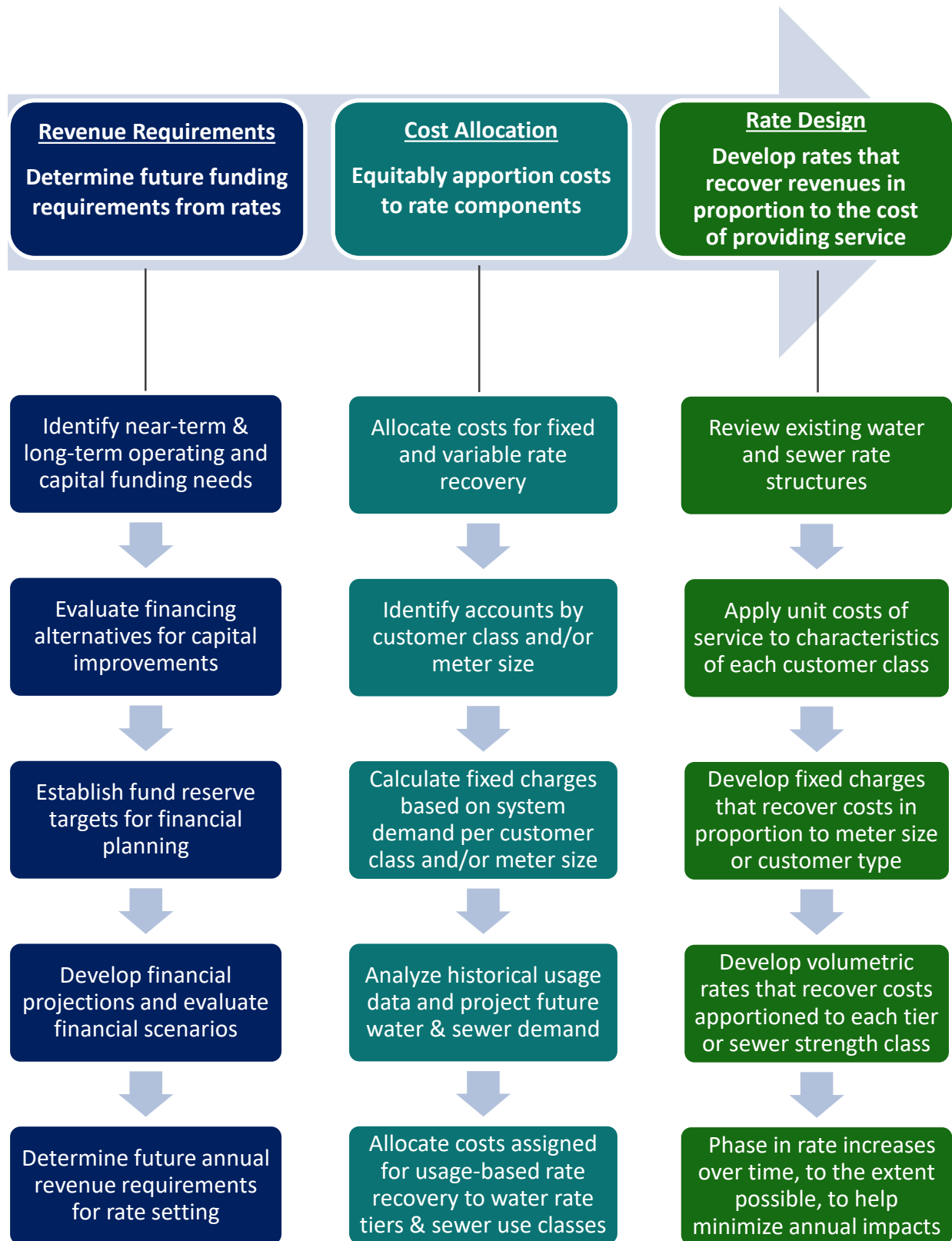
- 1) Revenues derived from the fee or charge shall not exceed the funds required to provide the property related service.
- 2) Revenues derived from the fee or charge shall not be used for any purpose other than that for which the fee or charge was imposed.
- 3) The amount of a fee or charge imposed upon any parcel or person as an incident of property ownership shall not exceed the proportional cost of the service attributable to the parcel.
- 4) No fee or charge may be imposed for a service unless that service is actually used by, or immediately available to, the owner of the property in question.
- 5) No fee or charge may be imposed for general governmental services, such as police or fire services, where the service is available to the public at large in substantially the same manner as it is to property owners.

A number of court decisions over past 20 years have added some legal clarification regarding these substantive rate requirements. The water and sewer rates derived in this report are based on cost-of-service methodologies that are designed to equitably recover costs from water and sewer customers and comply with all legal requirements.

2.2 Rate-Setting Methodology

The rates developed in this report use a cost-of-service methodology to establish an equitable system of fixed and variable service charges designed to recover costs of providing service. The general methodology used in this study is summarized on the diagram on the following page.

Cost of Service Rate-Setting Methodology



3 WATER FINANCIAL PLAN & RATE DERIVATION

3.1 Current & Historical Water Rates

The City has provided strong financial stewardship by gradually raising water rates most years over the past 20 years to keep rates in line with escalating costs of providing water service. Table 3 shows a recent history of the City's water rates. The City bills customers bi-monthly (once every 2 months) via a combined utility bill.

The City last conducted water and sewer rate studies in 2017 leading to adoption of 5 years of 5% annual water and sewer rate increases effective July 1, 2017 through 2021. However, the City cancelled the final 5% water and sewer rate increases that had been scheduled to become effective July 1, 2021 and has subsequently been able to defer raising rates. Current rates have been in effect since July 1, 2020.

Table 3 – Water Rates

	July 1 2016	July 1 2017	July 1 2018	July 1 2019	July 1 2020	July 1 2021	
Rate Increase %		5%	5%	5%	5%	5%	
MONTHLY SERVICE CHARGES					Currently in effect	Cancelled	
Fixed monthly charge based on meter size.							
<u>Meter Size</u>							
3/4-inch	\$21.13	\$22.10	\$23.20	\$24.36	\$25.58	\$26.86	
1-inch	35.22	36.83	38.67	40.60	42.63	44.76	
1-1/2 inch	70.43	73.67	77.33	81.20	85.27	89.53	
2-inch	112.69	117.87	123.73	129.92	136.43	143.25	
3-inch	211.30	221.00	232.00	243.60	255.80	268.59	
4-inch	352.17	368.33	386.67	406.00	426.33	447.65	
6-inch	704.33	736.67	773.33	812.00	852.67	895.30	
8-inch	1,126.93	1,178.67	1,237.33	1,299.20	1,364.27	1,432.47	
10-inch	1,619.97	1,694.33	1,778.67	1,867.60	1,961.13	2,059.18	
QUANTITY CHARGES							
Billed based on metered water consumption (\$ per hundred cubic feet or hcf)							
a) Single-Family Residential							
	<u>Bi-Monthly Use</u>						
Tier 1	0 - 10 hcf	\$7.36	\$7.78	\$8.17	\$8.58	\$9.01	\$9.46
Tier 2	11 - 20 hcf	8.83	9.31	9.78	10.27	10.78	11.32
Tier 3	> 20 hcf	11.78	12.38	13.00	13.65	14.33	15.05
b) All Other Accounts (All Water Use)		8.32	8.73	9.17	9.63	10.11	10.62

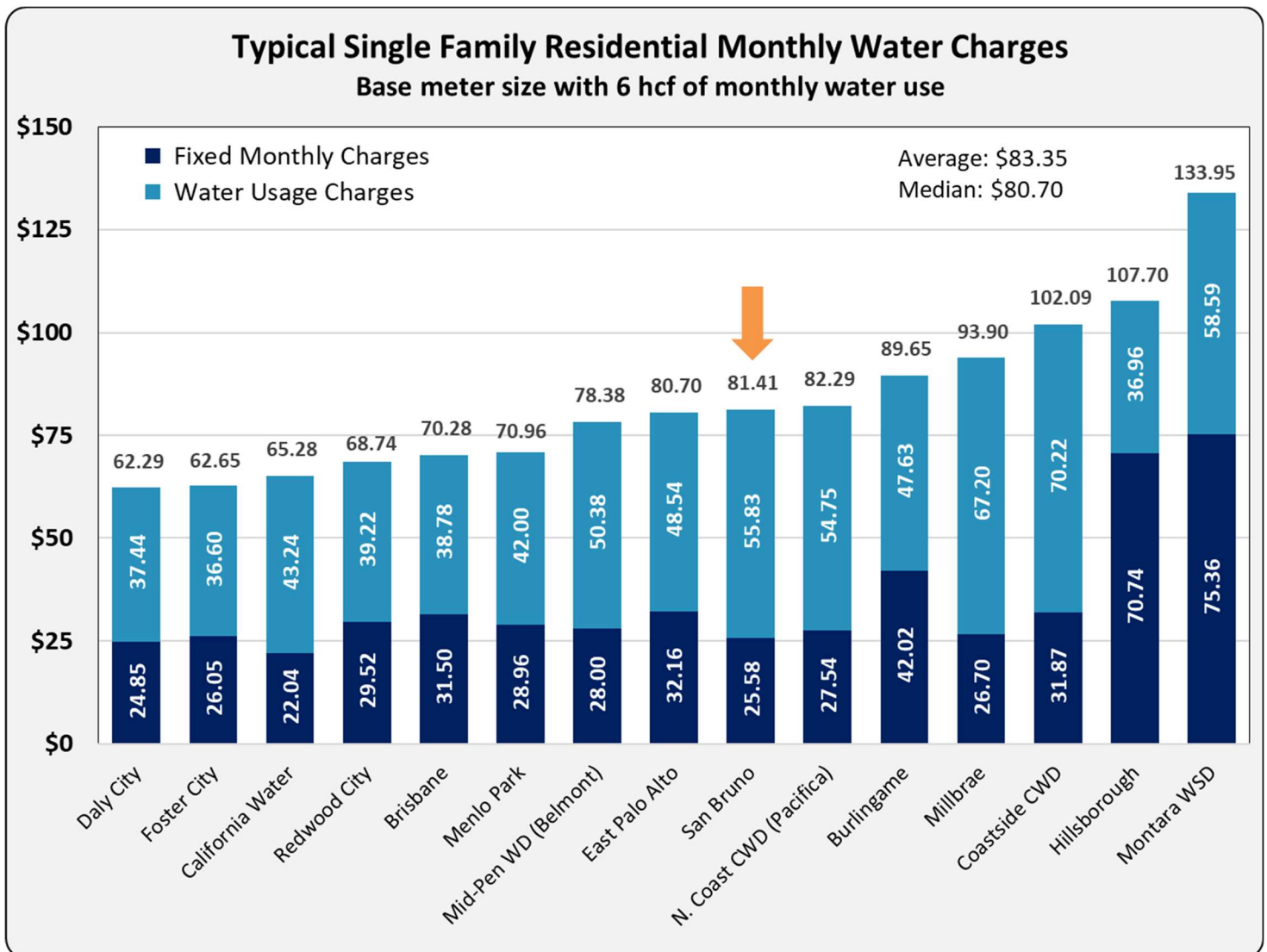
The City's water rates include two components:

- **Fixed Monthly Service Charges** that vary based on meter size. These charges are levied independent of water use and recover a portion of the City's fixed costs for providing service. The City incurs a substantial amount of costs ensuring that water is available at all times to meet customer needs on demand. The fixed Monthly Service Charges varies by meter size, with larger meters paying higher charges based on each meter's capacity and associated demand placed on the water system.
- Volumetric **Water Quantity Charges** billed based on metered water use. Single family residential customers are billed according to a 3-tiered inclining rate structure with water first billed in Tier 1 and subsequently billed in higher tiers as water use increases each billing period. All other customers including commercial, institutional and multi-family accounts are billed a uniform rate for all water use. Water Quantity Charges are billed per hundred cubic feet (hcf), with 1 hcf equal to approximately 748 gallons of water. Hence, City's current quantity charges range from approximately 1.20 cents to 1.92 cents per gallon.

3.2 Regional Water Rate Survey

The following chart compares the City's current water rates to those of other regional agencies for a typical single family home using 6 hundred cubic feet of water per month. This level of use equates to approximately 150 gallons per day. The City's water rates are currently in the middle range compared to other regional agencies in San Mateo County and are projected to remain in the middle range as many other agencies have adopted or are anticipating rate increases in upcoming years.

Figure 2 – Single Family Residential Water Rate Survey



Note: The survey assumes same level of water use for all agencies for comparative purposes. Agencies in northern San Mateo County and on the Pacific Coast tend to have lower water use per home than agencies in central and southern San Mateo County.

3.3 Financial Challenges / Key Drivers of Rate Increases

Going forward, the City's water enterprise is facing a number of financial challenges that will require the City to resume its historical practice of implementing gradual annual water rates over the next 5 years. Key drivers of future rate increases are summarized as follows.

3.3.1 Capital Improvements & Replacement of Aging Infrastructure

The City's water system includes many facilities that are reaching the end of their useful lives. Most of the City's water pipelines are original metal pipes with a life expectancy of about 50 years. Many of these pipelines are 70 to 100 years old and subject to leaks and breaks. Over the past 5 years, the City has averaged about 100 water main breaks per year. As shown the table below, the City anticipates funding approximately \$85 million of water system capital improvement projects over the next 5 years. Water capital improvements planned for the next 5 years include the replacement of 3 older water tanks as well as replacement of aging water pipelines and various other improvements to wells, pressure regulating stations, and pump stations. The improvements are needed to address existing deficiencies, rehabilitate and/or replace aging infrastructure that has reached the end of its useful life, and support safe and reliable water service.

Table 4 – Water Capital Improvement Program

		2022/23			2023/24	2024/25	2025/26	2026/27	5-Yr Total
	Prior Approp	Est. Carryover	New Funding	Total					
Funding Sources									
Water Fund	28,181,000	14,619,000	10,354,000	24,973,000	1,600,000	16,900,000	30,250,000	11,200,000	84,923,000
SFPUC	315,000	315,000		315,000					315,000
Total Funding Sources	28,496,000	14,934,000	10,354,000	25,288,000	1,600,000	16,900,000	30,250,000	11,200,000	85,238,000
Water Capital Improvement Program Budget Appropriations [1]									
Main Improvement & Replacement Program	10,650,000	6,730,000	900,000	7,630,000		6,300,000	2,800,000	9,000,000	25,730,000
Pump Station Improvement & Replacement	2,273,000	1,350,000	4,550,000	5,900,000	950,000	950,000			7,800,000
Water Tank Improvement & Replacement									
Commodore Tank Installation	1,500,000	1,500,000	750,000	2,250,000			17,750,000		20,000,000
Cunningham Drive Tank Replacements	1,437,000	542,000		542,000		9,000,000			9,542,000
Princeton Tank Replacement	500,000	500,000	700,000	1,200,000				2,000,000	3,200,000
Sweeney Ridge Tank Replacement	1,094,000	890,000		890,000			9,500,000		10,390,000
Advanced Water Meter	6,017,000	504,000		504,000					504,000
Acappella Well Project	2,348,000	1,032,000	3,000,000	4,032,000					4,032,000
Pressure Reg Station Impvt & Replacement	1,600,000	1,557,000	(346,000)	1,211,000	450,000	450,000			2,111,000
Well Rehabilitation	1,077,000	329,000	200,000	529,000	200,000	200,000	200,000	200,000	1,329,000
Wtr Qual Well Syst Upgrades & Sweeny Rdg Tar	0		600,000	600,000					600,000
Total Capital Funding	28,496,000	14,934,000	10,354,000	25,288,000	1,600,000	16,900,000	30,250,000	11,200,000	85,238,000
Estimated Annual Water Capital Improvement Expenditures [2]									
Average Annual Expenditures				17,048,000	17,048,000	17,048,000	17,048,000	17,048,000	85,240,000

