CITY OF BRISBANE

Water and Sewer Utility Rate Study

FINAL REPORT
December 2022

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SECTION 1: INTRODUCTION

1.1 Background

The City of Brisbane (City) is situated in Northern San Mateo County on the west side of San Francisco Bay. Brisbane borders the cities of San Francisco, Daly City, and South San Francisco. The City provides water and wastewater (sewer) service to about 2,000 customers, serving a total population of about 4,800 people. Both water and sewer rates are billed bimonthly on the same bill. The City's last rate study for water and sewer utility services was prepared in 2001.

In 2021, the City engaged Lechowicz & Tseng Municipal Consultants to complete a comprehensive water and wastewater (sewer) rate study to recommend utility rates to ensure the financial health and stability of the City's water and sewer funds. This study focuses only on the water and sewer rates used to pay for operations, including salaries, wholesale water purchases, treatment charges, supplies and services, and other operating expenses. The operational water and sewer rates do not pay for capital projects, which are funded separately with the Capital Project Charge. Additionally, customers also pay a separate Drought Contingency Surcharge that is set aside in a specific reserve fund to avoid raising rates during a drought. This study recommends water and sewer rates for the five-year period beginning in 2023/24 through 2027/28.

The City's Utility Fund (Fund 540) includes four funds - 1) City Water Utilities (Fund 6110), 2) City Water Maintenance (Fund 6115), 3) City Sewer Utilities (Fund 6130), and 4) the Guadalupe Valley Municipal Improvement District (GVMID) Utility (Fund 6120). The GVMID provides water, sewer, and stormwater services to business and residents located within its district boundaries. The City of Brisbane provides both the management and staff for GVMID, and the water and sewer systems are maintained by the City's Public Works Department as part of the City's overall water and sewer systems.

In order to determine the revenue requirements and rate increases needed for water and sewer separately, the City Water Utilities (Fund 6110), City Water Maintenance (Fund 6115), and GVMID Water funds have been combined into a single fund called the "Water Utility." Similarly, the City Sewer Utilities (Fund 6130) and GVMID Sewer have been combined into a single fund called the "Sewer Utility." GVMID storm water revenues and expenses are not included in this study.

1.2 Requirements of Proposition 218

The implementation of utility rates in California is governed by the substantive and procedural requirements of Proposition 218 the "Right to Vote on Taxes Act" which is codified as Articles XIIIC and XIIID of the California Constitution. The City must follow the procedural requirements of Proposition 218 for all utility rate increases. These requirements include:

1. **Noticing Requirement** – The City must mail a notice of the proposed rate increases to all affected property owners or ratepayers. The notice must specify the amount of the fee, the

basis upon which it was calculated, the reason for the fee, and the date/time/location of a public rate hearing at which the proposed rates will be considered/adopted.

2. **Public Hearing** – The City must hold a public hearing prior to adopting the proposed rate increases. The public hearing must be held not less than 45 days after the required notices are mailed.

3. **Rate Increases Subject to Majority Protest** – At the public hearing, the proposed rate increases are subject to majority protest. If more than 50% of affected property owners or ratepayers submit written protests against the proposed rate increases, the increases cannot be adopted.

Proposition 218 also established substantive requirements that apply to water and sewer rates and charges, including:

1. **Cost of Service** – Revenues derived from the fee or charge cannot exceed the funds required to provide the service. In essence, fees cannot exceed the "cost of service".

2. **Intended Purpose** – Revenues derived from the fee or charge can only be used for the purpose for which the fee was imposed.

3. **Proportional Cost Recovery** – The amount of the fee or charge levied on any customer shall not exceed the proportional cost of service attributable to that customer.

4. **Availability of Service** – No fee or charge may be imposed for a service unless that service is used by, or immediately available to, the owner of the property.

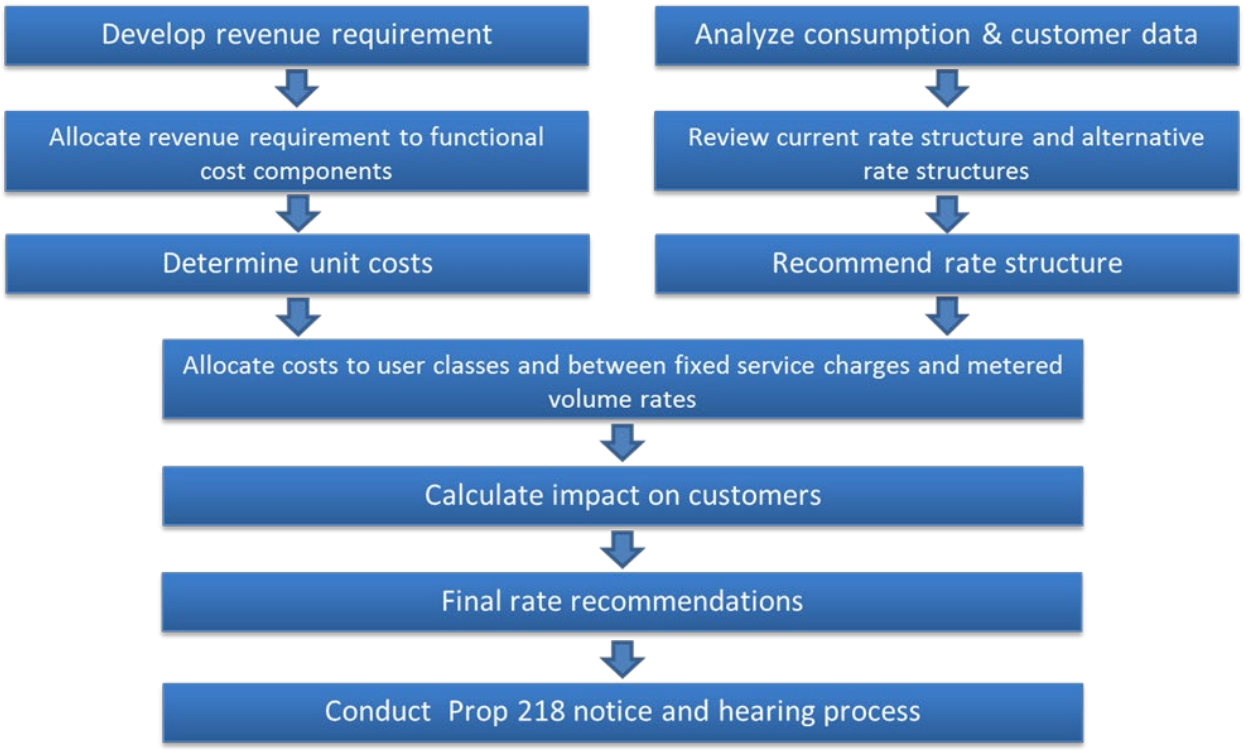
5. **General Government Services** – No fee or charge may be imposed for general governmental services where the service is available to the public at large.

Charges for water and sewer collection are exempt from additional voting requirements of Proposition 218, provided the charges do not exceed the cost of providing service and are adopted pursuant to the procedural requirements of Proposition 218.

1.3 Rate Study Process

This section details the development of the City's water and sewer rates via the Proposition 218 process as shown in the following figure.

Figure 1: Comprehensive Cost of Service Study Process



The following is a brief description of the rate study process:

- **Revenue Requirements** - Revenue requirements are analyzed via financial plans developed from the Water and Sewer Fund budgets. Based on the best information currently available, the financial plans incorporate projected operation and maintenance costs, debt service, and growth to estimate annual revenue requirements. The plans serve as a roadmap for funding the City's future operating expenses while maintaining long-term fiscal stability.

- **Cost of Service Allocation** - The cost of service process builds on the financial plan analysis and assigns water and sewer system costs to functional cost components: *metering and customer service*, *base,* and *extra* for water, and *customer service*, *capital*, and *treatment/disposal* for sewer.

- **Rate Design** - Rate design involves developing a rate structure that proportionately recovers costs from customers. Final rate recommendations are designed to (a) fund the utilities' short- and long-term costs of providing service; (b) proportionately allocate costs to all customers and customer classes; and (c) comply with the substantive requirements of Proposition 218.

The rates developed in this report were based on the best information available at the time of the study. This information was taken from City budgets, audits, billing information, water consumption data, and input from staff. The cost allocations proposed herein are based on American Water Works Association methodologies and industry standard practice. The proposed rates are based on the reasonable cost of providing service and are proportional to the benefits received by each customer.