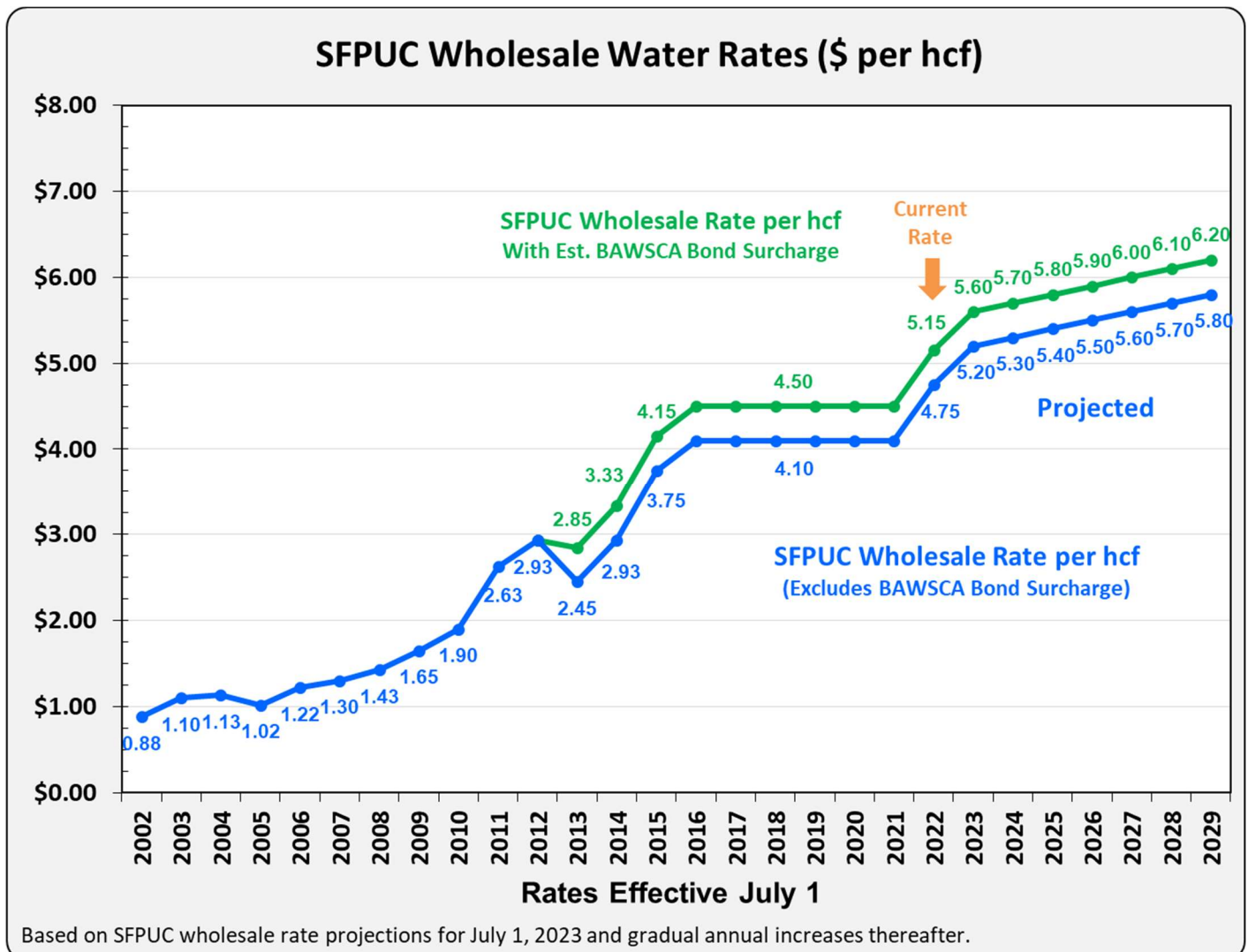
1 Source: City of San Bruno Revised 5-Year Water Capital Program (Updated 11.4.22 & 1.23.23); budget appropriation required for project contract awards.

2 Source: Assumes average annual expenditures over the 5-year period.

3.3.2 Wholesale Water Rate Increases

The San Francisco Public Utility Commission (SFPUC) is in the process of completing a roughly \$5 billion capital program of seismic upgrades and reliability enhancements to its aging Hetch-Hetchy regional water system that provides water supply to many Bay Area communities. To help fund these improvements and ensure adequate revenue recovery over a period of declining water sales, the SFPUC has substantially increased its wholesale water rates since 2010. After 2016, the SFPUC was temporarily able to defer wholesale rate increases due to an overcollection of revenues that resulted in a buildup of fund reserves in a Balancing Account that has been drawn down over the past 5 years. The Balancing Account is now mostly depleted and the SFPUC began resuming annual wholesale rate increases with a 16% increase effective July 1, 2022 and additional rate increases projected in future years. The following chart shows historical and projected SFPUC wholesale water rates. The chart shows both the underlying SFPUC wholesale rate as well as the additional BAWSCA bond surcharge that wholesale agencies pay.

Figure 3 – Historical & Projected SFPUC Wholesale Water Rates



3.3.3 Ongoing Operating Cost Inflation

In addition, the City faces ongoing cost inflation for its own operating and maintenance expenses. Water and sewer cost inflation has historically been significantly higher than the Consumer Price Index (CPI) for consumer goods and services. The City avoided some expenses in recent years due to unfilled staff positions and participation in the Groundwater Storage and Recovery Agreement with SFPUC, but these cost savings were only temporary. In addition to rate increases for capital needs and other purposes, gradual annual rate increases are needed each year to support the City's own operating expenses and keep up with cost inflation.

3.4 Outstanding Debt Service

The following table shows debt service repayment schedule by fiscal year for the City's water enterprise, which includes one outstanding debt obligation, the 2017 Water Revenue Bonds.

Table 5 – Outstanding Water Debt Service

Fiscal Year Ending	2017 Water Revenue Bonds
2023	\$683,650
2024	684,050
2025	681,550
2026	683,550
2027	684,800
2028	685,300
2029	685,050
2030	684,050
2031	682,300
2032	684,800
2033	681,300
2034	682,050
2035	684,900
2036	682,300
2037	684,400
2038	681,600
2039	683,200
2040	684,000
2041	684,000
2042	683,200
2043	681,600
2044	684,200
2045	685,800
2046	681,400
2047	681,200

*Rate Covenant: 1.25x debt service coverage requirement
Optional Redemption starting July 1, 2027*

3.5 Water Enterprise Financial Projections

Bartle Wells Associates developed 10-year water enterprise cash flow projections to identify future funding needs and evaluate water rate increases. The table on the following page shows 10-year water enterprise cash flow projections. The projections incorporate the latest information available as well as a number of reasonable and slightly conservative assumptions. Key assumptions include:

- Operating and maintenance costs are based on the 2022/23 budget and escalate at the annual rate of 4% to account for future cost inflation.
- Growth from new development and/or redevelopment is conservatively projected at the equivalent of 20 new single family homes per year for financial planning purposes.
- Water sales are projected to remain constant at the same level experienced in the prior fiscal year.
- SFPUC wholesale water rates are based on the latest SFPUC projections.
- The projections assume the current fiscal year 2022/23 is a Recovery/Take year under the Groundwater Storage & Recovery (GSR) Agreement but do not assume any GSR designations in future years.
- Capital improvement costs are based on the City's latest 5-Year Capital Improvement Program with future capital costs projected at \$7.5 million per year with 3% annual cost escalation.
- In recent years, the water enterprise has accrued a healthy levels of fund reserves that includes some excess reserves available for capital projects that were deferred in recent years but are scheduled for completion over the next few years. The projections assume approximately \$32 million of these fund reserves will be drawn down over the next few years to help fund water system capital needs while rate increases are gradually phased in.
- The financial projections include a projected debt issuance in 2025 to generate \$24 million to help fund the elevated levels of capital improvement funding needs over the next 5 years while enabling the City to implement gradual rate increases. The actual amount and timing of this potential future debt issue may vary based on the financing needs at the time debt is issued. Debt service is estimated based on a 4.5% average interest rate and assumes a 30-year repayment term.
- For financial planning purposes, the financial projections assume a minimum fund reserve target equal to 50% of annual operating, maintenance and debt service costs, plus \$5 million for emergency capital reserves. Maintaining a prudent minimal level of fund reserves provides a financial cushion for dealing with unanticipated expenses, revenue shortfalls, and non-catastrophic emergency capital repairs. The fund reserve target will escalate over time as the City's expenses gradually increase.
- The table also calculates annual debt service coverage based on a) total revenues less operating and maintenance expenses, divided by b) annual debt service.

Table 6 - 10-Year Water Cash Flow Projections

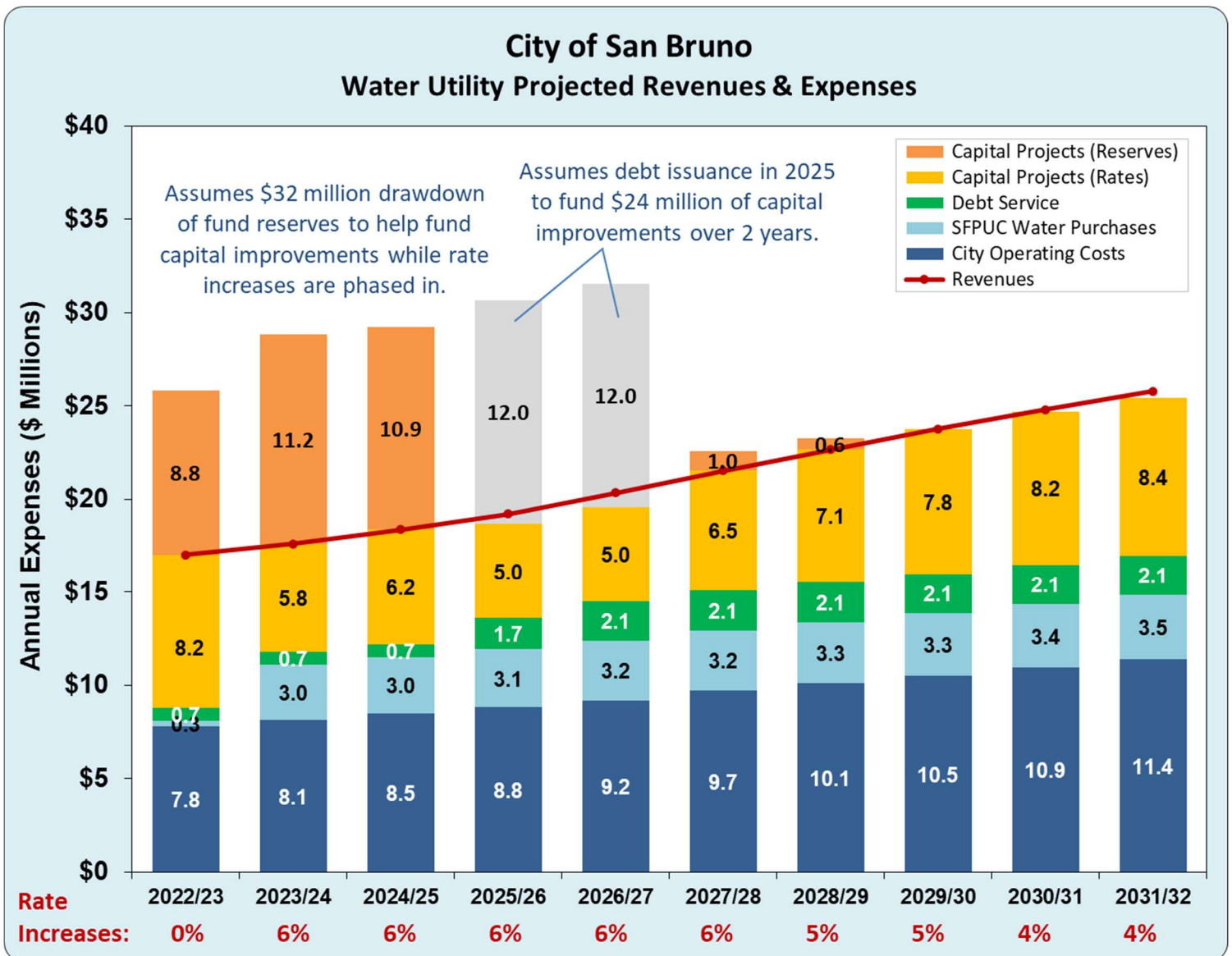
San Bruno Water Cash Flow Projections												
	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32		
Effective Date of Rate Increases		Jan-1	Jan-1	Jan-1	Jan-1	Jan-1	Jan-1	Jan-1	Jan-1	Jan-1	Jan-1	Jan-1
Overall Rate Adjustment	0.0%	6%	6%	6%	6%	6%	5%	5%	4%	4%	4%	4%
Growth (3/4" Meter Equivalents)	20	20	20	20	20	20	20	20	20	20	20	20
Annual % Change in Water Sales	-2.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total Water Sales (hcf)	1,281,000	1,281,000	1,281,000	1,281,000	1,281,000	1,281,000	1,281,000	1,281,000	1,281,000	1,281,000	1,281,000	1,281,000
Plus 10% Unaccounted Water	1,409,000	1,409,000	1,409,000	1,409,000	1,409,000	1,409,000	1,409,000	1,409,000	1,409,000	1,409,000	1,409,000	1,409,000
Groundwater Production (hcf)	900,000	900,000	900,000	900,000	900,000	900,000	900,000	900,000	900,000	900,000	900,000	900,000
SFPUC Water Supply (hcf)	509,000	509,000	509,000	509,000	509,000	509,000	509,000	509,000	509,000	509,000	509,000	509,000
GSR Credit hcf (3,915 AF, 1,705,000 hcf)	(509,000)	-	-	-	-	-	-	-	-	-	-	-
SFPUC Rate per hcf	\$4.75	\$5.20	\$5.30	\$5.40	\$5.50	\$5.60	\$5.70	\$5.80	\$5.90	\$6.00	\$6.00	\$6.00
Interest Earnings Rate	1.5%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
City Cost Escalation		4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
Beginning Fund Balances	\$49,842,000	\$41,012,000	\$29,781,000	\$18,918,000	\$19,470,000	\$20,253,000	\$19,211,000	\$18,625,000	\$18,434,000	\$18,565,000		
REVENUES												
Water Service Charges	4,288,000	4,417,000	4,678,000	4,954,000	5,248,000	5,559,000	5,862,000	6,154,000	6,431,000	6,690,000		
Water Quantity Charges	11,858,000	12,196,000	12,928,000	13,704,000	14,526,000	15,397,000	16,246,000	17,058,000	17,828,000	18,541,000		
Subtotal Rate Revenues	16,146,000	16,613,000	17,606,000	18,658,000	19,774,000	20,956,000	22,108,000	23,212,000	24,259,000	25,231,000		
Investment Income	748,000	820,000	596,000	378,000	389,000	405,000	384,000	373,000	369,000	371,000		
Connection/Mtr Inst/Capacity Fees	100,000	160,000	160,000	160,000	160,000	160,000	160,000	160,000	160,000	160,000		
Other/Miscellaneous	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000		
Total Revenues	17,014,000	17,613,000	18,382,000	19,216,000	20,343,000	21,541,000	22,672,000	23,765,000	24,808,000	25,782,000		
Projected Debt Proceeds				Projected 2025 Bonds (tbd)	12,000,000	12,000,000						
EXPENSES												
Operating & Maintenance												
Salaries & Benefits	3,050,000	3,172,000	3,299,000	3,431,000	3,568,000	3,711,000	3,859,000	4,013,000	4,174,000	4,341,000		
Less Capitalized Project Staffing	(500,000)	(500,000)	(500,000)	(500,000)	(500,000)	(375,000)	(386,000)	(398,000)	(410,000)	(422,000)		
Supplies & Materials	1,914,000	1,991,000	2,071,000	2,154,000	2,240,000	2,330,000	2,423,000	2,520,000	2,621,000	2,726,000		
Utilities	570,000	593,000	617,000	642,000	668,000	695,000	723,000	752,000	782,000	813,000		
SFPUC/NCCWD Wholesale Water	2,418,000	2,647,000	2,698,000	2,749,000	2,800,000	2,850,000	2,901,000	2,952,000	3,003,000	3,054,000		
SFPUC GSR Credits (3,915 AF)	(2,418,000)	0	0	0	0	0	0	0	0	0		
SFPUC Meter Charges	153,000	159,000	165,000	172,000	179,000	186,000	193,000	201,000	209,000	217,000		
BAWSCA Bond Surcharge	165,000	180,000	180,000	180,000	180,000	180,000	180,000	180,000	180,000	180,000		
Internal/Intergovt Charges	2,760,000	2,870,000	2,985,000	3,104,000	3,228,000	3,357,000	3,491,000	3,631,000	3,776,000	3,927,000		
Subtotal	8,112,000	11,112,000	11,515,000	11,932,000	12,363,000	12,934,000	13,384,000	13,851,000	14,335,000	14,836,000		
Debt Service												
2017 Water Revenue Bonds	684,000	684,000	682,000	684,000	685,000	685,000	685,000	684,000	682,000	685,000		
Projected 2025 Bonds (4.5% 30-Yr)	0	0	0	1,000,000	1,464,000	1,464,000	1,464,000	1,464,000	1,464,000	1,464,000		
Subtotal	684,000	684,000	682,000	1,684,000	2,149,000	2,149,000	2,149,000	2,148,000	2,146,000	2,149,000		
Capital Improvements	17,048,000	17,048,000	17,048,000	17,048,000	17,048,000	7,500,000	7,725,000	7,957,000	8,196,000	8,442,000		
Total Expenses	25,844,000	28,844,000	29,245,000	30,664,000	31,560,000	22,583,000	23,258,000	23,956,000	24,677,000	25,427,000		
Revenues Less Expenses	(8,830,000)	(11,231,000)	(10,863,000)	552,000	783,000	(1,042,000)	(586,000)	(191,000)	131,000	355,000		
Ending Fund Balances	41,012,000	29,781,000	18,918,000	19,470,000	20,253,000	19,211,000	18,625,000	18,434,000	18,565,000	18,920,000		
Min Rsrv Target: 50% O&M&D + \$5M CIP	9,400,000	10,900,000	11,100,000	11,810,000	12,260,000	12,540,000	12,770,000	13,000,000	13,240,000	13,490,000		
Debt Service Coverage	13.01	9.50	10.07	4.33	3.71	4.01	4.32	4.62	4.88	5.09		

Future capital expenditures are projected at \$7.5 million per year with 3% cost escalation

Assumes total 5-year capital expenditures are spread evenly over the first 5 years

The following chart graphically shows a 10-year breakdown of projected water enterprise revenues and expenses. The proposed rate increases are designed to put the City on a long-term path toward supporting balanced budgets while providing adequate funding for ongoing rehabilitation and replacement of aging water system infrastructure to support safe and reliable service. As shown on the chart, the projections account for an elevated level of capital funding over the next 5 years which will require an approximately \$32 million drawdown of fund reserves and potential subsequent issuance of debt in 2025. Longer-term capital needs are projected to be funded on a pay-as-you-go basis.

Figure 4 – Water Utility Projected Revenues & Expenses



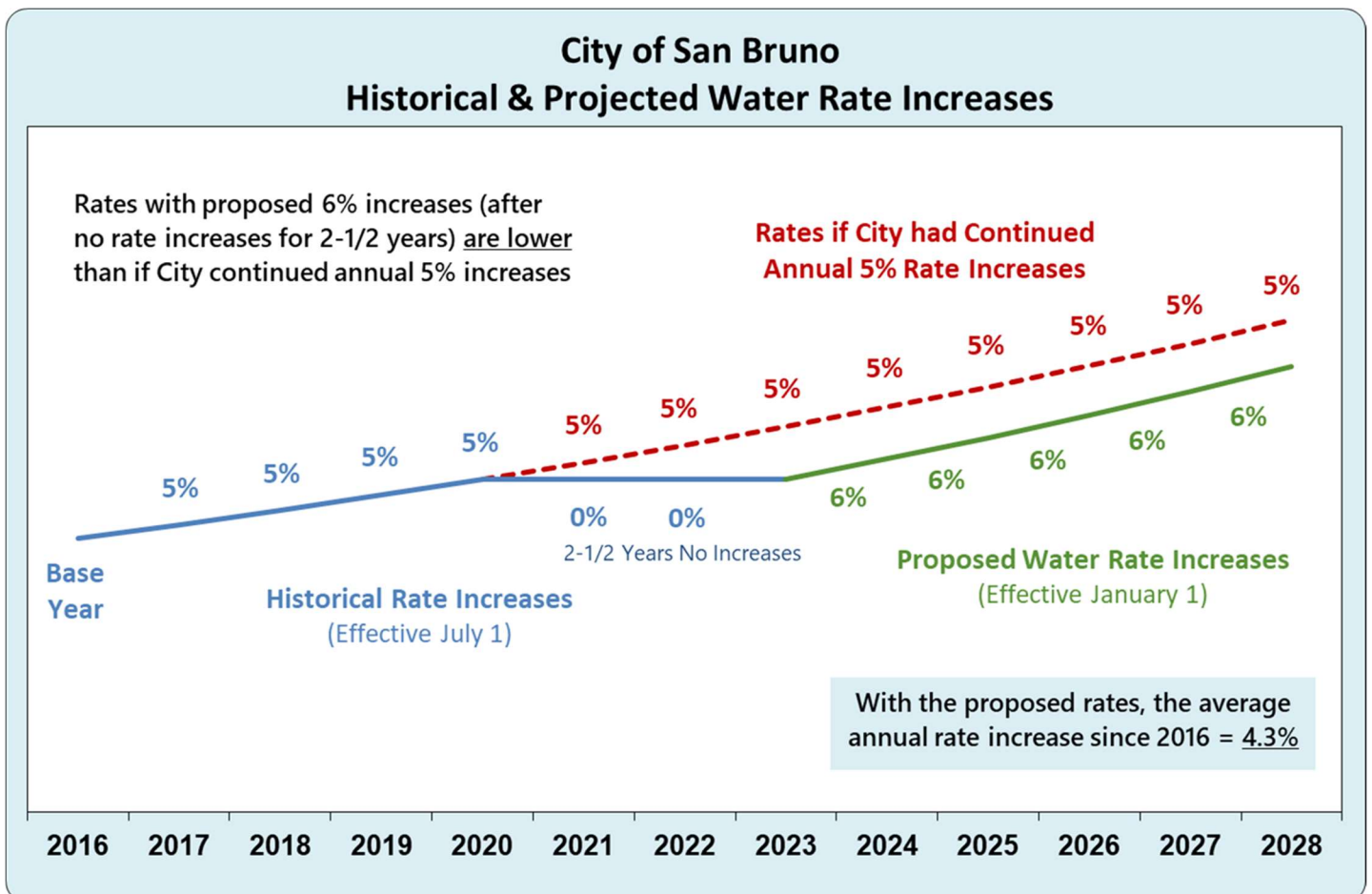
3.6 Projected Water Rate Increases

The cash flow projections indicate the need to raise rates by 6% each year for the next 5 years in order to meet the water utility's projected operating and capital funding needs. These projected rate increases follow a period of no rate increases over the past 2 years as shown below. With the proposed rates, the average annual water rate increase since 2016 equates to approximately 4.3%

Table 7 – Projected Water Rate Increases

Projected Water Rate Increases						
July 1 2021	July 1 2022	January 1 2024	January 1 2025	January 1 2026	January 1 2027	January 1 2028
5% 0%	0%	6%	6%	6%	6%	6%

Figure 5 – Historical & Projected Water Rate Increases



The 6% water rate increases represent the overall level of annual rate increases proposed. Actual impacts to customers' monthly water bills may vary a little based on meter size and water use due to minor modifications to the rate structure designed to keep water rates aligned with the cost of providing service.

3.7 Water Use

The following table shows a 3-year history of water use including a breakdown of bi-monthly use by customer class and tier. Water use can vary from year to year due to many factors such as weather and conservation efforts. Although the City's water was relatively consistent over the past few years, it was roughly 6% lower in the past fiscal year 2021/22 than it had been in the prior two years.

Table 8 – Water Use by Class & Tier

Bi-Monthly Period	Jul/Aug	Sep/Oct	Nov/Dec	Jan/Feb	Mar/Apr	May/June	Total	% of Ttl
2019/20 Water Use (hcf)								
Single Family Residential								
Tier 1	80,782	81,262	79,325	75,940	76,832	80,759	474,900	36.0%
Tier 2	30,324	32,382	27,636	21,331	21,942	30,689	164,304	12.4%
Tier 3	<u>9,180</u>	<u>11,504</u>	<u>8,196</u>	<u>5,297</u>	<u>4,766</u>	<u>8,456</u>	<u>47,399</u>	<u>3.6%</u>
Subtotal	120,286	125,148	115,157	102,568	103,540	119,904	686,603	52.0%
Multi-Family Res	65,628	62,797	58,349	55,421	54,608	58,394	355,197	26.9%
Commercial/Other	<u>58,010</u>	<u>61,998</u>	<u>50,725</u>	<u>36,629</u>	<u>35,400</u>	<u>36,258</u>	<u>279,020</u>	<u>21.1%</u>
Total	243,924	249,943	224,231	194,618	193,548	214,556	1,320,820	100.0%
2020/21 Water Use (hcf)								
Single Family Residential								
Tier 1	83,196	83,489	81,204	77,104	75,823	79,654	480,470	36.2%
Tier 2	37,264	37,332	30,916	23,923	21,240	28,208	178,883	13.5%
Tier 3	<u>13,807</u>	<u>14,422</u>	<u>10,120</u>	<u>6,905</u>	<u>6,055</u>	<u>8,168</u>	<u>59,477</u>	<u>4.5%</u>
Subtotal	134,267	135,243	122,240	107,932	103,118	116,030	718,830	54.1%
Multi-Family Res	64,705	64,345	61,194	57,009	54,279	58,768	360,300	27.1%
Commercial/Other	<u>51,918</u>	<u>46,202</u>	<u>41,217</u>	<u>26,886</u>	<u>35,674</u>	<u>47,202</u>	<u>249,099</u>	<u>18.8%</u>
Total	250,890	245,790	224,651	191,827	193,071	222,000	1,328,229	100.0%
2021/22 Water Use (hcf)								
Single Family Residential								
Tier 1	80,047	79,364	75,757	73,990	74,239	75,992	459,389	37.1%
Tier 2	29,550	28,295	21,455	19,480	19,191	22,227	140,198	11.3%
Tier 3	<u>10,066</u>	<u>9,947</u>	<u>6,043</u>	<u>6,347</u>	<u>5,782</u>	<u>6,953</u>	<u>45,138</u>	<u>3.6%</u>
Subtotal	119,663	117,606	103,255	99,817	99,212	105,172	644,725	52.0%
Multi-Family Res	57,095	55,823	54,100	52,405	51,446	54,348	325,217	26.2%
Commercial/Other	<u>53,048</u>	<u>55,493</u>	<u>34,684</u>	<u>35,853</u>	<u>43,466</u>	<u>46,806</u>	<u>269,350</u>	<u>21.7%</u>
Total	229,806	228,922	192,039	188,075	194,124	206,326	1,239,292	100.0%

Source: Based on detailed utility billing data files, excludes City water use which is billed separately.

The tables on the following pages show a breakdown of monthly water use and sources of supply since fiscal year 2017/18.

Table 9 – Water Use by Month

	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total (hcf)	Ttl (AF)	% of Ttl
2017/18 Water Use (hcf)															
Residential	98,929	84,385	105,093	82,391	98,284	74,142	88,842	71,291	85,285	68,624	85,930	76,210	1,019,406	2,340	75.0%
Commercial	27,776	30,657	30,668	26,609	24,779	17,467	16,300	17,972	17,100	16,051	20,681	25,619	271,679	624	20.0%
City	9,395	9,857	10,193	8,627	5,787	1,989	1,462	1,958	1,861	2,278	5,082	9,033	67,522	155	5.0%
Total	136,100	124,899	145,954	117,627	128,850	93,598	106,604	91,221	104,246	86,953	111,693	110,862	1,358,607	3,119	100.0%
2018/19 Water Use (hcf)															
Residential	99,235	83,302	108,893	81,401	107,093	74,114	96,641	69,252	82,283	65,068	90,124	75,180	1,032,586	2,370	75.1%
Commercial	26,792	27,975	29,575	26,397	22,340	19,005	15,114	16,228	16,541	18,965	23,859	27,192	269,983	620	19.6%
City	10,455	12,030	9,621	8,496	6,467	2,753	1,300	2,206	4,901	1,830	5,690	6,433	72,182	166	5.3%
Total	136,482	123,307	148,089	116,294	135,900	95,872	113,055	87,686	103,725	85,863	119,673	108,805	1,374,751	3,156	100.0%
2019/20 Water Use (hcf)															
Residential	104,044	82,122	105,703	82,444	99,083	74,819	86,683	69,158	86,527	72,266	99,115	79,921	1,041,885	2,392	74.5%
Commercial	25,820	29,117	31,174	27,895	27,219	20,221	16,385	18,247	8,851	26,180	16,201	19,345	266,655	612	19.1%
City	9,721	11,705	11,645	10,375	9,644	5,438	3,168	3,703	4,331	5,831	5,300	9,451	90,312	207	6.5%
Total	139,585	122,944	148,522	120,714	135,946	100,478	106,236	91,108	99,709	104,277	120,616	108,717	1,398,852	3,211	100.0%
2020/21 Water Use (hcf)															
Residential	108,328	88,279	113,474	85,834	106,905	76,531	93,931	70,930	88,345	69,007	97,563	77,828	1,076,955	2,472	77.2%
Commercial	23,179	25,626	22,382	21,042	21,441	16,602	13,273	12,950	14,605	19,118	21,564	23,818	235,600	541	16.9%
City	12,279	13,084	9,574	7,521	7,544	3,835	3,021	3,193	2,539	5,093	7,324	7,907	82,914	190	5.9%
Total	143,786	126,989	145,430	114,397	135,890	96,968	110,225	87,073	105,489	93,218	126,451	109,553	1,395,469	3,204	100.0%
2021/22 Water Use (hcf)															
Residential	99,080	77,895	97,460	76,264	90,525	66,937	84,523	67,597	84,441	66,277	88,813	71,236	971,048	2,229	74.3%
Commercial	26,237	27,172	26,813	26,114	16,330	17,680	16,246	19,162	19,766	20,740	20,296	23,226	259,782	596	19.9%
City	9,587	8,452	9,797	8,310	3,327	3,362	2,616	4,340	5,693	6,429	6,808	8,162	76,883	176	5.9%
Total	134,904	113,519	134,070	110,688	110,182	87,979	103,385	91,099	109,900	93,446	115,917	102,624	1,307,713	3,002	100.0%
2022/23 Water Use (hcf)															
Residential	94,289	74,070	97,618	70,837	88,780	68,015							493,609	1,133	73.7%
Commercial	24,753	25,427	26,369	23,052	21,271	16,979							137,851	316	20.6%
City	7,795	8,335	8,707	5,842	4,371	3,031							38,081	87	5.7%
Total	126,837	107,832	132,694	99,731	114,422	88,025	-	-	-	-	-	-	669,541	1,537	100.0%

Source: Based on monthly water use data provided by the City of San Bruno.