SECTION 2: WATER RATE STUDY

The City of Brisbane provides water service to approximately 1,300 City water accounts and 700 GVMID water accounts. On average, the City consumes over 270,000 ccf (hundred cubic feet) of water each year. The last water rate study was conducted in 2001, and water rates for operations have not increased since 2012. Based on City billing records, the current average monthly residential water use is 5 ccf per month, or a total of 10 ccf per bimonthly billing period. The average water bill is currently $120.17 per bimonthly billing period, including Drought Contingency and Capital Project charges.

2.1 Current Water Rates

Schedules of current bimonthly water rates for residential, commercial, and irrigation customers are provided in Table 1, Table 2, and Table 3. The City's current water rate structure includes two components: (a) a Fixed Charge and (b) a Consumption Rate. Moreover, customers are levied two additional charges on their bimonthly utility bill - a Capital Project Charge and a Drought Contingency Charge.

2.1.1 Fixed Charge

All customers are charged a base service charge based on the size of their water meter. The Fixed Charge is levied regardless of water consumption and recognizes that even when a customer does not use any water, the City incurs fixed costs associated with maintaining the ability or readiness to serve each connection. The current Fixed Charges also vary based on customer class. For example, a residential customer with a 5/8"or 3/4" meter currently pays $22.67 while a commercial or irrigation customer with the same meter size pays $35.07.

The Fixed Charges are designed to recover the City's fixed expenses and currently generate about 15% of total water rate revenues. Fixed costs include staffing, customer service, debt service, system maintenance, and repairs.

2.1.2 Consumption Rate

In addition to the Fixed Charges, all customers pay a Consumption Rate per ccf of water consumption per billing period. One ccf is equal to 748 gallons of water. The charges for water usage are based on a tiered rate system where the price per unit of water is higher as more water is used. The highest rates start at 16 ccf of water usage for each customer class. Most customers pay based on a three-tiered rate structure. However, residential customers with a 5/8" meter receive one unit of water for free and have a five-tiered rate structure and residential customers with a 3/4" meter have four tiers.

The Consumption Rate is intended to recover costs that vary based on the amount of water consumed and currently generate roughly 85% of total water rate revenues. Variable expenses include water purchases, utilities, and chemicals.

2.1.3 Capital Project Charge

In April of 2014, the City Council approved the first Capital Project Charge to pay for infrastructure projects for the water and sewer systems. The projects are based on the City's Capital Improvement Plan which outlines the need for approximately $5 million in projects every five years. The policy adopted in 2014 included placing a new Capital Project Charge on the water and sewer bill four times over a twenty-year period. The second charge should have been implemented in 2020 but was delayed due to the impacts of COVID. To prevent further delays in completing the projects, the City Council adopted the second of four increases to the Capital Project Charge in October 2022.

The Capital Project Charge is levied according to a tiered rate system based on springtime usage (mid-February through mid-June) to ensure that lower water users pay less than higher users. Total Capital Project Charge revenue is evenly split between the water and sewer funds. The Capital Project Charge will not be reviewed or analyzed in this study.

2.1.4 Drought Contingency Charges

Approved by the City in 2018, the Drought Contingency Charge was enacted to create a separate drought reserve fund with the objective of avoiding having to raise rates in times of severe water shortages. For residential and commercial accounts, the charge is $2.32 per bimonthly billing period for customers whose annual average consumption is below the median use of 12 ccf. For customers whose use is above the median, the bimonthly charge is $6.99. For irrigation customers, the charge is $102.14 per billing period. The Drought Contingency Charge will not be reviewed or analyzed in this study.

Table 1: Current Bi-Monthly Residential Water Rates
City of Brisbane
Water Utility Rate Study 2022

RESIDENTIAL WATER RATES		
FIXED CHARGES		
Meter Size		Bimonthly Charge
5/8"		$22.67
3/4"		$22.67
1"		$30.60
1-1/2"		$61.14
2"		$97.85
3"		$195.73
4"		$305.78
CONSUMPTION CHARGES		
Meter Size	Tier	Bimonthly Charge
5/8"	0 - 1 ccf	$0.00
	1 - 2 ccf	$2.17
	3 ccf	$5.63
	4 - 8 ccf	$7.00
	9 - 16 ccf	$8.69
	Over 16 ccf	$11.05
3/4"	0 - 3 ccf	$5.19
	4 - 8 ccf	$7.00
	9 - 16 ccf	$8.69
	Over 16 ccf	$11.05
All Other Meter Sizes	0 - 8 ccf	$7.00
	9 - 16 ccf	$8.69
	Over 16 ccf	$11.05

Effective 10/15/2012
ccf = cubic feet. 1 ccf = 748 gallons

Table 2: Current Bi-Monthly Commercial Water Rates
City of Brisbane
Water Utility Rate Study 2022

COMMERCIAL WATER RATES		
FIXED CHARGES		
Meter Size		Bimonthly Charge
5/8"		$35.07
3/4"		$41.46
1"		$58.41
1-1/2"		$116.80
2"		$186.90
3"		$373.75
4"		$587.00
6"		$1,168.00
CONSUMPTION CHARGES		
Meter Size	Tier	Bimonthly Charge
5/8" & 3/4"	0 - 8 ccf	$5.20
	9 - 16 ccf	$8.69
	Over 16 ccf	$11.05
All Other Meter Sizes	0 - 8 ccf	$7.00
	9 - 16 ccf	$8.69
	Over 16 ccf	$11.05

Effective 10/15/2012
ccf = cubic feet. 1 ccf = 748 gallons

Table 3: Current Bi-Monthly Irrigation Water Rates
City of Brisbane
Water Utility Rate Study 2022

IRRIGATION WATER RATES		
FIXED CHARGES		
Meter Size		Bimonthly Charge
5/8"		$35.07
3/4"		$41.46
1"		$44.64
1-1/2"		$66.95
2"		$92.47
3"		$178.56
4"		$521.55
CONSUMPTION CHARGES		
Meter Size	Tier	Bimonthly Charge
All except for 4"	0 - 8 ccf	$5.18
	9 - 16 ccf	$11.35
	Over 16 ccf	$13.19
4" Meter	0 - 8 ccf	$8.49
	9 - 16 ccf	$11.35
	Over 16 ccf	$13.19

Effective 10/15/2012
ccf = cubic feet. 1 ccf = 748 gallons

2.2 Water System Overview

2.2.1 Water System

The City obtains all of its water from the San Francisco Public Utilities Commission (SFPUC) through five turnouts of the Crystal Springs Pipeline. Approximately 80% of the SFPUC's water supply is from the Hetch Hetchy Reservoir in Yosemite National Park, with the Alameda and Peninsula Watersheds supplying the remainder.

The City operates two separate water districts—the City of Brisbane Water District and the Guadalupe Valley Municipal Improvement District (GVMID). GVMID serves Crocker Industrial Park and the Northeast Ridge Development, while the City of Brisbane Water District serves the remainder of the City including Central Brisbane, Sierra Point, and the Baylands. The City Water Enterprise is interconnected with the GVMID Combined Enterprise, allowing for maximum circulation and flow within the system. The combined water distribution system includes 5 water storage tanks, 4 booster pump stations serving 7 pressure zones, more than 25 miles of underground pipeline, and over 700 valves.

2.2.2 Water Customers

The City of Brisbane provides water service to approximately 1,284 City water accounts and 754 GVMID water accounts as shown on Table 4. The majority of customers are single family residential customers with 5/8" meters.