Table 10 – Sources of Water Supply by Month

	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total (hcf)	Ttl (AF)	% of Ttl
2017/18 Water Supply (hcf)															
Wells	12,930	13,080	13,036	13,253	11,747	13,486	8,840	14,262	13,061	14,323	13,494	13,829	155,341	357	10.4%
SFPUC	113,342	135,352	130,261	109,369	97,616	105,668	91,871	87,626	93,886	92,934	122,593	129,285	1,309,803	3,007	88.0%
NCCWD	2,043	2,044	2,029	2,028	1,977	1,976	1,860	1,859	1,836	1,836	1,961	1,962	23,411	54	1.6%
Total	128,315	150,476	145,326	124,650	111,340	121,130	102,571	103,747	108,783	109,093	138,048	145,076	1,488,555	3,417	100.0%
2018/19 Water Supply (hcf)															
Wells	12,768	4,124	14,166	6,508	13,484	14,709	6,853	13,580	14,364	15,582	13,649	9,825	139,612	321	9.6%
SFPUC	119,235	136,866	119,224	97,586	104,661	99,365	94,911	86,332	94,926	102,297	113,596	129,565	1,298,564	2,981	89.1%
NCCWD	2,057	2,056	3,888	1,638	1,638	1,071	1,071	975	975	946	946	1,234	18,495	42	1.3%
Total	134,060	143,046	137,278	105,732	119,783	115,145	102,835	100,887	110,265	118,825	128,191	140,624	1,456,671	3,344	100.0%
2019/20 Water Supply (hcf)															
Wells	1,227	14,456	11,484	7,453	10,864	-	13,174	13,809	14,703	1,282	12,824	9,030	110,306	253	7.2%
SFPUC	131,267	137,064	122,585	115,869	108,311	120,738	83,960	105,336	107,464	106,008	125,419	136,511	1,400,532	3,215	91.9%
NCCWD	1,234	1,502	1,503	873	874	885	885	946	947	1,163	1,164	1,172	13,148	30	0.9%
Total	133,728	153,022	135,572	124,195	120,049	121,623	98,019	120,091	123,114	108,453	139,407	146,713	1,523,986	3,499	100.0%
2020/21 Water Supply (hcf)															
Wells	14,349	12,423	14,479	14,520	14,105	13,412	14,091	17,765	15,635	5,342	10,500	18,783	165,404	380	11.0%
SFPUC	128,986	135,657	110,866	109,817	109,187	99,794	82,640	94,325	105,412	118,954	122,494	110,268	1,328,400	3,050	88.2%
NCCWD	1,172	1,172	1,172	1,176	1,175	841	841	1,043	1,044	1,043	1,044	1,050	12,773	29	0.8%
Total	144,507	149,252	126,517	125,513	124,467	114,047	97,572	113,133	122,091	125,339	134,038	130,101	1,506,577	3,459	100.0%
2021/22 Water Supply (hcf)															
Wells	69,697	78,147	73,858	65,865	76,177	82,308	79,135	80,041	96,250	76,332	93,581	90,099	961,490	2,207	64.9%
SFPUC	68,454	60,969	62,029	53,223	35,552	29,115	27,064	26,805	33,345	27,250	41,465	41,949	507,220	1,164	34.3%
NCCWD	1,051	957	957	978	978	1,043	1,044	972	972	975	976	1,137	12,040	28	0.8%
Total	139,202	140,073	136,844	120,066	112,707	112,466	107,243	107,818	130,567	104,557	136,022	133,185	1,480,750	3,399	100.0%
2022/23 Water Supply (hcf)															
Wells	90,682	81,262	88,581	90,282	72,254	69,615							492,676	1,131	66.4%
SFPUC	46,952	53,782	35,958	33,412	35,594	38,392							244,090	560	32.9%
NCCWD	1,137	1,110	1,109	1,136	1,135								5,627	13	0.8%
Total	138,771	136,154	125,648	124,830	108,983	108,007	-	-	-	-	-	-	742,393	1,704	100.0%

Source: Based on monthly water use data provided by the City of San Bruno.

3.8 Water Rate Derivation

The following sections develop rates projected to become effective on January 1, 2028 in fiscal year 2027/28, the fifth and final year of the proposed rate increases. Rates in intervening years are phased in from current levels to the proposed levels calculated for 2027/28.

3.9 Cost Recovery Allocations

The following table allocates costs for recovery from the City's fixed and quantity charges. Based on the allocations, fixed monthly charges are designed to recover a little under 26% of total rate revenues and water quantity charges will recover roughly 74% of total rate revenues. These allocation percentages are consistent with the City's current rate structure. The table also further allocated costs be recovered from Quantity Charges associated with Base Costs vs. Extra Capacity. Base Costs represent expenses associated with providing system capacity and water service under base, wet weather months with the lowest levels of water use and account for most of the costs to be recovered from Quantity Charges. Extra Capacity costs are expenses related to providing system capacity and water service to meet peak demands in excess of base use and are conservatively allocated at a little less than 5.7% of total costs.

Table 11 – Cost Recovery Allocation

	Projected Expenses 2027/28	Cost Recovery %			Cost Recovery \$		
		Fixed Charges	Quantity Charges		Fixed Charges	Quantity Charges	
			Base Costs	Extra Capacity		Base Costs	Extra Capacity
EXPENSES							
Operating & Maintenance							
Salaries & Benefits	\$3,711,000	25.0%	70.0%	5.0%	\$927,750	\$2,597,700	\$185,550
Less Capitalized Project Staffing	(375,000)	25.0%	70.0%	5.0%	(93,750)	(262,500)	(18,750)
Supplies & Services/Equipment	2,330,000	25.0%	70.0%	5.0%	582,500	1,631,000	116,500
Utilities	695,000	0.0%	100.0%	0.0%	0	695,000	0
SFPUC/NCCWD Wholesale Water (net)	2,850,000	0.0%	100.0%	0.0%	0	2,850,000	0
SFPUC Meter Charges	186,000	25.0%	75.0%	0.0%	46,500	139,500	0
BAWSCA Bond Surcharge	180,000	0.0%	100.0%	0.0%	0	180,000	0
Internal/Intergovt Charges	3,357,000	35.0%	65.0%	0.0%	1,174,950	2,182,050	0
Subtotal	12,934,000	20.4%	77.4%	2.2%	2,637,950	10,012,750	283,300
Debt Service	2,149,000	33.0%	57.0%	10.0%	709,170	1,224,930	214,900
Capital Improvements (Pay-Go)	7,500,000	33.0%	57.0%	10.0%	2,475,000	4,275,000	750,000
Total Expenses	22,583,000	25.8%	68.7%	5.5%	5,822,120	15,512,680	1,248,200
NET FUNDING REQUIRED FROM WATER RATES							
Total Expenses	22,583,000	25.8%	68.7%	5.5%	5,822,120	15,512,680	1,248,200
Less Funding Sources Other Than Rates	(585,000)	25.8%	74.2%	0.0%	(150,819)	(434,181)	0
Net Total	21,998,000	25.78%	68.54%	5.67%	5,671,301	15,078,499	1,248,200

The following table uses the percentage cost allocations derived on Table 11 to allocate the amount of total targeted water rates revenues for recovery from the City's fixed and quantity charges in order to derive rates for January 1, 2028, the final year of the proposed 5-year rate increase period.

Table 12 – Fixed & Quantity Charge Revenue Recovery

TARGET WATER RATE REVENUES	
Annualized Rate Revenues with Jan-1, 2028 Rate Increase	\$22,016,000
RATE RECOVERY ALLOCATIONS	
Fixed Service Charges	
Allocation %	25.78%
Allocation \$	\$5,675,942
Water Quantity Charges	
<u>Base Rate Recovery</u>	
Allocation %	68.54%
Allocation \$	\$15,090,837
<u>Extra Capacity Rate Recovery</u>	
Allocation %	5.67%
Allocation \$	\$1,249,221

3.10 Water Accounts & Meter Equivalents

The table on the following page shows the number of accounts by meter size along the relative capacity of each meter size compared to that of the base 3/4-inch meter, based on meter capacity standards developed by the American Water Works Association. For example, a 3-inch meter has roughly the same capacity as ten 3/4-inch meters and generates the same demand as ten 3/4-inch meters. The table calculated the total number of 3/4-inch meter equivalents served by the City.

Table 13 – Water Accounts & Meter Equivalents

Meter Code	Meter Size	Number of Accts	AWWA Meter Capacity Ratio	3/4" Meter Equivalents
WT01	3/4"	10,573	1.00	10,573
WT02	1"	351	1.67	585
WT03	1-1/2"	210	3.33	700
WT04	2"	307	5.33	1,637
WT05	3"	16	10.00	160
WT06	4"	2	16.67	33
WT07	6"	1	33.33	33
WT08	8"	1	53.33	53
WT09	10"	-	76.67	-
Total		11,460		13,722

Source: Estimated active accounts as of January 2023.

3.11 Fixed Monthly Service Charges

The following table derives the fixed charge for the base 3/4-inch meter effective January 1, 2028 by dividing the targeted level of revenues allocated for fixed rate recovery by the projected number of 3/4-inch meter equivalents, resulting in a fixed monthly charge of \$34.22 per meter equivalent.

Table 14 – Fixed Rate Derivation January 1, 2028

Meter Size	Fixed Charge Jan-1, 2028
Fixed Rate Recovery \$	\$5,675,942
Meter Equivalents	
Current Meter Equivalents	13,722
Plus Growth through 2027/28	<u>100</u>
Total	13,822
Fixed Service Charge per Meter Equivalent	
Annual Charge	\$410.65
Monthly Charge	\$34.22

The following table calculates the fixed charges for all meter sizes by multiplying the charge for the base 3/4-inch meter by the meter capacity ratio for each meter size, resulting in fixed charges that are proportional to meter capacity.

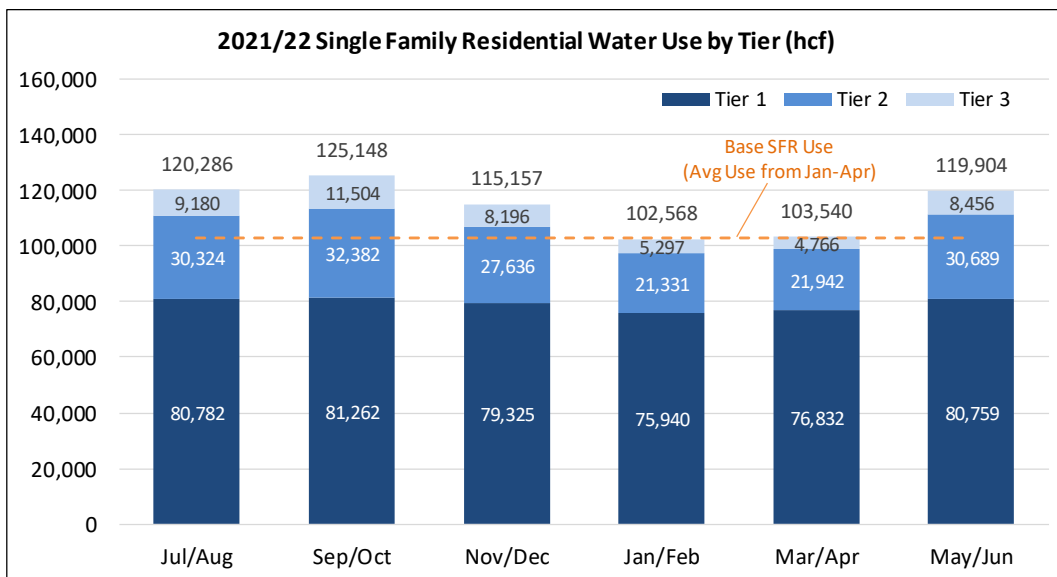
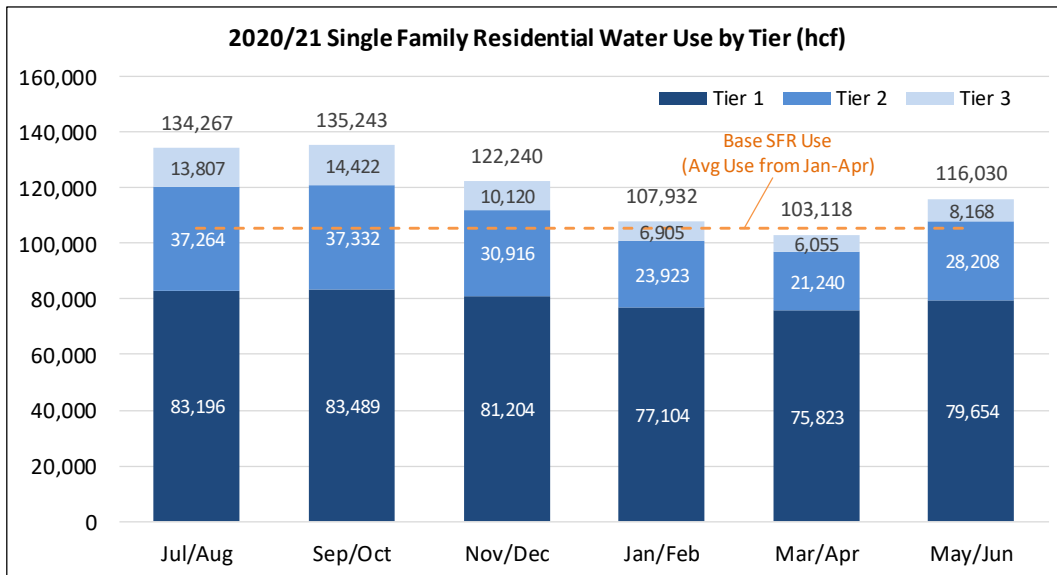
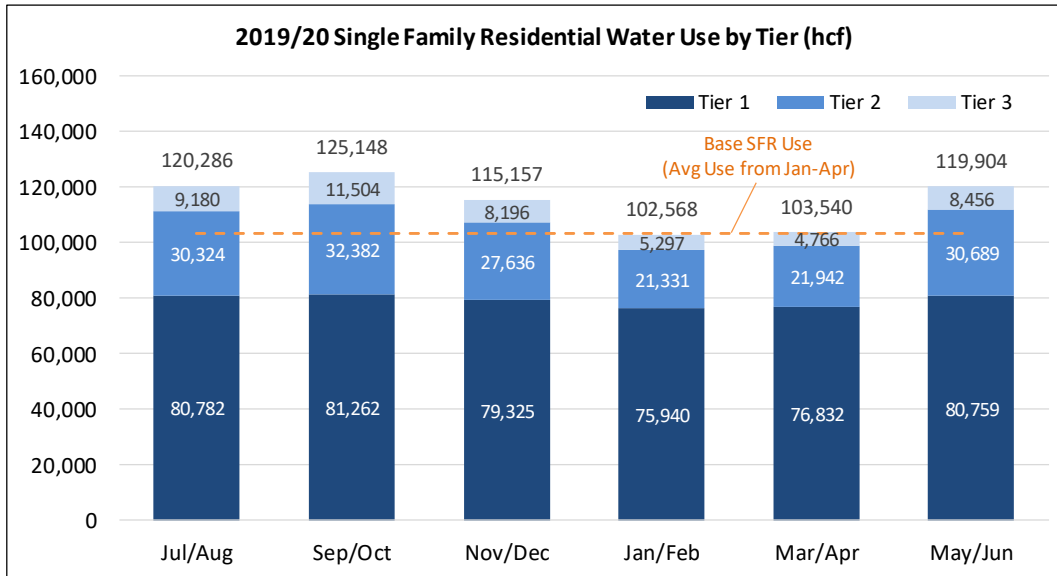
Table 15 – Projected Fixed Services Charges January 1, 2028

		Fixed Charge Jan-1, 2028
Fixed Monthly Service Charge per Meter Equivalent		\$34.22
Fixed Monthly Service Charges		
Single Family Up to 1", 1.5"?		\$34.22
Meter <u>Size</u>	Meter <u>Capacity Ratio</u>	
3/4"	1.00	\$34.22
1"	1.67	57.03
1.5"	3.33	114.07
2"	5.33	182.51
3"	10.00	342.20
4"	16.67	570.33
6"	33.33	1,140.67
8"	53.33	1,825.07
10"	76.67	2,623.53

3.12 Water Quantity Charge Derivation

The tables in this section derive water quantity charges for January 1, 2028. The charts on the following page show a breakdown of single family water use by tier per each bi-monthly billing cycle over the past 3 fiscal years. The orange dotted line on the charts shows the level of water use under base, wet weather months with the lowest levels of water use each year which are largely reflective of indoor water demand. Water use over this level represents peak demands in excess of base use. As shown, a small portion of water use in Tier2 and a large portion of water use in Tier 3 exceed base usage levels.