Table 4: Number of Water Accounts by Meter Size & Customer Class for 2020
City of Brisbane
Water Utility Rate Study 2022

	5/8"	3/4"	1"	1-1/2"	2"	3"	4"	TOTAL	% of Total
CITY									
Single Family Residential	832	89	90	19	0	0	0	1,030	50.5%
Multi-Family Residential	79	7	12	7	6	1	1	113	5.5%
Commercial/Government	55	9	6	4	12	9	3	98	4.8%
Landscape	1	3	6	2	16	4	0	32	1.6%
Hydrant	0	0	0	0	0	11	0	11	0.5%
Total City	967	108	114	32	34	25	4	1,284	63.0%
GVMID									
Single Family Residential	351	26	50	77	0	0	0	504	24.7%
Multi-Family Residential	0	0	0	0	0	0	0	0	0.0%
Commercial/Government	90	19	21	31	21	6	0	188	9.2%
Landscape	1	3	7	24	25	0	0	60	2.9%
Hydrant	0	0	0	0	0	2	0	2	0.1%
Total GVMID	442	48	78	132	46	8	0	754	37.0%
Customer Class									
Single Family Residential	1,183	115	140	96	0	0	0	1,534	75.3%
Multi-Family Residential	79	7	12	7	6	1	1	113	5.5%
Commercial/Government	145	28	27	35	33	15	3	286	14.0%
Landscape	2	6	13	26	41	4	0	92	4.5%
Hydrant	0	0	0	0	0	13	0	13	0.6%
TOTAL WATER ACCOUNTS	**1,409**	**156**	**192**	**164**	**80**	**33**	**4**	**2,038**	100.0%

Source: Number of Accts & Total Water Use by Class 2018-2020

2.2.3 Water Consumption

Table 5 summarizes annual water consumption by customer class for the past 3 calendar years. In 2020, total consumption increased approximately 8.0%. In total, residential customers (single family and multi-family) account for roughly 36% of overall consumption. Commercial accounts represent approximately 35% of total use. Irrigation use accounts for 26% of total consumption, followed by hydrant use at nearly 3%.

Table 5: Annual Water Consumption
City of Brisbane
Water Utility Rate Study 2022

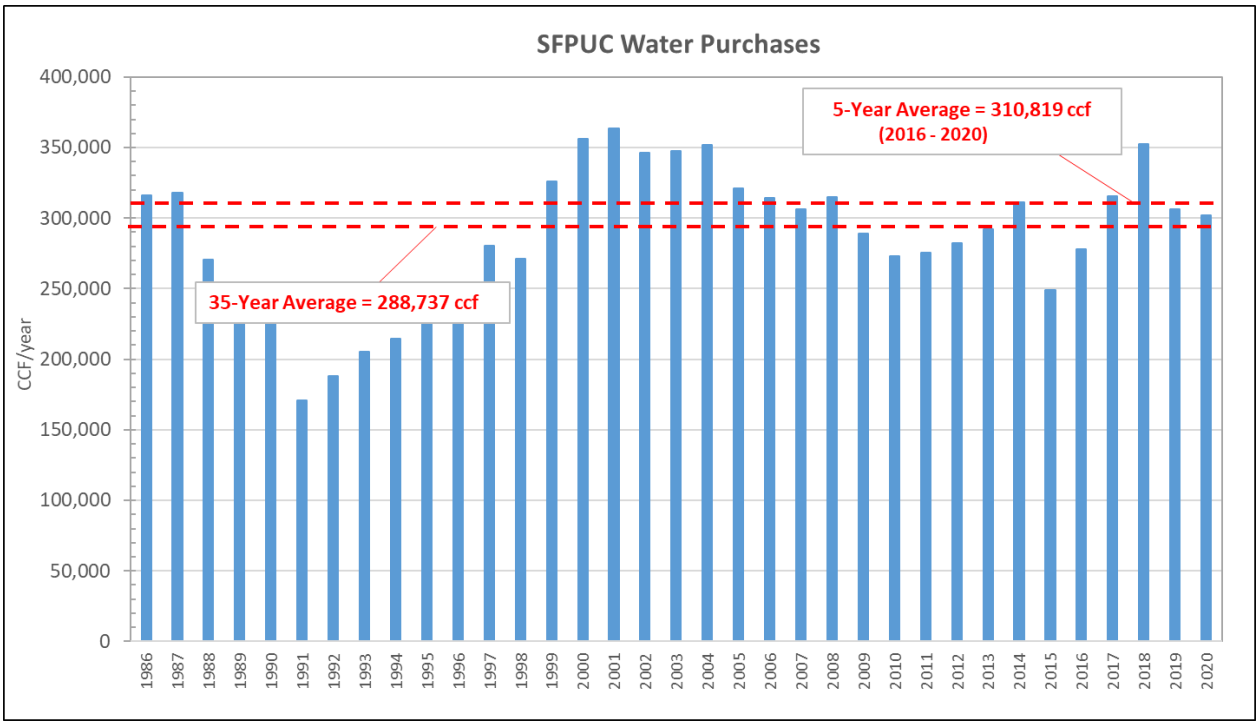
Calendar Year	2018	2019	2020	3-Year Average	% of Total
CITY					
Single Family Residential	56,169	55,666	61,134	57,656	20.4%
Multi-Family Residential	15,312	16,603	17,437	16,451	5.8%
Commercial/Government	33,983	32,443	28,959	31,795	11.2%
Landscape	37,177	31,786	39,283	36,082	12.7%
Hydrant	0	0	22,998	7,666	2.7%
Total City	142,641	136,498	169,811	149,650	52.9%
Percent Change		*-4%*	*24%*		
GVMID					
Single Family Residential	26,197	26,553	30,662	27,804	9.8%
Multi-Family Residential	0	0	0	0	0.0%
Commercial/Government	79,437	69,714	51,947	67,033	23.7%
Landscape	38,456	37,544	39,409	38,470	13.6%
Hydrant	0	0	184	61	0.0%
Total GVMID	144,090	133,811	122,202	133,368	47.1%
Percent Change		*-7.1%*	*-8.7%*		
TOTAL					
Single Family Residential	82,366	82,219	91,796	85,460	30.2%
Multi-Family Residential	15,312	16,603	17,437	16,451	5.8%
Commercial/Government	113,420	102,157	80,906	98,828	34.9%
Landscape	75,633	69,330	78,692	74,552	26.3%
Hydrant	0	0	23,182	7,727	2.7%
TOTAL WATER USE	**286,731**	**270,309**	**292,013**	**283,018**	**100.0%**
Percent Change		*-5.7%*	*8.0%*		

Source: Number of Accts & Total Water Use by Class 2018-2020

2.2.4 SFPUC Wholesale Water

This chart shows the City's historical SFPUC water purchases over the past 35 years by calendar year. The five-year average from 2016 through 2020 is 310,819 ccf.

Figure 2: Historical SFPUC Water Purchases
City of Brisbane
Water Utility Rate Study 2022



2.3 Water Financial Plan

2.3.1 Water Reserves

For accounting, the City's Utility Fund (Fund 540) combines water and sewer finances into one fund. As of July 1, 2021, the total fund balance for the Utility Fund (Fund 540) in "Cash and investments" was approximately $7.7 million. However, for the purposes of this study, the total reserves have been allocated between the water and sewer funds as shown on Table 6. Because the Sewer Utility is currently operating in a deficit, additional reserves have been assigned to the sewer utility to mitigate rate impacts. Cash reserves are not split evenly between the water and sewer funds. The allotted beginning fund balance for the water utility is $2.8 million.

Table 6: Utility Fund (Fund 540) Reserves
City of Brisbane
Water Utility Rate Study 2022

Fund	Beginning Balance as of June 30, 2021
Total Utility Fund (Fund 540) Reserves (1)	$7,656,890
Water Utility Reserves (2)	$2,828,445
Sewer Utility Reserves (2)	$4,828,445

1) Cash and investments (Unaudited Financials).
Source: Proprietry Funds, Statement of Net Position, June 30, 2020
2) Includes GVMID

Adequate fund reserves protect the City when faced with unforeseen financial challenges such as emergency expenses or revenue deficits. Fund reserves allow the City to maintain its financial health and positive credit ratings, especially during emergencies. Moreover, funding can be drawn from reserves to supplement rate revenues lost during drought conditions or other unexpected situations. It is acceptable if reserves dip below the target on a temporary basis, provided the City takes action to attain the target over the longer run.

The City currently has two water reserve fund targets:

- *Operating Reserve:* The fund balance target is equal to 35% of annual operating expenses per City policy. This is in line with industry standards that recommend an operating reserve target of at least 25% of annual expenses to account for the time (at least 4 months) that it would take an agency to approve new rate increases to comply with Proposition 218.

- *Drought Reserve:* The fund balance target is $700,000 which the City would draw on only if needed during times of severe drought. This reserve is funded by the Drought Contingency Surcharges.