Figure 6 – Single Family Water Use by Tier



The following table shows a 5-year projection of water sales by rate class. The projections are based on water sales from the prior fiscal year 2021/22 and assume no change in use.

Table 16 – Projected Water Sales

		Base Year	Projected Water Use (hcf)				
		2021/22	2023/24	2024/25	2025/26	2026/27	2027/28
Annual Change in Water Sales			0%	0%	0%	0%	0%
Single Family Residential Use							
Tier	Monthly Use						
Tier 1	0 - 10 hcf	459,389	459,400	459,400	459,400	459,400	459,400
Tier 2	11 - 20 hcf	140,198	140,200	140,200	140,200	140,200	140,200
Tier 3	>20 hcf	<u>45,138</u>	<u>45,100</u>	<u>45,100</u>	<u>45,100</u>	<u>45,100</u>	<u>45,100</u>
Subtotal		644,725	644,700	644,700	644,700	644,700	644,700
All Other Billed Use		594,567	594,600	594,600	594,600	594,600	594,600
Total		1,239,292	1,239,300	1,239,300	1,239,300	1,239,300	1,239,300
Change %			0.0%	0.0%	0.0%	0.0%	0.0%

Water Quantity Charges are derived based on a Base vs. Extra Capacity approach:

- Base costs are defined as expenses associated with providing system capacity and water service under base, wet weather months with the lowest levels of water use. These costs benefit all water use on a proportionate basis and are recovered equally from each unit of water sold. Base costs account for most of the City's costs of service.
- Extra Capacity costs are defined as expenses related to providing and maintaining system capacity and water service to meet peak demands in excess of base use. These costs are allocable to higher levels of water use. Water system facilities must generally be oversized to meet peak demands, which require additional system capacity similar to the need for additional lanes on a highway to meet peak rush hour demands even though fewer lanes would otherwise be adequate for non-rush hour traffic. The City also incurs some costs that should be recovered more from higher levels of use, such as costs related to the City's water conservation program.

The following table derives Water Quantity Charges effective January 1, 2028 by dividing a) the costs allocated for recovery from each rate tier by b) the projected volume of water sales in each tier.

- Base costs attributable equally to all water use are allocated on a pro-rata basis to water use in all rate classes.
- Extra Capacity costs related to meeting demands in excess of base use are allocated more toward higher tiers in recognition that these costs are incurred due to higher levels of water use. Costs related to peak demands are attributed to 20% of Tier 2 water use, and 60% of Tier 3 water use based on analysis of historical water use. For example, 60% of Tier 3 water use throughout the year is in excess of base levels of use and is corresponding allocated a share of Extra Capacity costs. These costs are amortized over total annual Tier 3 use resulting in Tier 3 rates that recover the allocated costs over the course of the years. No costs related to Extra Capacity are designated for recovery from Tier 1.
- The rates for each customer class and tier are based on the combined Base and Extra Capacity costs assigned to each tier, divided by the volume of water projected to be sold in each tier.

Table 17 – Water Quantity Charge Derivation

	Single Family Residential			All Other Customers
	Tier 1 0 - 10 hcf	Tier 2 11 - 20 hcf	Tier 3 >20 hcf	
Water Use (hcf)	459,400	140,200	45,100	594,600
A) Base Cost Allocation				
% of Total Use	37.1%	11.3%	3.6%	48.0%
B) Extra Capacity Cost Allocation				
% of Water in Class/Tier for Peak Cost Recovery	0.0%	20.0%	60.0%	10.0%
Volume of Water for Peak Cost Recovery	0	28,040	27,060	59,460
% of Total Water for Peak Cost Recovery	0.0%	24.5%	23.6%	51.9%
VARIABLE RATE COST RECOVERY				
Base \$15,090,837	\$5,594,070	\$1,707,202	\$549,178	\$7,240,387
Extra Capacity <u>1,249,221</u>	<u>0</u>	<u>305,763</u>	<u>295,076</u>	<u>648,383</u>
Total 16,340,058	5,594,070	2,012,965	844,255	7,888,769
Water Use (hcf)	459,400	140,200	45,100	594,600
Quantity Charge Components				
Base	\$12.18	\$12.18	\$12.18	\$12.18
Extra Capacity <u>0.00</u>	<u>0.00</u>	<u>2.18</u>	<u>6.54</u>	<u>1.09</u>
Total Charge per hcf	12.18	14.36	18.72	13.27

3.13 Proposed Water Rates

The table on the following page shows a 5-year schedule of proposed water rates incorporating a) the overall level of required rate increases needed to fund the costs of providing service, b) the updated cost allocations that apportion costs to the various components of City's water rate structure. Proposed water rates are scheduled to become effective on January 1 of each year, when water use is low. The rates shown for each year are projected to gradually increase by the same percentage each year from current rates to the rates derived for January 1, 2028.

Table 18 – Proposed Water Rates

Proposed Water Rates							
	Current	Proposed Rates Effective On or After					
	Water	Jan-1	Jan-1	Jan-1	Jan-1	Jan-1	
	Rates	2024	2025	2026	2027	2028	
Overall Rate Increase Target		6%	6%	6%	6%	6%	
MONTHLY SERVICE CHARGES							
Fixed monthly charge based on meter size.							
Meter Size							
3/4-inch	\$25.58	\$27.11	\$28.73	\$30.45	\$32.27	\$34.22	
1-inch	42.63	45.18	47.88	50.75	53.78	57.03	
1-1/2 inch	85.27	90.37	95.77	101.50	107.57	114.07	
2-inch	136.43	144.59	153.23	162.40	172.11	182.51	
3-inch	255.80	271.10	287.30	304.50	322.70	342.20	
4-inch	426.33	451.83	478.83	507.50	537.83	570.33	
6-inch	852.67	903.67	957.67	1,015.00	1,075.67	1,140.67	
8-inch	1,364.27	1,445.87	1,532.27	1,624.00	1,721.07	1,825.07	
10-inch	1,961.13	2,078.43	2,202.63	2,334.50	2,474.03	2,623.53	
QUANTITY CHARGES							
Billed based on metered water consumption (\$ per hundred cubic feet or hcf)							
a) Single-Family Residential							
	Bi-Monthly Use						
Tier 1	0 - 10 hcf	\$9.01	\$9.57	\$10.16	\$10.79	\$11.46	\$12.18
Tier 2	11 - 20 hcf	10.78	11.42	12.09	12.80	13.56	14.36
Tier 3	> 20 hcf	14.33	15.12	15.95	16.83	17.75	18.72
b) All Other Accounts	All Use	10.11	\$10.68	\$11.28	\$11.91	\$12.58	\$13.27

Accounts served by water procured from NCCWD are also charged a Differential Cost of Supply Charge reflecting the higher cost of water procured from this source.

Note: One hundred cubic feet (hcf) is equivalent to approximately 748 gallons.

3.14 Water Rate Impacts

The following table shows the impacts of the proposed water rates single family residential and non-residential customers with a range of water use. As previously noted, while the rates reflect overall 6% annual rate increases, the impacts vary a little based on meter size and water use due to the minor modifications to the rate structure.

Table 19 – Water Rate Impacts

Use (hcf)			Current Rates	Charges with Proposed Rated Effective Jan-1				
				2024	2025	2026	2027	2028
Overall Rate Increase Target				6%	6%	6%	6%	6%
Single Family Residential, 3/4" Meter (Bi-Monthly Billing)								
Bi-Monthly Use								
Low	6 hcf	Bi-Monthly Bill	\$105.22	\$111.64	\$118.42	\$125.64	\$133.30	\$141.52
		Monthly Equivalent	52.61	55.82	59.21	62.82	66.65	70.76
		Monthly Increase		3.21	3.39	3.61	3.83	4.11
		% Increase		6.1%	6.1%	6.1%	6.1%	6.2%
Median	10 hcf	Bi-Monthly Bill	\$141.26	\$149.92	\$159.06	\$168.80	\$179.14	\$190.24
		Monthly Equivalent	70.63	74.96	79.53	84.40	89.57	95.12
		Monthly Increase		4.33	4.57	4.87	5.17	5.55
		% Increase		6.1%	6.1%	6.1%	6.1%	6.2%
Average	12 hcf	Bi-Monthly Bill	\$162.82	\$172.76	\$183.24	\$194.40	\$206.26	\$218.96
		Monthly Equivalent	81.41	86.38	91.62	97.20	103.13	109.48
		Monthly Increase		4.97	5.24	5.58	5.93	6.35
		% Increase		6.1%	6.1%	6.1%	6.1%	6.2%
Mod-High	20 hcf	Bi-Monthly Bill	\$249.06	\$264.12	\$279.96	\$296.80	\$314.74	\$333.84
		Monthly Equivalent	124.53	132.06	139.98	148.40	157.37	166.92
		Monthly Increase		7.53	7.92	8.42	8.97	9.55
		% Increase		6.0%	6.0%	6.0%	6.0%	6.1%
Commercial/Multi-Family (Monthly Billing)								
Monthly Use								
3/4" Meter	10 hcf	Monthly Bill	\$126.68	\$133.91	\$141.53	\$149.55	\$158.07	\$166.92
		Monthly Increase		7.23	7.62	8.02	8.52	8.85
		% Increase		5.7%	5.7%	5.7%	5.7%	5.6%
1" Meter	25 hcf	Monthly Bill	\$295.38	\$312.18	\$329.88	\$348.50	\$368.28	\$388.78
		Monthly Increase		16.80	17.70	18.62	19.78	20.50
		% Increase		5.7%	5.7%	5.6%	5.7%	5.6%
2" Meter	100 hcf	Monthly Bill	\$1,147.43	\$1,212.59	\$1,281.23	\$1,353.40	\$1,430.11	\$1,509.51
		Monthly Increase		65.16	68.64	72.17	76.71	79.40
		% Increase		5.7%	5.7%	5.6%	5.7%	5.6%
4" Meter	200 hcf	Monthly Bill	\$2,448.33	\$2,587.83	\$2,734.83	\$2,889.50	\$3,053.83	\$3,224.33
		Monthly Increase		139.50	147.00	154.67	164.33	170.50
		% Increase		5.7%	5.7%	5.7%	5.7%	5.6%

4 SEWER FINANCIAL PLAN & RATE DERIVATION

4.1 Current & Historical Sewer Rates

The City has provided good financial stewardship by gradually raising sewer rates most years over the past 20 years to keep rates in line with escalating costs of providing water service. The table on the following page shows a recent history of the City's sewer rates. The City bills customers bi-monthly (once every 2 months) via a combined utility bill.

The City last conducted water and sewer rate studies in 2017 leading to adoption of 5 years of 5% annual water and sewer rate increases effective July 1, 2017 through 2021. However, the City cancelled the final 5% water and sewer rate increases that had been scheduled to become effective July 1, 2021 and has subsequently been able to defer raising rates. Current rates have been in effect since July 1, 2020.

The City's sewer rates include two components:

- A fixed **Monthly Service Charge** that varies based on meter size. These fixed charges are levied independent of usage and recover a portion of the City's fixed costs for providing service. The City incurs a substantial amount of costs ensuring that sewer system capacity is available at all times to meet customer needs on demand. The fixed Monthly Service Charge varies by meter size, with larger meters paying higher charges based on the increased capacity needs and demand placed on the sewer system.
- Volumetric **Sewer Quantity Charges** billed based on metered water use. Residential accounts are billed based on average winter water use from two billing periods between December and April. Residential use during this period excludes most outdoor irrigation and is a better reflection of residential wastewater discharge. All other customers are billed based on water used each billing period. Sewer Quantity Charges are billed per hundred cubic feet (hcf), with 1 hcf equal to approximately 748 gallons of water. Hence, the City's current Residential Quantity Charges equate to approximately 1.43 cents per gallon of wastewater discharge.

Table 20 – Sewer Rates

	Sewer Rates Effective July 1				
	2017	2018	2019	2020	2021
Rate Increase %	5%	5%	5%	5%	5%
MONTHLY SERVICE CHARGES				Currently in effect	Cancelled
<i>Fixed monthly charge per account</i>					
Single Family Residential	\$27.88	\$29.27	\$30.73	\$32.27	\$33.88
All Other Customers (Charge Based on Water Meter Size)					
<u>Meter Size</u>					
3/4-inch	\$27.88	\$29.27	\$30.73	\$32.27	\$33.88
1-inch	46.47	48.78	51.22	53.78	56.47
1-1/2 inch	92.93	97.57	102.43	107.57	112.93
2-inch	148.69	156.11	163.89	172.11	180.69
3-inch	278.80	292.70	307.30	322.70	338.80
4" & Larger	464.67	487.83	512.17	537.83	564.67
QUANTITY CHARGES					
<i>Billed per hundred cubic feet (hcf)</i>					
Residential	\$10.69	\$11.22	\$11.78	\$12.37	\$12.99
Commercial					
C-1 Light Commercial	9.93	10.43	10.95	11.50	12.08
C-2 Medium Commercial	10.69	11.22	11.78	12.37	12.99
C-3 Heavy Commercial	15.21	15.97	16.77	17.61	18.49
C-4 Special Commercial	19.74	20.73	21.77	22.86	24.00
Governmental	10.69	11.22	11.78	12.37	12.99
Industrial					
I-1 Light Industrial	10.69	11.22	11.78	12.37	12.99
I-2 Industrial Flow	7.68	8.06	8.46	8.88	9.32
COD per lb	0.59	0.62	0.65	0.68	0.71
SS per lb	1.22	1.28	1.34	1.41	1.48

Residential Quantity Charges are billed based on average metered water use from two bi-monthly billing periods during wet weather months between either Nov-Mar or Dec-Apr.

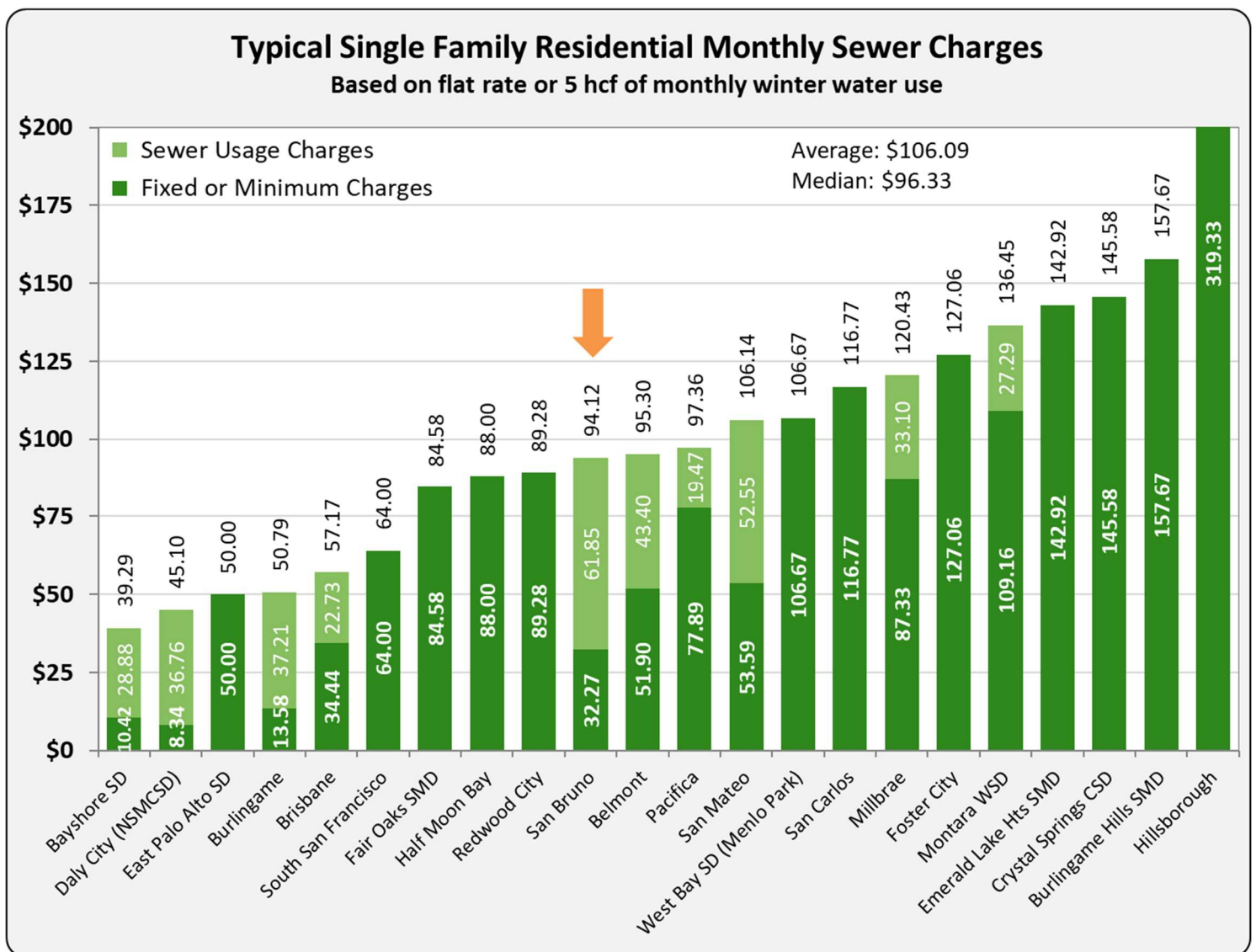
Non-Residential Quantity Charges are billed based on metered water use during each billing period.