2.3.2 Water Revenues

Table 7 shows a history of revenues for Utility Fund (Fund 540). The "Water Sales" revenues are evenly split between City Water and GVMID Water. "Sewer Service Charges" are evenly split between City Sewer and GVMID Sewer. The "GVMID Only" tax revenues are divided evenly between the three GVMID utilities (GVMID water, sewer, and storm drain). The GVMID storm drain revenues are not included in this study. All Other Revenues including "Investment Earnings," "Low Income Rate Assistance," and "Capital Charge" are divided evenly amongst the four utilities.

Table 7: Utility Fund (Fund 540) Budgeted Revenues
City of Brisbane
Water Utility Rate Study 2022

REVENUE CATEGORY		Actual 2018/19	Budgeted 2019/20	Budgeted 2020/21	Budgeted 2021/22
WATER ONLY (1)					
40801	Water Sales	$3,050,110	$2,950,000	$2,750,000	$3,000,000
40804	Meter Connection Fees	$68,663	$20,000	$20,000	$20,000
40805	Fire Service Charges	$118,952	$115,000	$115,000	$115,000
40806	Altamar Meter Reading Fee	$7,656	$7,500	$7,500	$7,500
	Drought Reserve Charge	$95,481	$120,000	$100,000	$100,000
	Total Water Only	**$3,340,862**	**$3,212,500**	**$2,992,500**	**$3,242,500**
SEWER ONLY (2)					
40820	Sewer Service Charges	$2,188,866	$2,200,000	$2,000,000	$2,000,000
40821	Sewer Connection Fees	$123,706	$3,000	$3,000	$3,000
	Total Sewer Only	**$2,312,572**	**$2,203,000**	**$2,003,000**	**$2,003,000**
GVMID ONLY (3)					
40101	Current Secured Tax	$27,358	$29,000	$29,000	$29,000
40102	Current Unsecured Tax	$1,513	$1,500	$1,500	$1,500
40103	Prior Year Tax	($1)	$0	$0	$0
40105	Supplemental Property Taxes	$1,048	$0	$0	$0
40108	Property Tax from RDA	$2,866	$100	$100	$100
40150	ERAF	$134	$100	$100	$100
	Total GVMID	**$32,918**	**$30,700**	**$30,700**	**$30,700**
ALL OTHER REVENUES (4)					
40501	Investment Earnings	$133,599	$50,000	$50,000	$50,000
40503	Unrealized-Gain/Loss	$96,152	$0	$0	$0
40609	H.O.P.T R	$121	$100	$100	$100
40770	Processing Fee	$5,472	$0	$0	$0
40802	Account Open/Reconnections	$2,987	$3,000	$3,000	$3,000
40803	Late Payment Charges	$8,117	$10,000	$10,000	$10,000
40810	Less: Low Income Rate Assistance	($42,336)	($50,000)	($75,000)	($75,000)
40825	Capital Charge	$378,443	$365,000	$365,000	$365,000
40941	Returned Check Fees	$75	$0	$0	$0
40959	Reimbursed Expenses - Current Year	$3,541	$0	$0	$0
40961	Transfers from Other Funds	$43,000	$50,000	$75,000	$75,000
	Total All Other Revenues	**$629,172**	**$428,100**	**$428,100**	**$428,100**
	TOTAL REVENUES	**$6,315,524**	**$5,874,300**	**$5,454,300**	**$5,704,300**

Source: Budget 2020_2022
1 - Divided by 2 between City Water & GVMID Water
2 - Divided by 2 between City Sewer & GVMID Sewer
3 - Divided by 3 between GVMID Water, Sewer, & Stormwater
4 - Divided by 4 between City Water, City Sewer, GVMID Water, & GVMID Sewer

Table 8 summarizes total revenues for the Water Utility. For 2021/22, Water Sales are estimated at $3 million with total water revenues projected at $3.4 million.

Table 8: Water Utility Revenues
City of Brisbane
Water Utility Rate Study 2022

	Actual	Budget		
	2018/19	2019/20	2020/21	2021/22
WATER REVENUES				
Water Sales	$3,050,110	$2,950,000	$2,750,000	$3,000,000
Other Water Only Revenues (1)	$195,271	$142,500	$142,500	$142,500
Drought Reserve Charge	$95,481	$120,000	$100,000	$100,000
All Other Revenues (2)	$314,586	$214,050	$214,050	$214,050
Total	$3,655,448	$3,426,550	$3,206,550	$3,456,550
Percent Change		*-6.3%*	*-6.4%*	*7.8%*

1 - Includes Meter Connection Fees, Fire Service Charges, and Altamar Meter Reading Fees

2 - All Other Revenues divided by 2 (Table 7)

2.3.3 Water Expenses

Table 9 summarizes the operating expenses for Water Utilities (Fund 1110). On average, operating expenses have increased by 7% over the past 4 years.

Table 9: Water Utilities (Fund 1110) Operating Expenses
City of Brisbane
Water Utility Rate Study 2022

Expense (1)	Actual 2018/19	Budgeted 2019/20	Budgeted 2020/21	Budgeted 2021/22	Avg Annual Increase
Salaries	$176,372	$270,136	$369,070	$383,832	
Percent Change	*12.9%*	*53.2%*	*36.6%*	*4.0%*	*21.5%*
Payroll Taxes	$2,642	$3,884	$5,308	$5,522	
Percent Change	*13.1%*	*47.0%*	*36.7%*	*4.0%*	*20.2%*
Benefits	$112,905	$180,750	$186,854	$217,088	
Percent Change	*28.0%*	*60.1%*	*3.4%*	*16.2%*	*17.8%*
Insurance	$26,657	$28,196	$45,594	$45,764	
Percent Change	*36.3%*	*5.8%*	*61.7%*	*0.4%*	*14.5%*
Supplies and Services	$1,092,293	$1,111,297	$1,247,416	$1,236,584	
Percent Change	*4.8%*	*1.7%*	*12.2%*	*-0.9%*	*3.2%*
Admin Charges and Credits	$300,162	$323,897	$322,357	$346,290	
Percent Change	*7.0%*	*7.9%*	*-0.5%*	*7.4%*	*3.6%*
TOTAL FUND 1110 OPERATING EXPENSES	**$1,711,033**	**$1,918,160**	**$2,176,599**	**$2,235,080**	
Percent Change	*7.7%*	*12.1%*	*13.5%*	*2.7%*	*6.9%*

Source: Budget 2020_2022

1 - Does not include depreciation

Table 10 summarizes the operating expenses for GVMID Utility (Fund 6120). On average, total GVMID operating expenses have increased by 7% over the past 4 years. Each expense category is divided by 3 to determine how much should be allocated to the Water Utility, Sewer Utility, and GVMID storm water. GVMID storm water expenses are not included in this study.

Table 10: GVMID Combined Utility (Fund 6120) Operating Expenses
City of Brisbane
Water Utility Rate Study 2022

Expense (1)	Actual 2018/19	Budgeted 2019/20	Budgeted 2020/21	Budgeted 2021/22	Avg Annual Increase	2021/22 Budget per Utility (2)
Salaries	$180,809	$179,236	$333,150	$345,879		$115,293
Percent Change	*-5.3%*	*-0.9%*	*85.9%*	*3.8%*	*17.6%*	
Payroll Taxes	$3,987	$2,306	$4,584	$4,769		$1,590
Percent Change	*39.2%*	*-42.2%*	*98.8%*	*4.0%*	*4.6%*	
Benefits	$98,172	$95,450	$153,452	$181,974		$60,658
Percent Change	*0.8%*	*-2.8%*	*60.8%*	*18.6%*	*16.7%*	
Insurance	$15,567	$16,406	$39,376	$39,521		$13,174
Percent Change	*-7.8%*	*5.4%*	*140.0%*	*0.4%*	*26.2%*	
Supplies and Services	$1,105,804	$1,166,543	$1,165,054	$1,291,240		$430,413
Percent Change	*41.8%*	*5.5%*	*-0.1%*	*10.8%*	*4.0%*	
Admin Charges and Credits	$303,900	$335,321	$341,554	$380,262		$126,754
Percent Change	*-2.0%*	*10.3%*	*1.9%*	*11.3%*	*5.8%*	
TOTAL GVMID UTILITY OPERATING EXPENSES	**$1,708,239**	**$1,795,263**	**$2,037,171**	**$2,243,645**		**$747,882**
Percent Change	*22.2%*	*5.1%*	*13.5%*	*10.1%*	*7.1%*	

Source: Budget 2020_2022

1 - Does not include expenses to "Operate a Storm Drain System" or Depreciation

2 - Budget divided by the 3 GVMID utilties (water, sewer, & storm water)

Table 11 combines the Water Utilities (Fund 1110) Operating Expenses from Table 9 with the GVMID Combined Utility (Fund 6120) Operating Expenses from Table 10 to calculate the total Water Utility expenses. As described above, only one third of the GVMID Combined Utility expenses are categorized as Water Utility expenses.