Note: 1 hcf = 100 cubic feet or approximately 748 gallons.

4.2 Regional Sewer Rate Survey

The chart below compares the City's current sewer service charges to those of other regional agencies for a typical single family home with 5 hundred cubic feet of monthly winter water use. This level of use equates to almost 125 gallons per day. Roughly half of the agencies have 100% fixed residential wastewater charges that do not vary based on volume of wastewater discharge, and the other half (including San Bruno) have rates that include a volumetric component based on metered water use during the wet winter months, a period of minimal outdoor irrigation. The City's sewer rates are currently in the-middle range compared to other regional agencies and are expected to remain in the middle range as many other regional agencies have already adopted or are anticipating rate increases in upcoming years.

Figure 7 – Single Family Residential Sewer Rate Survey



4.3 Financial Challenges / Key Drivers of Rate Increases

Going forward, the City's sewer enterprise is facing a number of financial challenges that will require the City to resume its historical practice of implementing gradual annual sewer rates over the next 5 years. Key drivers of future rate increases are summarized as follows.

4.3.1 Capital Improvements & Replacement of Aging Infrastructure

Many of the City's sewer collection system pipelines are at or approaching the end of their useful lives and in need of replacement. The City anticipates funding approximately \$71 million of wastewater system capital improvement projects over the next 5 years as shown on the following table. This total includes roughly \$46 million of improvements to the City's sewer collection system – mostly consisting of sewer pipeline replacements – and about \$25 million for the City's share of upgrades to the Water Quality Control Plant, which include an estimated \$14 million for the City's share of a biosolids handling improvement project that South San Francisco anticipates financing via debt.

Table 21 – Sewer Capital Improvement Program

		2022/23			2023/24	2024/25	2025/26	2026/27	5-Yr Total
	Prior Approp	Est. Carryover	New Funding	Total					
Funding Sources									
Wastewater Fund	36,796,000	15,169,000	5,300,000	17,969,000	12,000,000	13,200,000	5,750,000	22,000,000	70,919,000
Wastewater Capital Improvement Projects									
Main Improvement & Replacement Program	13,360,000	8,466,000	1,700,000	10,166,000	10,000,000	11,200,000	3,750,000	6,000,000	41,116,000
Pump Station Improvement & Replacement	10,760,000	5,203,000	100,000	5,303,000					5,303,000
Subtotal Sewer Collection System	24,120,000	13,669,000	1,800,000	15,469,000	10,000,000	11,200,000	3,750,000	6,000,000	46,419,000
Water Quality Control Plant Ongoing Upgrades	12,676,000	1,500,000	1,000,000	2,500,000	2,000,000	2,000,000	2,000,000	2,000,000	10,500,000
WQCP Biosolids Handling Improvements (est) [1]								14,000,000	14,000,000
Total Capital Funding	36,796,000	15,169,000	2,800,000	17,969,000	12,000,000	13,200,000	5,750,000	22,000,000	70,919,000
Estimated Annual Wastewater Capital Expenditures (Excludes Debt-Financing for WQCP Biosolids Improvements)									
Sewer Collection System Upgrades [2]				9,284,000	9,284,000	9,284,000	9,284,000	9,284,000	46,420,000
Water Quality Control Plant Upgrades				2,500,000	2,000,000	2,000,000	2,000,000	2,000,000	10,500,000
Average Annual Expenditures				11,784,000	11,284,000	11,284,000	11,284,000	11,284,000	56,920,000

Source: City of San Bruno Revised 5-Year Wastewater Capital Program (Updated 11.4.22); budget appropriation required for project contract awards.

1 South San Francisco anticipates financing a biosolids handling improvement project with long-term debt, with a portion allocated to San Bruno

2 Source: Assumes average annual expenditures over the 5-year period for City sewer collection system upgrades.

4.3.2 Ongoing Operating Cost Inflation

The City is contractually responsible for paying its share of operating, maintenance and debt service expenses for the Water Quality Control Plant and effluent disposal system. Costs for wastewater treatment operations have increased in recent years with no corresponding increases to the City's sewer rates, and are projected to continue to gradually increase in future years.

In addition, the City faces ongoing cost inflation for its own operating and maintenance expenses. Water and sewer cost inflation has historically been significantly higher than the Consumer Price Index (CPI) for consumer goods and services. In addition to rate increases for capital needs, annual rate increases are needed over the next 5 years to support the City's operating expenses and keep up with cost inflation.

4.4 Outstanding Debt Service

The following table shows a schedule of outstanding sewer enterprise debt by fiscal year. Debt includes a) two outstanding series of wastewater revenue bonds issued by the City and directly secured by the net revenues of the City's sewer enterprise, and b) the City's allocated share of three State Revolving Fund (SRF) Loans obtained by South San Francisco for the Water Quality Control Plant.

Table 22 – Outstanding Sewer Debt Service

Fiscal Year Ending June 30	San Bruno Debt Obligations ¹		San Bruno Share of WQCP Debt Obligations ²			Total
	2013 Wastewater Revenue Bonds	2017 Wastewater Revenue Bonds	1999 SRF Loan C-06-4614-111 18.01%	2007 SRF Loan C-06-4728-110 32.70%	2018 SRF Loan 26.92%	
2023	\$542,600	\$1,442,850	\$589,551	\$458,471	-	\$3,033,472
2024	544,475	1,439,450	-	458,471	796,976	3,239,372
2025	541,225	1,438,200	-	458,471	796,976	3,234,872
2026	547,225	1,440,700	-	458,471	796,976	3,243,372
2027	546,975	1,441,700	-	458,471	796,976	3,244,122
2028	544,975	1,441,200	-	-	796,976	2,783,151
2029	546,825	1,439,200	-	-	796,976	2,783,001
2030	547,275	1,440,700	-	-	796,976	2,784,951
2031	540,675	1,440,450	-	-	796,976	2,778,101
2032	543,400	1,438,450	-	-	796,976	2,778,826
2033	-	1,439,700	-	-	796,976	2,236,676
2034	-	1,438,950	-	-	796,976	2,235,926
2035	-	1,438,300	-	-	796,976	2,235,276
2036	-	1,441,900	-	-	796,976	2,238,876
2037	-	1,439,600	-	-	796,976	2,236,576
2038	-	1,442,200	-	-	796,976	2,239,176
2039	-	1,438,200	-	-	796,976	2,235,176
2040	-	1,437,800	-	-	796,976	2,234,776
2041	-	1,440,800	-	-	796,976	2,237,776
2042	-	1,442,000	-	-	796,976	2,238,976
2043	-	1,441,400	-	-	796,976	2,238,376
2044	-	1,439,000	-	-	-	1,439,000
2045	-	1,439,800	-	-	-	1,439,800
2046	-	1,438,600	-	-	-	1,438,600
2047	-	1,440,400	-	-	-	1,440,400

4.5 Sewer Enterprise Financial Projections

Bartle Wells Associates developed 10-year sewer enterprise cash flow projections to identify future funding needs and evaluate sewer rate increases. The table on the following page shows 10-year sewer enterprise cash flow projections. The projections incorporate the latest information available as well as a number of reasonable and slightly conservative assumptions. Key assumptions include:

- Operating and maintenance costs are based on the 2022/23 budget and escalate at the annual rate of 4% to account for future cost inflation.
- Growth from new development and/or redevelopment is conservatively projected at the equivalent of 20 new single family homes per year for financial planning purposes.
- Billed sewer use is projected to remain constant at the same level as the prior fiscal year 2021/22.
- Capital improvement costs are based on the City's latest 5-Year Capital Improvement Program with capital costs in subsequent years projected at \$10 million per year – including \$7.5 million annually for City sewer collection system improvements and \$2.5 million annually for the City's share of WQCP improvements – with 3% annual cost escalation.
- In recent years, the sewer enterprise has accrued a healthy levels of fund reserves that includes some excess reserves available for capital projects that were deferred in recent years but are scheduled for completion over the next few years. The projections assume approximately \$21 million of these fund reserves will be drawn down in upcoming years to fund sewer system capital needs while rate increases are gradually phased in.
- The financial projections include \$800,000 of new debt service starting fiscal year 2026/27 for the City's share of debt service for an anticipated biosolids handling improvement project at the WQCP that the South San Francisco anticipates financing via debt. The actual amount and timing of this potential future debt issue may vary based on the actual project cost and timing. Debt service is estimated assuming South San Francisco obtains a loan from the Clean Water State Revolving Fund (SRF) Loan program or the Water Infrastructure and Financing Innovation Act (WIFIA) financing program with an 3.75% average interest rate and a 30-year repayment term.
- For financial planning purposes, the financial projections assume a minimum fund reserve target equal to 50% of annual operating, maintenance and debt service costs, plus \$5 million for emergency capital reserves. Maintaining a prudent minimal level of fund reserves provides a financial cushion for dealing with unanticipated expenses, revenue shortfalls, and non-catastrophic emergency capital repairs. The fund reserve target will escalate over time as the City's expenses gradually increase.
- The table also calculates annual debt service coverage on the City's wastewater debt as well as total debt including the City's share of WQCP debt issued by South San Francisco. Debt service coverage is calculated based on a) total revenues less operating and maintenance expenses, divided by b) annual debt service.

Table 23 - 10-Year Sewer Cash Flow Projections

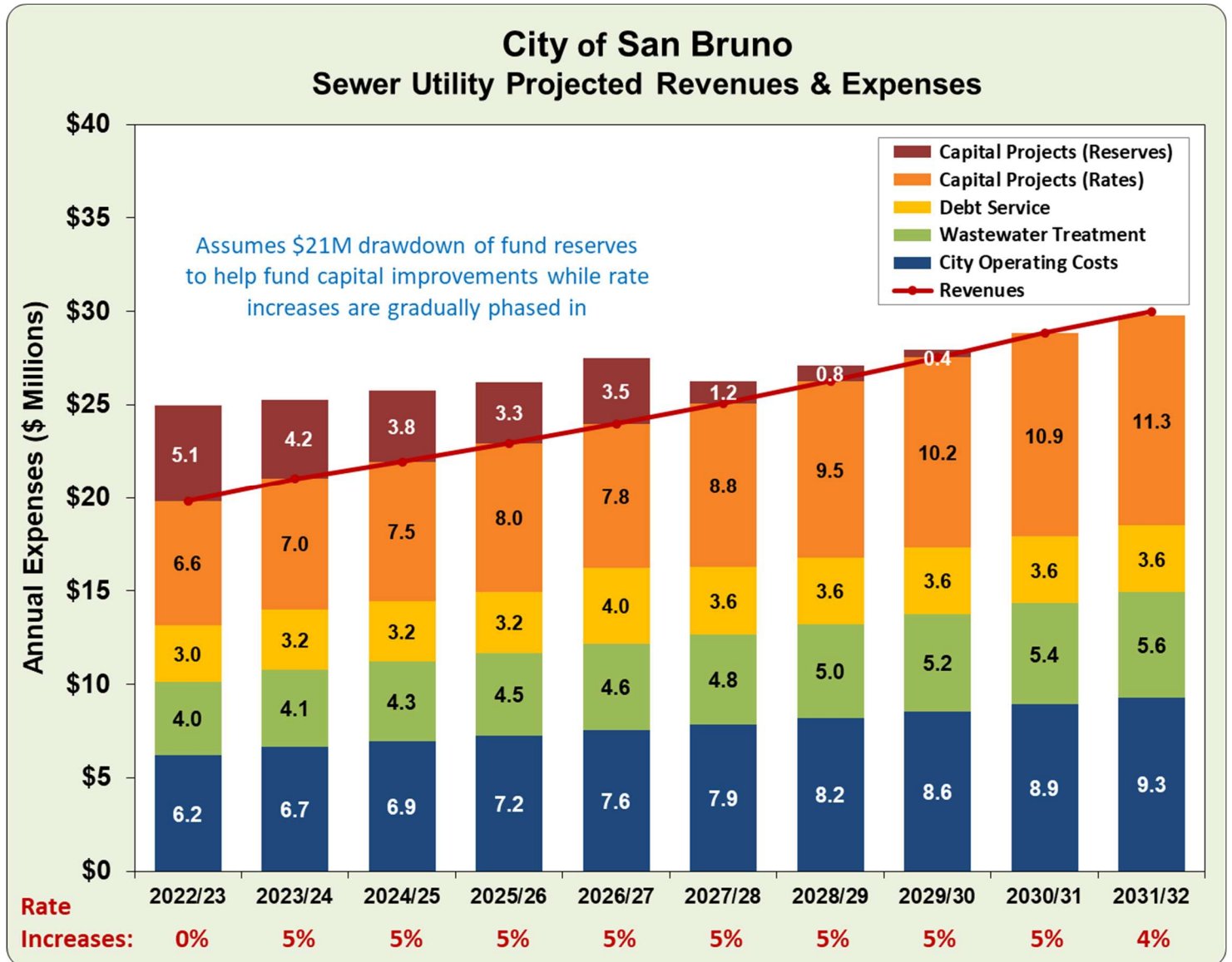
San Bruno Sewer Cash Flow Projections											
	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	
Effective Date of Rate Increases		July 1	July 1	July 1	July 1	July 1	July 1	July 1	July 1	July 1	
Overall Rate Adjustment	0%	5%	5%	5%	5%	5%	5%	5%	5%	4%	
Growth (3/4" Meter Equivalents)		20	20	20	20	20	20	20	20	20	
Annual % Change in Billed Sewer Use	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Interest Earnings Rate	1.5%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	
WQCP Cost Escalation		4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	
City Cost Escalation		4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	
Beginning Unrestricted Fund Rsrvs	\$47,280,000	\$42,137,000	\$37,891,000	\$34,115,000	\$30,838,000	\$27,314,000	\$26,117,000	\$25,287,000	\$24,861,000	\$24,888,000	
REVENUES											
Sewer Rate Revenues	19,100,000	20,055,000	21,058,000	22,111,000	23,217,000	24,378,000	25,597,000	26,877,000	28,221,000	29,350,000	
Connection & Capacity Fees	100,000	132,000	132,000	132,000	132,000	132,000	132,000	132,000	132,000	132,000	
Investment Income	600,000	843,000	758,000	682,000	617,000	546,000	522,000	506,000	497,000	498,000	
Other/Miscellaneous	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	
Total Revenues	19,820,000	21,050,000	21,968,000	22,945,000	23,986,000	25,076,000	26,271,000	27,535,000	28,870,000	30,000,000	
EXPENSES											
Operating & Maintenance											
Salaries & Benefits	2,586,000	2,689,000	2,797,000	2,909,000	3,025,000	3,146,000	3,272,000	3,403,000	3,539,000	3,681,000	
Less Capitalized Project Staffing	(500,000)	(500,000)	(500,000)	(500,000)	(500,000)	(500,000)	(500,000)	(500,000)	(500,000)	(500,000)	
Supplies & Services	1,295,000	1,347,000	1,401,000	1,457,000	1,515,000	1,576,000	1,639,000	1,705,000	1,773,000	1,844,000	
Wastewater Treatment SSF	3,957,000	4,115,000	4,280,000	4,451,000	4,629,000	4,814,000	5,007,000	5,207,000	5,415,000	5,632,000	
Internal Charges	2,811,000	2,923,000	3,040,000	3,162,000	3,288,000	3,420,000	3,557,000	3,699,000	3,847,000	4,001,000	
Vehicle & Equip Replacement	0	200,000	208,000	216,000	225,000	234,000	243,000	253,000	263,000	274,000	
Subtotal	10,149,000	10,774,000	11,226,000	11,695,000	12,182,000	12,690,000	13,218,000	13,767,000	14,337,000	14,932,000	
Debt Service											
2013 Wastewater Bonds	542,000	544,000	541,000	547,000	547,000	545,000	547,000	547,000	541,000	543,000	
2017 Wastewater Bonds	1,440,000	1,439,000	1,438,000	1,441,000	1,442,000	1,441,000	1,439,000	1,441,000	1,440,000	1,438,000	
Share of WQCP Debt, Subordinate	1,048,000	1,255,000	1,255,000	1,255,000	1,255,000	797,000	797,000	797,000	797,000	797,000	
Share of New WQCP Debt, Projected	0	0	0	0	800,000	800,000	800,000	800,000	800,000	800,000	
Subtotal All Debt	3,030,000	3,238,000	3,234,000	3,243,000	4,044,000	3,583,000	3,583,000	3,585,000	3,578,000	3,578,000	
Other Non-Operating											
City Sewer System Capital Projects	9,284,000	9,284,000	9,284,000	9,284,000	9,284,000	7,500,000	7,725,000	7,957,000	8,196,000	8,442,000	
City Share of WPCP Capital Projects	2,500,000	2,000,000	2,000,000	2,000,000	2,000,000	2,500,000	2,575,000	2,652,000	2,732,000	2,814,000	
Subtotal	11,784,000	11,284,000	11,284,000	11,284,000	11,284,000	10,000,000	10,300,000	10,609,000	10,928,000	11,256,000	
Total Expenses	24,963,000	25,296,000	25,744,000	26,222,000	27,510,000	26,273,000	27,101,000	27,961,000	28,843,000	29,766,000	
Revenues Less Expenses	(5,143,000)	(4,246,000)	(3,776,000)	(3,277,000)	(3,524,000)	(1,197,000)	(830,000)	(426,000)	27,000	234,000	
Ending Unrestricted Fund Balances	42,137,000	37,891,000	34,115,000	30,838,000	27,314,000	26,117,000	25,287,000	24,861,000	24,888,000	25,122,000	
Min Rsrv Target: 50% O&M&D + \$5M	11,590,000	12,010,000	12,230,000	12,470,000	13,110,000	13,140,000	13,400,000	13,680,000	13,960,000	14,260,000	
Debt Service Coverage											
On Parity Debt (Ming1.25)	4.88	5.18	5.43	5.66	5.93	6.24	6.57	6.93	7.34	7.61	
On Total Debt Incl Subord SSF Debt Pymt	3.19	3.17	3.32	3.47	2.92	3.46	3.64	3.84	4.06	4.21	