Table 11: Water Utility Combined Operating Expenses
City of Brisbane
Water Utility Rate Study 2022

Expense (1)	Actual 2018/19	Budget 2019/20	Budget 2020/21	Budget 2021/22
Salaries	$236,642	$329,881	$480,120	$499,125
Payroll Taxes	$3,971	$4,653	$6,836	$7,112
Benefits	$145,629	$212,567	$238,005	$277,746
Insurance	$31,846	$33,664	$58,719	$58,938
Supplies and Services	$1,460,895	$1,500,145	$1,635,767	$1,666,998
Admin Charges and Credits	$401,462	$435,670	$436,209	$473,044
TOTAL WATER OPERATING EXPENSES	**$2,280,446**	**$2,516,581**	**$2,855,656**	**$2,982,962**
Percent Change	*11.0%*	*10.4%*	*13.5%*	*4.5%*

Source: Budget 2020_2022

1 - Does not include Depreciation

Table 12 includes a projection of future water operating expenses over the next five years through 2027/28. Escalation factors were determined using City input. Supplies and Services, which includes water purchases, is projected to increase by 10.0% each year. Salaries and Benefits are projected to increase by 4.0% each year. Insurance is increased by 5.0% per year, and Admin Charges and Credits are escalated by 3.0% each year. Overall, water operating expenses are projected to increase by approximately 7 to 8% each year.

Table 12: Water Utility Projection of Future Operating Expenses
City of Brisbane
Water Utility Rate Study 2022

Expense (1)	Budget 2021/22	Escalation Factor	Projected 2022/23	Years 1 -5: Proposition 218 2023/24	2024/25	2025/26	2026/27	2027/28
Salaries	$499,125	4.0%	$519,000	$540,000	$562,000	$584,000	$607,000	$631,000
Payroll Taxes	$7,112	4.0%	$7,000	$7,000	$7,000	$7,000	$7,000	$7,000
Benefits	$277,746	4.0%	$289,000	$301,000	$313,000	$326,000	$339,000	$353,000
Insurance (2)	$58,938	5.0%	$65,000	$68,000	$71,000	$75,000	$79,000	$83,000
Supplies and Services	$1,666,998	10.0%	$1,932,000	$2,125,000	$2,338,000	$2,572,000	$2,829,000	$3,112,000
Admin Charges and Credits	$473,044	3.0%	$487,000	$502,000	$517,000	$533,000	$549,000	$565,000
TOTAL WATER OPERATING EXPENSES	**$2,982,962**		**$3,299,000**	**$3,543,000**	**$3,808,000**	**$4,097,000**	**$4,410,000**	**$4,751,000**
Percent Change	*4.5%*		*10.6%*	*7.4%*	*7.5%*	*7.6%*	*7.6%*	*7.7%*

Source: Budget 2020_2022

1 - Does not include Depreciation

2.3.4 Water Purchases

As shown on Table 13, wholesale water purchases are the largest expense for the Water Utility, accounting for nearly half of total operating expenses in 2022/23.

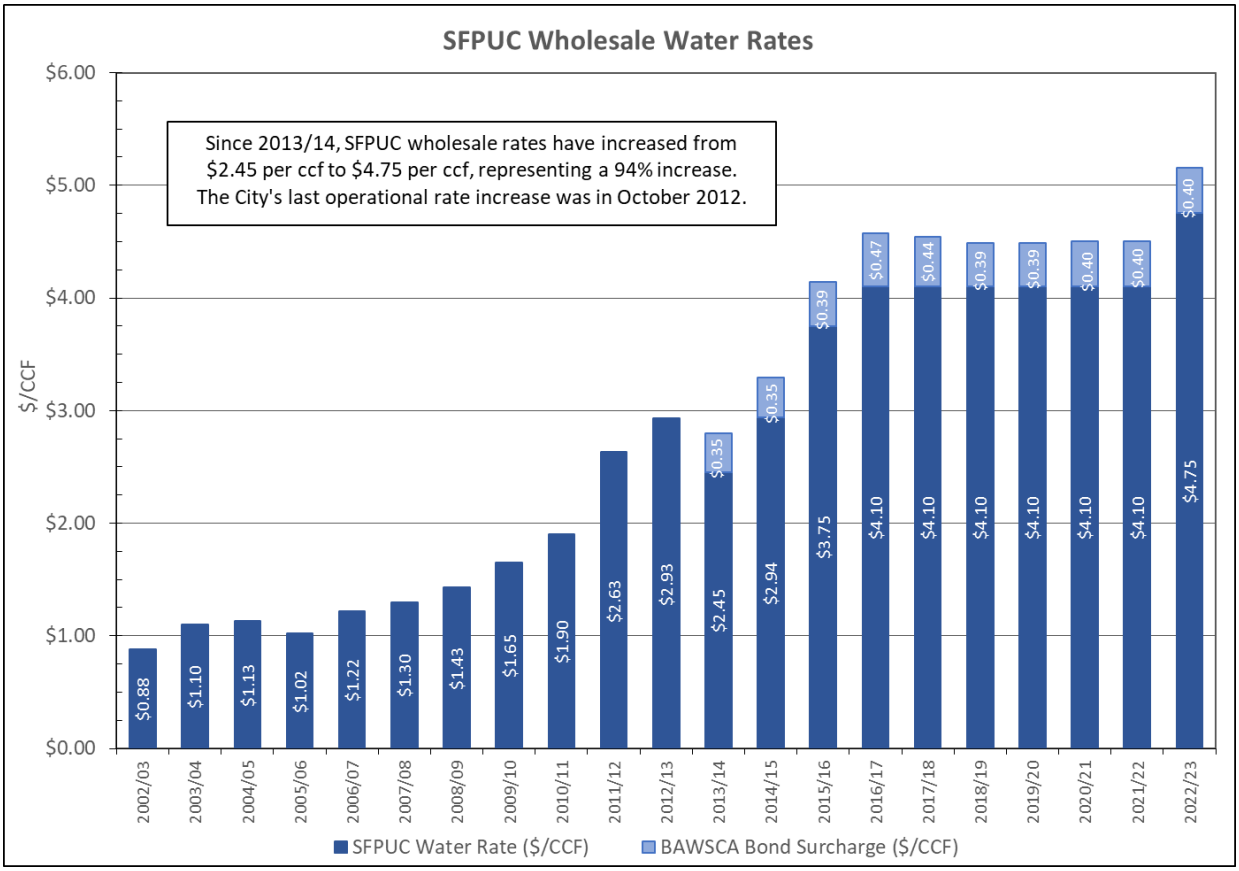
Table 13: SFPUC Water Purchase Costs
City of Brisbane
Water Utility Rate Study 2022

	Budget				Projected
	2018/19	2019/20	2020/21	2021/22	2022/23
Estimated SFPUC Rate ($ per ccf) (1)	$4.49	$4.49	$4.50	$4.50	$5.15
% Increase		*0.0%*	*0.2%*	*0.0%*	*14.5%*
Estimated Total Water Purchased (ccf)	352,347	306,221	302,003	302,003	311,063
% Increase		*-13.1%*	*-1.4%*	*0.0%*	*3.0%*
Total Water Purchases	$1,582,038	$1,374,932	$1,359,014	$1,359,014	$1,602,566
% Increase		*-13.1%*	*-1.2%*	*0.0%*	*17.9%*
Total Water Operating Expenses	$2,280,446	$2,516,581	$2,855,656	$2,982,962	$3,299,000
% Increase		*10.4%*	*13.5%*	*4.5%*	*10.6%*
% of Water Purchases / Total Operating Expenses	69.4%	54.6%	47.6%	45.6%	48.6%

1 - Includes both the water rate and BAWSCA Surcharge

In 2022/23, the SFPUC implemented a 16% increase for its water rates to $4.75 per ccf. The SFPUC is nearing its completion of the $4.8 billion Water System Improvement Project (WSIP) to upgrade the Hetch Hetchy Water System; however, the SFPUC is projecting significant increases to its operating costs over the next five years and rates are projected to continue to increase. Figure 3 shows historical SFPUC wholesale water rates.