Future capital expenditures are projected at \$10 million per year with 3% cost escalation

Assumes total 5-year capital expenditures are spread evenly over the first 5 years

The following chart graphically shows a 10-year breakdown of projected sewer enterprise revenues and expenses. The proposed rate increases are designed to put the City on a long-term path toward supporting balanced budgets while providing adequate funding for ongoing rehabilitation and replacement of aging sewer system infrastructure to support safe and reliable service. As shown on the chart, the projections assume the City draws down approximately \$21 million of fund reserves to help fund projected capital improvements while rates are being phased in.

Figure 8 – Sewer Utility Projected Revenues & Expenses



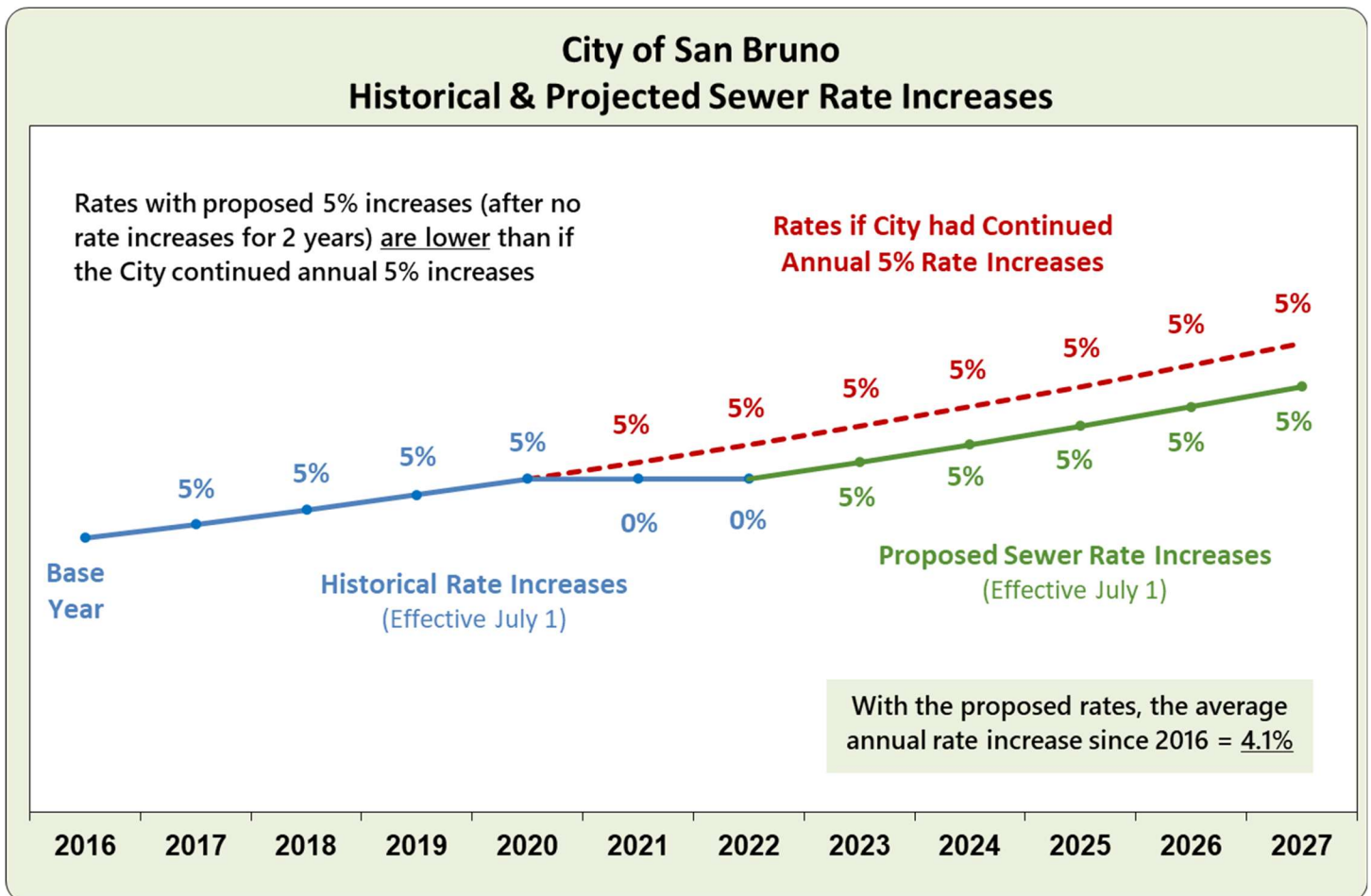
4.6 Sewer Rate Projections

The cash flow projections indicate the need to raise sewer rates by 5.0% each year for the next 5 years in order to support the sewer utility's projected operating and capital funding needs. These projected rate increases follow a period of no rate increases over the past 2 years as shown below. With the proposed rates, the average annual sewer rate increase since 2016 equates to approximately 4.3%.

Table 24 – Projected Sewer Rate Increases

Projected Sewer Rate Increases						
July 1 2021	July 1 2022	July 1 2023	July 1 2024	July 1 2025	July 1 2026	July 1 2027
5% 0%	0%	5%	5%	5%	5%	5%

Figure 9 – Historical & Projected Sewer Rate Increases



The 5% sewer rate increases represent the overall level of annual rate increases proposed. Actual impacts to customers' monthly water bills may vary a little based on customer class and billed usage due to minor modifications to the rate structure designed to keep sewer rates aligned with the cost of providing service.

4.7 Sewer Use

The table below shows a history of sewer use by customer class per bi-monthly billing period.

Table 25 – Sewer Use by Class

Bi-Monthly Period	Jul/Aug	Sep/Oct	Nov/Dec	Jan/Feb	Mar/Apr	May/Jun	Total	% of Ttl
2019/20 Sewer Use (hcf)								
RESIDENTIAL								
<i>Based on prior year winter water use</i>								
SEWR1	151,990	151,670	153,270	151,514	151,980	151,424	911,848	77.7%
SEWR1L	<u>4,928</u>	<u>5,516</u>	<u>5,640</u>	<u>5,800</u>	<u>5,708</u>	<u>5,844</u>	<u>33,436</u>	<u>2.8%</u>
Subtotal	156,918	157,186	158,910	157,314	157,688	157,268	945,284	80.6%
COMMERCIAL/OTHER								
C-1 Light Comm	2,269	2,689	2,418	2,175	2,087	1,789	13,427	1.1%
C-2 Medium Comm	18,253	20,759	17,189	14,164	11,496	9,905	91,766	7.8%
C-3 Heavy Comm	13,785	14,098	13,481	12,580	8,024	5,976	67,944	5.8%
C-4 Special Comm	16	16	15	14	15	14	90	0.0%
Governmental	11,533	13,627	11,648	3,658	4,463	7,816	52,745	4.5%
Industrial Light	<u>217</u>	<u>171</u>	<u>251</u>	<u>547</u>	<u>252</u>	<u>610</u>	<u>2,048</u>	<u>0.2%</u>
Subtotal	46,073	51,360	45,002	33,138	26,337	26,110	228,020	19.4%
Total	202,991	208,546	203,912	190,452	184,025	183,378	1,173,304	100.0%
2020/21 Sewer Use (hcf)								
RESIDENTIAL								
<i>Based on prior year winter water use</i>								
SEWR1	157,130	156,214	155,940	156,076	156,598	156,450	938,408	80.0%
SEWR1L	<u>5,596</u>	<u>6,132</u>	<u>6,330</u>	<u>6,410</u>	<u>6,538</u>	<u>6,618</u>	<u>37,624</u>	<u>3.2%</u>
Subtotal	162,726	162,346	162,270	162,486	163,136	163,068	976,032	83.2%
COMMERCIAL/OTHER								
C-1 Light Comm	1,700	1,901	2,005	1,974	2,076	2,341	11,997	1.0%
C-2 Medium Comm	12,596	11,722	11,881	10,306	13,431	14,497	74,433	6.3%
C-3 Heavy Comm	8,761	8,693	9,051	7,388	8,893	10,244	53,030	4.5%
C-4 Special Comm	25	21	16	18	20	19	119	0.0%
Governmental	12,014	9,621	5,235	2,967	4,235	7,019	41,091	3.5%
Industrial Light	<u>343</u>	<u>333</u>	<u>333</u>	<u>346</u>	<u>400</u>	<u>321</u>	<u>2,076</u>	<u>0.2%</u>
Subtotal	35,439	32,291	28,521	22,999	29,055	34,441	182,746	15.6%
Total	198,165	194,637	190,791	185,485	192,191	197,509	1,158,778	98.8%
2021/22 Sewer Use (hcf)								
RESIDENTIAL								
<i>Based on prior year winter water use</i>								
SEWR1	158,022	158,924	158,792	158,632	158,212	158,032	950,614	81.0%
SEWR1L	<u>6,710</u>	<u>5,648</u>	<u>5,838</u>	<u>5,780</u>	<u>5,936</u>	<u>5,960</u>	<u>35,872</u>	<u>3.1%</u>
Subtotal	164,732	164,572	164,630	164,412	164,148	163,992	986,486	84.1%
COMMERCIAL/OTHER								
C-1 Light Comm	2,215	2,104	2,111	2,313	2,264	2,020	13,027	1.1%
C-2 Medium Comm	15,623	15,249	11,798	12,466	11,638	12,761	79,535	6.8%
C-3 Heavy Comm	10,967	11,961	10,464	10,554	10,894	11,101	65,941	5.6%
C-4 Special Comm	18	18	13	16	17	18	100	0.0%
Governmental	7,062	6,147	2,895	3,229	4,392	5,214	28,939	2.5%
Industrial Light	<u>332</u>	<u>359</u>	<u>376</u>	<u>354</u>	<u>356</u>	<u>393</u>	<u>2,170</u>	<u>0.2%</u>
Subtotal	36,217	35,838	27,657	28,932	29,561	31,507	189,712	16.2%
Total	200,949	200,410	192,287	193,344	193,709	195,499	1,176,198	100.2%
Source: Based on detailed utility billing data files, may include some non-billed usage.								

4.8 Sewer Rate Derivation

The following sections develop rates projected to become effective on July 1, 2027 at the start of fiscal year 2027/28, the fifth and final year of the proposed rate increases. Rates in intervening years are phased in from current levels to the proposed levels calculated for 2027/28.

4.9 Cost Recovery Allocations

The following table allocates costs for recovery from the City's fixed and quantity charges. Based on the allocations, fixed monthly charges are designed to recover a little under 24%% of total rate revenues and water quantity charges will recover roughly 76% of total rate revenues. These allocation percentages are consistent with the City's current rate structure.

Table 26 – Fixed & Variable Revenue Recovery

EXPENSES	Projected 2027/28 Exps	Cost Allocation %		Cost Allocation \$	
		Fixed	Variable	Fixed	Variable
<u>Operating & Maintenance</u>					
Salaries & Benefits	\$3,146,000	30%	70%	\$943,800	\$2,202,200
<i>Less Capitalized Project Staffing</i>	(500,000)	30%	70%	(150,000)	(350,000)
Supplies & Services	1,576,000	30%	70%	472,800	1,103,200
Wastewater Treatment SSF	4,814,000	0%	100%	0	4,814,000
Internal Charges	3,420,000	30%	70%	1,026,000	2,394,000
Vehicle & Equip Replacement	234,000	30%	70%	70,200	163,800
Subtotal	12,690,000	19%	81%	2,362,800	10,327,200
<u>Debt Service</u>					
2013 Wastewater Bonds	545,000	30%	70%	163,500	381,500
2017 Wastewater Bonds	1,441,000	30%	70%	432,300	1,008,700
Share of WQCP Debt, Subordinate	797,000	30%	70%	239,100	557,900
Share of New WQCP Debt, Project	800,000	30%	70%	240,000	560,000
Subtotal	3,583,000	30%	70%	1,074,900	2,508,100
<u>Other Non-Operating</u>					
<i>Excluding Debt-Funded Projects</i>					
City Sewer System Capital Project	7,500,000	30%	70%	2,250,000	5,250,000
City Share of WPCP Capital Project	2,500,000	30%	70%	750,000	1,750,000
Subtotal	10,000,000	30%	70%	3,000,000	7,000,000
Total	26,273,000	24.5%	75.5%	6,437,700	19,835,300
Less Revenue Offsets	(698,000)	50%	50%	(349,000)	(349,000)
Net Revenue Recovery %	25,575,000	23.8%	76.2%	6,088,700	19,486,300

4.10 Sewer Accounts & Billing Equivalents

The following table shows the number of sewer accounts by customer class and meter size along with the associated number of fixed rate billing equivalents. Single family residential accounts billed a uniform fixed charge per home and are assigned a capacity ratio of 1.00. Commercial sewer accounts pay fixed charges based on meter size. The table calculated the number of fixed rate billing equivalents for commercial accounts based on standard American Water Works Association meter capacity ratios. For example, a 3-inch meter has roughly the same capacity as ten 3/4-inch meters and is correspondingly assigned 10 fixed rate billing equivalents.