Figure 3: Historical SFPUC Wholesale Water Rates
City of Brisbane
Water Utility Rate Study 2022



The chart above shows SFPUC's historical wholesale water rates since 2002/03. Since 2013/14, SFPUC wholesale rates have increased from $2.45 per ccf to $4.75 per ccf, representing a 94% increase. To be conservative, this study estimates that wholesale rates will increase by 10.0% each year during the rate study period. The chart shows the actual wholesale water rate as well as the separate BAWSCA bond surcharge.

In 2013, BAWSCA issued Revenue Bonds (Series 2013A and 2013B) to prepay the remaining capital cost recovery payments that the BAWSCA member agencies owed the SFPUC as of June 30, 2013. Beginning in 2013/14, BAWSCA began collecting a fixed bond surcharge from each member agency as a separate item on their monthly water bills from the SFPUC. The payments are used to make debt service payments on the revenue bonds, reimburse bond administration expenses, and, as necessary, replenish a stabilization fund set up to limit the volatility in annual changes in the payments.

The allocation of the bond surcharge among the BAWSCA member agencies in a given year is based on the prior year's actual water sales to each agency. The following year, a financial reconciliation is

performed where each agency's final payments are adjusted based on actual water sales during the prior year. The current BAWSCA bond surcharge is $0.40 per ccf.

2.3.5 Water Net Revenues

The water utility has been doing well for the past few years, fully covering costs while building reserves. For 2021/22, total net revenues are projected at approximately $155,245, as noted below in Table 14.

Table 14: Water Net Revenues
City of Brisbane
Water Utility Rate Study 2022

	Actual	Budget		
	2018/19	2019/20	2020/21	2021/22
WATER REVENUES				
Water Sales Revenues	$3,050,110	$2,950,000	$2,750,000	$3,000,000
Other Revenues	$605,338	$476,550	$456,550	$456,550
Total	$3,655,448	$3,426,550	$3,206,550	$3,456,550
WATER EXPENSES				
Operating	$2,280,446	$2,516,581	$2,855,656	$2,982,962
Debt Service	$312,156	$313,906	$315,156	$318,344
Subtotal	$2,592,602	$2,830,487	$3,170,812	$3,301,305
TOTAL NET REVENUES	**$1,062,846**	**$596,063**	**$35,738**	**$155,245**

2.3.6 Debt Service

The Water Utility currently has one outstanding debt obligation that is shared with the Sewer Utility – the 2015 Utility Revenue Bonds for $8.3 million. Total debt service for 2022/23 is $632,063, see Table 15. Debt service payments are split evenly between the Water Utility and Sewer Utility.

Table 15: 2015 Utility Revenue Bonds - Debt Service Schedule
City of Brisbane
Water Utility Rate Study 2022

Fiscal Year Ending June 30	Principal	Interest	Total Debt Service (1)
2016	$170,000	$247,103	$417,103
2017	$305,000	$327,763	$632,763
2018	$310,000	$318,513	$628,513
2019	$320,000	$304,313	$624,313
2020	$340,000	$287,813	$627,813
2021	$360,000	$270,313	$630,313
2022	$385,000	$251,688	$636,688
2023	$400,000	$232,063	$632,063
2024	$415,000	$211,688	$626,688
2025	$440,000	$190,313	$630,313
2026	$455,000	$167,938	$622,938
2027	$480,000	$149,363	$629,363
2028	$490,000	$134,813	$624,813
2029	$510,000	$119,175	$629,175
2030	$525,000	$102,356	$627,356
2031	$540,000	$84,713	$624,713
2032	$570,000	$65,625	$635,625
2033	$305,000	$50,313	$355,313
2034	$320,000	$39,175	$359,175
2035	$330,000	$23,063	$353,063
2036	$340,000	$6,375	$346,375
TOTALS	$8,310,000	$3,584,471	$11,894,471

(1) Debt service is allocated 50% to the Water Utility and 50% to the Sewer Utility.

Debt Service Coverage

A chief covenant for the City to secure State loans/grants or revenue bonds/Certificates of Participation (COPs) is to maintain a specific debt service coverage ratio. A debt service coverage ratio is a financial measure of an agency's ability to repay outstanding debt. For the 2015 Utility Revenue Bonds, the debt service coverage ratio means that annual water net revenues (gross revenues less operating and maintenance expenses) must be at least 1.25 times the combined annual debt service payments on all

parity obligations. Failure to meet the debt service coverage ratio on an annual basis is considered to be technical default, thereby making the revenue bonds/COPs callable or payable upon demand. Thus, rates and fees must be set to meet this legal requirement. Moreover, failing to meet debt service coverage may hinder the City's ability to qualify for future bond funding.

2.3.7 Water Cash Flow Objectives

With input from City Staff, L&T developed three water cash flow scenarios based on various rate increase options. The following three goals are indicators of the overall fiscal health of the Water Utility, and the proposed rate adjustments for the rate scenarios have been designed to meet these objectives.

1. Meet debt service coverage (1.25x)
    a. The debt service coverage ratio for the 2015 Utility Revenue Bonds is 1.25x.
    b. Ratio is calculated as Net Operating Revenue/Total Debt Service.
2. Meet Water Utility reserve targets
    a. Operating Reserve Target = 25.0% of annual operating costs
    b. Drought Reserve Target = $700,000
3. Maintain positive net operating revenues
    a. To ensure that the Water Utility is covering its cost of service
    b. To avoid an operating deficit and dipping into reserves

The three cash flow scenarios considered are:

- *Water Scenario #1: No Rate Increases*
    - This scenario demonstrates what would happen if the City did not raise the water rates. Without rate increases, the projections show that the Water Utility would not meet debt service coverage beginning in 2022/23. Additionally, the Water Utility would be operating in a deficit and would run down its reserves by the end of 2026/27.
- *Water Scenario #2: 8.0% Annual Rate Increases*
    - This scenario shows the impact to the Water Utility with 8.0% annual rate increases to cover operating cost inflation. With Scenario #2, the projections show that the Water Utility would not meet debt service coverage beginning in 2022/23. Additionally, the Water Utility would be operating in a deficit for the next 10 years.
- *Water Scenario #3: 9.0% Annual Rate Increases*
    - This scenario shows the impact to the Water Utility with annual 9.0% rate increases. With Scenario #3, the Water Utility would meet debt service coverage by 2024/25. The Water Utility would meet its reserve targets each year and would be maintaining positive net operating revenue by 2027/28.

2.3.8 Water Scenario #1: Water Cash Flow Projection with No Rate Increases

Table 16 forecasts the financial health of the water utility over the next 10 years if the City does not implement any rate increases. Using 2021/22 as the base year, the cash flow for *Scenario #1* shows that the Water Utility will miss debt service coverage (line 54) and will have negative net operating

revenues beginning in 2022/23 (line 43). Additionally, the Water Utility will run down its reserves by the end of 2026/27 (line 45).

The cash flow uses the 2021/22 budget as the base year and includes the following assumptions:

Revenues

- Total Water Sales revenues are estimated at $3.0 million based on the 2021/22 budget.
- Rate increases will go into effect on July 1 of each year, beginning in 2023 through 2027.
- Meter Connection Fees, Fire Service Charges, and Altamar Meter Reading Fee revenues are increased by the Overall Rate Adjustment percentage.
- Drought Charge remains in effect through 2026/27.
- The Capital Charge is increased by $85,000 beginning in December 2022 and then $170,000 in 2023/24. The total estimated increase in the Capital Charge is estimated at $700,000 and is split evenly with the Sewer Utility.
- The Capital Charge will be increased again in 2027/28.
- Interest is increased by 1.0% each year.
- All other revenues are increased by 3.0% each year.
- The Low Income Rate Assistance contribution from the General Fund remains at $75,000 per year and is divided evenly between water and sewer.
- Growth is estimated at 0.5% each year.
- Water consumption is based on 2020 usage and is projected to increase on average approximately 2.0% each year through 2027/28.

Expenses

- Expenses are increased based on the escalation factors from Table 12.
- The only current debt obligation is the 2015 Utility Revenue Bonds. Total debt service is approximately $625,000 per year and is split evenly with the Sewer Utility.
- Debt service coverage is estimated at 1.25x and is calculated by dividing Net Revenues by Total Debt Service.
- Assuming that the City will issue $5 million in debt to pay for capital projects in 2027/28, total debt service is projected at $300,000 and is split evenly with the Sewer Utility beginning in 2027/28.
- No capital project expenditures are included.
- Annual depreciation is not included.

Table 16: Water Scenario #1: No Rate Increases - Water Cash Flow Projection
City of Brisbane
Water Utility Rate Study 2022

	Budget	Projected	Years 1 -5: Proposition 218					Years 6 - 10: Extended Projection				
	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33
Overall Revenue Adjustment			0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Rate Increase Effective			Jul 1, 2023	Jul 1, 2024	Jul 1, 2025	Jul 1, 2026	Jul 1, 2027	Jul 1, 2028	Jul 1, 2029	Jul 1, 2030	Jul 1, 2031	Jul 1, 2032
BEGINNING FUND BALANCE	$2,828,445	$2,983,640	$2,643,640	$2,062,640	$1,214,640	$81,640	($1,368,360)	($2,903,860)	($4,813,360)	($7,125,860)	($9,878,360)	($13,118,860)
REVENUES												
Water Sales	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000
Meter Connection Fees	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000
Fire Service Charges	115,000	115,000	115,000	115,000	115,000	115,000	115,000	115,000	115,000	115,000	115,000	115,000
Altamar Meter Reading Fee	7,500	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000
Drought Reserve Charge	100,000	100,000	100,000	100,000	100,000	100,000	0	0	0	0	0	0
Capital Charge (1)	182,500	267,500	352,500	352,500	352,500	352,500	502,500	502,500	502,500	502,500	502,500	502,500
Investment Earnings	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000
Account Open/Reconnection Fees	1,500	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
Late Payment Charges	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000
Transfers from Other Funds	37,500	37,500	37,500	37,500	37,500	37,500	37,500	37,500	37,500	37,500	37,500	37,500
Less: Low Income Rate Assistance	(37,500)	(37,500)	(37,500)	(37,500)	(37,500)	(37,500)	(37,500)	(37,500)	(37,500)	(37,500)	(37,500)	(37,500)
Grant Revenue	0	0	0	0	0	0	0	0	0	0	0	0
Total Revenues	3,456,500	3,542,500	3,627,500	3,627,500	3,627,500	3,627,500	3,677,500	3,677,500	3,677,500	3,677,500	3,677,500	3,677,500
EXPENSES												
Operating & Maintenance												
Salaries	499,125	519,000	540,000	562,000	584,000	607,000	631,000	656,000	682,000	709,000	737,000	766,000
Payroll Taxes	7,112	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000
Benefits	277,746	289,000	301,000	313,000	326,000	339,000	353,000	367,000	382,000	397,000	413,000	430,000
Insurance	58,938	65,000	68,000	71,000	75,000	79,000	83,000	87,000	91,000	96,000	101,000	106,000
Supplies and Services	1,666,998	1,932,000	2,125,000	2,338,000	2,572,000	2,829,000	3,112,000	3,423,000	3,765,000	4,142,000	4,556,000	5,012,000
Admin Charges and Credit	473,044	487,000	502,000	517,000	533,000	549,000	565,000	582,000	599,000	617,000	636,000	655,000
Subtotal O&M	2,982,962	3,299,000	3,543,000	3,808,000	4,097,000	4,410,000	4,751,000	5,122,000	5,526,000	5,968,000	6,450,000	6,976,000
Net Operating Revenue	473,538	243,500	84,500	(180,500)	(469,500)	(782,500)	(1,073,500)	(1,444,500)	(1,848,500)	(2,290,500)	(2,772,500)	(3,298,500)
Debt Service												
2015 Utility Bonds (2)	318,344	316,000	313,000	315,000	311,000	315,000	312,000	315,000	314,000	312,000	318,000	159,000
New Bonds	0	0	0	0	0	0	150,000	150,000	150,000	150,000	150,000	150,000
Subtotal Debt Service	318,344	316,000	313,000	315,000	311,000	315,000	462,000	465,000	464,000	462,000	468,000	309,000
Capital Projects	0	267,500	352,500	352,500	352,500	352,500	0	0	0	0	0	0
Total Expenses	3,301,305	3,882,500	4,208,500	4,475,500	4,760,500	5,077,500	5,213,000	5,587,000	5,990,000	6,430,000	6,918,000	7,285,000
Total Net Revenues	155,195	(340,000)	(581,000)	(848,000)	(1,133,000)	(1,450,000)	(1,535,500)	(1,909,500)	(2,312,500)	(2,752,500)	(3,240,500)	(3,607,500)
ENDING FUND BALANCE	2,983,640	2,643,640	2,062,640	1,214,640	81,640	(1,368,360)	(2,903,860)	(4,813,360)	(7,125,860)	(9,878,360)	(13,118,860)	(16,726,360)
Reserve Funds												
Operating Reserve Target (25% of O&M)	745,700	824,800	885,800	952,000	1,024,300	1,102,500	1,187,800	1,280,500	1,381,500	1,492,000	1,612,500	1,744,000
Drought Reserve ($700,000)	447,499	547,499	647,499	747,499	847,499	947,499	947,499	947,499	947,499	947,499	947,499	947,499
Total Water Reserves	1,193,199	1,372,299	1,533,299	1,699,499	1,871,799	2,049,999	2,135,299	2,227,999	2,328,999	2,439,499	2,559,999	2,691,499
Target Met?	*yes*	*yes*	*yes*	*yes*	*no*	*no*	*no*	*no*	*no*	*no*	*no*	*no*
Debt Service Coverage - 1.25x (3)	1.49	0.77	0.27	-0.57	-1.51	-2.48	-2.32	-3.11	-3.98	-4.96	-5.92	-10.67
Target Met?	*yes*	*no*	*no*	*no*	*no*	*no*	*no*	*no*	*no*	*no*	*no*	*no*

1 - Assumes Capital Charge will increase every 5 years. First increase will go into effect on Dec 1, 2022. Second increase is anticipated in 2027/28 and assumes that the City will issue $5M in new debt (combined water & sewer

2 - Total debt service for New Bonds is estimated at $300,000 and is split evenly with the Sewer Utility.

3 - (Net Operating Revenue less Projected Grant Revenue) divided by (Total Debt Service)

2.3.9 Water Scenario #2: Water Cash Flow Projection with 8.0% Annual Rate Increases

Water Scenario #2 includes the same assumptions for the Revenues and Expenses as Table 16 but includes annual rate increases of 8.0% each year to cover operating cost inflation. With *Scenario #2*, the projections show that the Water Utility would not meet debt service coverage beginning in 2022/23 (line 54). Additionally, the Water Utility would be operating in a deficit for the next 10 years (line 43).

Table 17: Scenario #2: 8% Annual Rate Increases - Water Cash Flow Projection
City of Brisbane
Water Utility Rate Study 2022