Table 27 – Sewer Accounts & Billing Equivalents

Meter Code	Meter Size	Number of Accts	Meter Capacity Ratio	Fixed Rate Equivalents
Single Family Residential				
All SFR		9621	1.00	9,621
All Other Accounts				
WT01	3/4"	620	1.00	620
WT02	1"	116	1.67	193
WT03	1-1/2"	54	3.33	180
WT04	2"	152	5.33	811
WT05	3"	5	10.00	50
WT06	4" & Larger	2	16.67	33
Subtotal		949		1,887
Total		10,570		11,508
Source: Estimated active accounts as of January 2023.				

4.11 Fixed Monthly Service Charges

The following table derives the fixed charge per single family home or billing equivalent by dividing the targeted level of revenues allocated for fixed rate recovery by the total projected number fixed rate billing equivalents, resulting in a fixed monthly sewer charge of \$41.66 per home or commercial meter equivalent.

Table 28 – Fixed Sewer Rate Derivation

Allocation to Fixed Rate Recovery	
Total Target Rate Revenues 2027/28	\$24,378,000
Fixed Rate Recovery %	23.8%
Fixed Rate Recovery \$	\$5,803,727
Sewer Fixed Rate Equivalents	
Current Fixed Rate Equivalents	11,508
Plus Projected Growth Through 2027/28	<u>100</u>
Total Sewer Fixed Rate Equivalents	11,608
Charge per Fixed Rate Equivalent	
Annual Charge	\$499.96
Monthly Charge	41.66

4.12 Sewer Quantity Charge Derivation

The tables in this section derive sewer quantity charges for each customer class effective for fiscal year 2027/28. The following table allocates variable costs for recovery based on wastewater flow and strength. Wastewater strength is measured by a) Biological Oxygen Demand (BOD) and b) Suspended Solids (SS). Overall, 68.4% of variable rate costs are allocated for recovery based on the volume of wastewater flow and 31.6% of variable rate costs are allocated for recovery based on wastewater strength.

Table 29 – Variable Rate Recovery from Wastewater Flow & Strength

EXPENSES	Variable Cost Recovery	Variable Cost Recovery %			Variable Cost Recovery \$		
		Flow	BOD	SS	Flow	BOD	SS
<u>Operating & Maintenance</u>							
Salaries & Benefits	\$2,202,200	80%	10.0%	10.0%	\$1,761,760	\$220,220	\$220,220
<i>Less Capitalized Project Staffing</i>	(350,000)	80%	10.0%	10.0%	(280,000)	(35,000)	(35,000)
Supplies & Services	1,103,200	80%	10.0%	10.0%	882,560	110,320	110,320
Wastewater Treatment SSF	4,814,000	50%	25.0%	25.0%	2,407,000	1,203,500	1,203,500
Internal Charges	2,394,000	80%	10.0%	10.0%	1,915,200	239,400	239,400
Vehicle & Equip Replacement	163,800	80%	10.0%	10.0%	131,040	16,380	16,380
Subtotal	10,327,200	66.0%	17.0%	17.0%	6,817,560	1,754,820	1,754,820
<u>Debt Service</u>							
2013 Wastewater Bonds	381,500	80%	10.0%	10.0%	305,200	38,150	38,150
2017 Wastewater Bonds	1,008,700	80%	10.0%	10.0%	806,960	100,870	100,870
Share of WQCP Debt, Subordinate	557,900	50%	25.0%	25.0%	278,950	139,475	139,475
Share of New WQCP Debt, Projected	560,000	50%	25.0%	25.0%	280,000	140,000	140,000
Subtotal	2,508,100	66.6%	16.7%	16.7%	1,671,110	418,495	418,495
<u>Other Non-Operating</u>							
<i>Excluding Debt-Funded Projects</i>							
City Sewer System Capital Projects	5,250,000	80%	10.0%	10.0%	4,200,000	525,000	525,000
City Share of WPCP Capital Projects	1,750,000	50%	25.0%	25.0%	875,000	437,500	437,500
Subtotal	7,000,000	72.5%	13.8%	13.8%	5,075,000	962,500	962,500
Total	19,835,300	68.4%	15.8%	15.8%	13,563,670	3,135,815	3,135,815

The table below shows an estimate of projected sewer flow and wastewater strength loadings by customer class. The table also shows the relative wastewater strength factor for each customer class relative to residential wastewater strength based on the cost recovery percentages for wastewater flow and strength shown on the prior table.

Table 30 – Sewer Flow & Loadings by Customer Class

	Flow Basis	Estimated Wastewater Flow		Wastewater Strength (mg/l)		Wastewater Loadings (lbs)		Wastewater Strength Factor
		(hcf)	(MG)	BOD	SS	BOD	SS	
Res Single Family Res	Winter Use ¹	642,000	480.2	200	200	801,054	801,054	1.00
Res Multi-Family Res	Winter Use ¹	328,000	245.4	200	200	409,261	409,261	1.00
C-1 Light Commercial	Annual Use	13,000	9.7	150	150	12,166	12,166	0.93
C-2 Medium Commercial	Annual Use	78,000	58.3	200	200	97,324	97,324	1.00
C-3 Heavy Commercial	Annual Use	65,000	48.6	500	500	202,759	202,759	1.45
C-4 Special Commercial	Annual Use	100	0.1	800	800	499	499	1.90
G Governmental	Annual Use	26,000	19.4	200	200	32,441	32,441	1.00
I-1 Light Industrial	Annual Use	2,000	1.5	200	200	2,495	2,495	1.00
Total		1,154,100	863.3	216	216	1,558,000	1,558,000	

The next table derives unit rates for wastewater flow and strength by dividing the costs allocated to flow, BOD and SS by each of these parameters total estimated wastewater loadings resulting unit rates for flow, BOD and SS that can be applied to the wastewater characteristics of each customer class.

Table 31 – Derivation of Unit Rates for Wastewater Flow & Strength

Allocation to Variable Rate Recovery				
Total Target Rate Revenues 2027/28				\$24,378,000
Variable Charge Recovery %				76.2%
Variable Charge Recovery \$				\$18,574,273
Allocation to Flow, BOD, SS	<u>Flow</u>	<u>BOD</u>	<u>SS</u>	
Cost Allocation %	68.38%	15.81%	15.81%	
Cost Allocation \$	\$12,701,000	\$2,936,000	\$2,936,000	
Total Annual Loadings	1,154,100	1,558,000	1,558,000	
Units	hcf	lbs	lbs	
Unit Costs	\$11.01	\$1.88	\$1.88	
	per hcf	per lb	per lb	

The following table calculates sewer quantity charges for each customer class for July 1, 2027 based the unit rates derived in the prior table and the wastewater strength associated with each customer class. All classes pay the same amount for wastewater flow, however customer classes with higher-strength wastewater pay more for costs associated with wastewater strength.

Table 32 – Sewer Quantity Charges by Customer Class

Customer Class	Wastewater Strength (mg/l)		Unit Rates (\$ per hcf or lb)			Total Rate per hcf
			Flow	BOD	SS	
	BOD	SS	\$11.01	\$1.88	\$1.88	
Res Residential	200	200	\$11.01	\$2.35	\$2.35	\$15.71
C-1 Light Commercial	150	150	11.01	1.76	1.76	14.53
C-2 Medium Commercial	200	200	11.01	2.35	2.35	15.71
C-3 Heavy Commercial	500	500	11.01	5.88	5.88	22.76
C-4 Special Commercial	800	800	11.01	9.41	9.41	29.82
G Governmental	200	200	11.01	2.35	2.35	15.71
I-1 Light Industrial	200	200	11.01	2.35	2.35	15.71

4.13 Proposed Sewer Rates

The table on the following page shows a 5-year schedule of proposed sewer rates incorporating a) the overall level of required rate increases needed to fund the costs of providing service, b) the updated cost allocations that apportion costs to the various components of City's sewer rate structure. Proposed sewer rates are scheduled to become effective July 1 at the beginning of each fiscal year. The rates shown for each year are projected to gradually increase by the same percentage each year from current rates to the rates derived for July 1, 2027.

Table 33 – Proposed Sewer Rates

Proposed Sewer Rates						
	Current	Proposed Sewer Rates Effective On or After				
	Sewer Rates	July 1 2023	July 1 2024	July 1 2025	July 1 2026	July 1 2027
Overall Rate Increase Target %		5%	5%	5%	5%	5%
MONTHLY SERVICE CHARGES						
<i>Fixed monthly charge per account</i>						
Single Family Residential	\$32.27	\$33.96	\$35.74	\$37.61	\$39.59	\$41.66
All Other Customers (Charge Based on Water Meter Size)						
<u>Meter Size</u>						
3/4-inch	\$32.27	\$33.96	\$35.74	\$37.61	\$39.59	\$41.66
1-inch	53.78	56.60	59.57	62.69	65.98	69.43
1-1/2 inch	107.57	113.20	119.14	125.38	131.95	138.87
2-inch	172.11	181.13	190.62	200.61	211.12	222.19
3-inch	322.70	339.61	357.41	376.14	395.85	416.60
4" & Larger	537.83	566.02	595.68	626.90	659.76	694.33
QUANTITY CHARGES						
<i>Billed per hundred cubic feet (hcf)</i>						
Residential	\$12.37	\$12.98	\$13.61	\$14.28	\$14.97	\$15.71
Commercial						
C-1 Light Commercial	11.50	12.05	12.63	13.23	13.87	14.53
C-2 Medium Commercial	12.37	12.98	13.61	14.28	14.97	15.71
C-3 Heavy Commercial	17.61	18.54	19.51	20.54	21.62	22.76
C-4 Special Commercial	22.86	24.11	25.42	26.81	28.27	29.82
Governmental	12.37	12.98	13.61	14.28	14.97	15.71
Industrial						
I-1 Light Industrial	12.37	12.98	13.61	14.28	14.97	15.71
I-2 Industrial						
Flow	8.88	9.27	9.68	10.10	10.54	11.01
COD per lb ³	0.68	0.72	0.77	0.82	0.87	0.93
SS per lb	1.41	1.49	1.58	1.68	1.78	1.88

- 1 Residential accounts are billed based on average metered water use from two bi-monthly billing periods from January through April. All other accounts are billed based on total metered use.
 - 2 Non-residential accounts are billed based on metered water use during each billing period.
 - 3 Based on South San Francisco WQCP wastewater loadings of COD 728 mg/l and BOD 358 mg/l. **UPDATE**
- Note: One hundred cubic feet (hcf) is equivalent to approximately 748 gallons.

4.14 Sewer Rate Impacts

The following tables show the impacts of the proposed sewer rates on a range of single family residential and commercial customers.

Table 34 – Single Family Residential Sewer Rate Impacts

% of Bills at or Below				Current Sewer Charges	Projected Charges with Rates Effective				
					July 1 2023	July 1 2024	July 1 2025	July 1 2026	July 1 2027
Overall Sewer Rate Increase					5.0%	5.0%	5.0%	5.0%	5.0%
Single Family Residential, 3/4" Meter (Bi-Monthly Billing)									
<u>Bi-Monthly Use</u>									
Low	6 hcf (3 hcf / month)	25%	Bi-Monthly Bill	\$138.76	\$145.77	\$153.14	\$160.89	\$169.02	\$177.57
			Monthly Equivalent	69.38	72.89	76.57	80.44	84.51	88.78
			Monthly Increase		3.51	3.68	3.87	4.07	4.27
			% Increase		5.1%	5.1%	5.1%	5.1%	5.1%
Typical	10 hcf (5 hcf / month)	50%	Bi-Monthly Bill	\$188.24	\$197.68	\$207.59	\$217.99	\$228.92	\$240.40
			Monthly Equivalent	94.12	98.84	103.79	109.00	114.46	120.20
			Monthly Increase		4.72	4.95	5.20	5.46	5.74
			% Increase		5.0%	5.0%	5.0%	5.0%	5.0%
Mod-High	16 hcf (8 hcf / month)	80%	Bi-Monthly Bill	\$262.46	\$275.53	\$289.25	\$303.65	\$318.77	\$334.64
			Monthly Equivalent	131.23	137.76	144.62	151.82	159.39	167.32
			Monthly Increase		6.53	6.86	7.20	7.56	7.94
			% Increase		5.0%	5.0%	5.0%	5.0%	5.0%
High	24 hcf (12 hcf / month)	90%	Bi-Monthly Bill	\$361.42	\$379.33	\$398.13	\$417.86	\$438.57	\$460.31
			Monthly Equivalent	180.71	189.67	199.06	208.93	219.29	230.15
			Monthly Increase		8.96	9.40	9.87	10.35	10.87
			% Increase		5.0%	5.0%	5.0%	5.0%	5.0%

Table 35 – Commercial Sewer Rate Impacts

Monthly Billable Use (hcf)			Current Sewer Charges	Projected Charges with Rates Effective				
				July 1 2023	July 1 2024	July 1 2025	July 1 2026	July 1 2027
Overall Sewer Rate Increase				5.0%	5.0%	5.0%	5.0%	5.0%
Commercial Low Strength C-1								
3/4" Meter	10 hcf	Monthly Bill	\$147.27	\$154.47	\$162.03	\$169.95	\$178.26	\$186.98
		Monthly Increase		7.20	7.55	7.92	8.31	8.72
		% Increase		4.9%	4.9%	4.9%	4.9%	4.9%
Commercial Medium Strength C-2								
3/4" Meter	10 hcf	Monthly Bill	\$155.97	\$163.71	\$171.84	\$180.38	\$189.34	\$198.74
		Monthly Increase		7.74	8.13	8.53	8.96	9.40
		% Increase		5.0%	5.0%	5.0%	5.0%	5.0%
1" Meter	25 hcf	Monthly Bill	\$363.03	\$380.98	\$399.83	\$419.60	\$440.35	\$462.12
		Monthly Increase		17.95	18.84	19.77	20.76	21.77
		% Increase		4.9%	4.9%	4.9%	4.9%	4.9%
1-1/2" Meter	50 hcf	Monthly Bill	\$726.07	\$761.97	\$799.66	\$839.20	\$880.70	\$924.26
		Monthly Increase		35.90	37.69	39.54	41.50	43.56
		% Increase		4.9%	4.9%	4.9%	4.9%	4.9%
2" Meter	100 hcf	Monthly Bill	\$1,409.11	\$1,478.66	\$1,551.65	\$1,628.24	\$1,708.62	\$1,792.97
		Monthly Increase		69.55	72.99	76.59	80.37	84.35
		% Increase		4.9%	4.9%	4.9%	4.9%	4.9%
4" Meter	200 hcf	Monthly Bill	\$3,011.83	\$3,161.09	\$3,317.74	\$3,482.17	\$3,654.75	\$3,835.89
		Monthly Increase		149.26	156.65	164.43	172.59	181.13
		% Increase		5.0%	5.0%	5.0%	5.0%	5.0%
Commercial High Strength C-3								
3/4" Meter	10 hcf	Monthly Bill	\$208.37	\$219.34	\$230.88	\$243.03	\$255.82	\$269.28
		Monthly Increase		10.97	11.54	12.15	12.79	13.46
		% Increase		5.3%	5.3%	5.3%	5.3%	5.3%
1" Meter	25 hcf	Monthly Bill	\$494.03	\$520.04	\$547.41	\$576.22	\$606.56	\$638.48
		Monthly Increase		26.01	27.38	28.81	30.33	31.92
		% Increase		5.3%	5.3%	5.3%	5.3%	5.3%
2" Meter	100 hcf	Monthly Bill	\$1,933.11	\$2,034.87	\$2,141.98	\$2,254.74	\$2,373.43	\$2,498.37
		Monthly Increase		101.76	107.11	112.76	118.69	124.94
		% Increase		5.3%	5.3%	5.3%	5.3%	5.3%