		Budget	Projected	Years 1 -5: Proposition 218					Years 6 - 10: Extended Projection				
		2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33
1	Overall Revenue Adjustment			8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%
2	Rate Increase Effective			Jul 1, 2023	Jul 1, 2024	Jul 1, 2025	Jul 1, 2026	Jul 1, 2027	Jul 1, 2028	Jul 1, 2029	Jul 1, 2030	Jul 1, 2031	Jul 1, 2032
3													
4													
5	**BEGINNING FUND BALANCE**	$2,828,445	$2,983,640	$2,643,640	$2,314,640	$1,990,640	$1,675,640	$1,360,640	$1,302,140	$1,239,640	$1,174,140	$1,099,640	$1,002,140
6													
7	**REVENUES**												
8	Water Sales	3,000,000	3,000,000	3,240,000	3,499,000	3,779,000	4,081,000	4,407,000	4,760,000	5,141,000	5,552,000	5,996,000	6,476,000
9	Meter Connection Fees	20,000	20,000	22,000	24,000	26,000	28,000	30,000	32,000	35,000	38,000	41,000	44,000
10	Fire Service Charges	115,000	115,000	124,000	134,000	145,000	157,000	170,000	184,000	199,000	215,000	232,000	251,000
11	Altamar Meter Reading Fee	7,500	8,000	9,000	10,000	11,000	12,000	13,000	14,000	15,000	16,000	17,000	18,000
12	Drought Reserve Charge	100,000	100,000	100,000	100,000	100,000	100,000	0	0	0	0	0	0
13	Capital Charge (1)	182,500	267,500	352,500	352,500	352,500	352,500	502,500	502,500	502,500	502,500	502,500	502,500
14	Investment Earnings	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000
15	Account Open/Reconnection Fees	1,500	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
16	Late Payment Charges	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000
17	Transfers from Other Funds	37,500	37,500	37,500	37,500	37,500	37,500	37,500	37,500	37,500	37,500	37,500	37,500
18	Less: Low Income Rate Assistance	(37,500)	(37,500)	(37,500)	(37,500)	(37,500)	(37,500)	(37,500)	(37,500)	(37,500)	(37,500)	(37,500)	(37,500)
19	Grant Revenue	0	0	0	0	0	0	0	0	0	0	0	0
20	**Total Revenues**	3,456,500	3,542,500	3,879,500	4,151,500	4,445,500	4,762,500	5,154,500	5,524,500	5,924,500	6,355,500	6,820,500	7,323,500
21													
22	**EXPENSES**												
23	*Operating & Maintenance*												
24	Salaries	499,125	519,000	540,000	562,000	584,000	607,000	631,000	656,000	682,000	709,000	737,000	766,000
25	Payroll Taxes	7,112	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000
26	Benefits	277,746	289,000	301,000	313,000	326,000	339,000	353,000	367,000	382,000	397,000	413,000	430,000
27	Insurance	58,938	65,000	68,000	71,000	75,000	79,000	83,000	87,000	91,000	96,000	101,000	106,000
28	Supplies and Services	1,666,998	1,932,000	2,125,000	2,338,000	2,572,000	2,829,000	3,112,000	3,423,000	3,765,000	4,142,000	4,556,000	5,012,000
29	Admin Charges and Credit	473,044	487,000	502,000	517,000	533,000	549,000	565,000	582,000	599,000	617,000	636,000	655,000
30	Subtotal O&M	2,982,962	3,299,000	3,543,000	3,808,000	4,097,000	4,410,000	4,751,000	5,122,000	5,526,000	5,968,000	6,450,000	6,976,000
31													
32	Net Operating Revenue	473,538	243,500	336,500	343,500	348,500	352,500	403,500	402,500	398,500	387,500	370,500	347,500
33													
34	**Debt Service**												
35	2015 Utility Bonds (2)	318,344	316,000	313,000	315,000	311,000	315,000	312,000	315,000	314,000	312,000	318,000	159,000
36	New Bonds	0	0	0	0	0	0	150,000	150,000	150,000	150,000	150,000	150,000
37	Subtotal Debt Service	318,344	316,000	313,000	315,000	311,000	315,000	462,000	465,000	464,000	462,000	468,000	309,000
38													
39	**Capital Projects**	0	267,500	352,500	352,500	352,500	352,500	0	0	0	0	0	0
40													
41	**Total Expenses**	3,301,305	3,882,500	4,208,500	4,475,500	4,760,500	5,077,500	5,213,000	5,587,000	5,990,000	6,430,000	6,918,000	7,285,000
42													
43	**Total Net Revenues**	155,195	(340,000)	(329,000)	(324,000)	(315,000)	(315,000)	(58,500)	(62,500)	(65,500)	(74,500)	(97,500)	38,500
44													
45	**ENDING FUND BALANCE**	2,983,640	2,643,640	2,314,640	1,990,640	1,675,640	1,360,640	1,302,140	1,239,640	1,174,140	1,099,640	1,002,140	1,040,640
46													
47													
48	*Reserve Funds*												
49	Operating Reserve Target (25% of O&M)	745,700	824,800	885,800	952,000	1,024,300	1,102,500	1,187,800	1,280,500	1,381,500	1,492,000	1,612,500	1,744,000
50	Drought Reserve ($700,000)	447,499	547,499	647,499	747,499	847,499	947,499	947,499	947,499	947,499	947,499	947,499	947,499
51	Total Water Reserves	1,193,199	1,372,299	1,533,299	1,699,499	1,871,799	2,049,999	2,135,299	2,227,999	2,328,999	2,439,499	2,559,999	2,691,499
52	*Target Met?*	*yes*	*yes*	*yes*	*yes*	*yes*	*yes*	*yes*	*no*	*no*	*no*	*no*	*no*
53													
54	Debt Service Coverage - 1.25x (3)	1.49	0.77	1.08	1.09	1.12	1.12	0.87	0.87	0.86	0.84	0.79	1.12
55	*Target Met?*	*yes*	*no*	*no*	*no*	*no*	*no*	*no*	*no*	*no*	*no*	*no*	*no*
56													

1 - Assumes Capital Charge will increase every 5 years. First increase will go into effect on Dec 1, 2022. Second increase is anticipated in 2027/28 and assumes that the City will issue $5M in new debt (combined water & sewer
2 - Total debt service for New Bonds is estimated at $300,000 and is split evenly with the Sewer Utility.
3 - (Net Operating Revenue less Projected Grant Revenue) divided by (Total Debt Service)

2.3.10 Water Scenario #3: Water Cash Flow Projection with 9.0% Annual Rate Increases

Water Scenario #3 includes the same assumptions for the Revenues and Expenses as Table 16 but includes rate increases of 9.0% per year to meet the three financial goals. With *Scenario #3*, the projections show that the Water Utility would meet debt service coverage beginning in 2023/24 (line 54). Additionally, the Water Utility will meet its reserve fund targets (line 45) and maintain positive net revenues for the next 10 years (line 43).

Table 18: Scenario #3: 9% Annual Rate Increases - Water Cash Flow Projection
City of Brisbane
Water Utility Rate Study 2022

		Budget	Projected	Years 1 -5: Proposition 218					Years 6 - 10: Extended Projection				
		2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33
1	Overall Revenue Adjustment			9.0%	9.0%	9.0%	9.0%	9.0%	8.0%	8.0%	8.0%	8.0%	8.0%
2	Rate Increase Effective			Jul 1, 2023	Jul 1, 2024	Jul 1, 2025	Jul 1, 2026	Jul 1, 2027	Jul 1, 2028	Jul 1, 2029	Jul 1, 2030	Jul 1, 2031	Jul 1, 2032
3													
4													
5	**BEGINNING FUND BALANCE**	$2,828,445	$2,983,640	$2,643,640	$2,345,640	$2,088,640	$1,882,640	$1,725,640	$1,882,140	$2,050,640	$2,234,140	$2,428,640	$2,622,140
6													
7	**REVENUES**												
8	Water Sales	3,000,000	3,000,000	3,270,000	3,564,000	3,885,000	4,235,000	4,616,000	4,985,000	5,384,000	5,815,000	6,280,000	6,782,000
9	Meter Connection Fees	20,000	20,000	22,000	24,000	26,000	28,000	31,000	33,000	36,000	39,000	42,000	45,000
10	Fire Service Charges	115,000	115,000	125,000	136,000	148,000	161,000	175,000	189,000	204,000	220,000	238,000	257,000
11	Altamar Meter Reading Fee	7,500	8,000	9,000	10,000	11,000	12,000	13,000	14,000	15,000	16,000	17,000	18,000
12	Drought Reserve Charge	100,000	100,000	100,000	100,000	100,000	100,000	0	0	0	0	0	0
13	Capital Charge (1)	182,500	267,500	352,500	352,500	352,500	352,500	502,500	502,500	502,500	502,500	502,500	502,500
14	Investment Earnings	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000
15	Account Open/Reconnection Fees	1,500	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
16	Late Payment Charges	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000
17	Transfers from Other Funds	37,500	37,500	37,500	37,500	37,500	37,500	37,500	37,500	37,500	37,500	37,500	37,500
18	Less: Low Income Rate Assistance	(37,500)	(37,500)	(37,500)	(37,500)	(37,500)	(37,500)	(37,500)	(37,500)	(37,500)	(37,500)	(37,500)	(37,500)
19	Grant Revenue	0	0	0	0	0	0	0	0	0	0	0	0
20	**Total Revenues**	3,456,500	3,542,500	3,910,500	4,218,500	4,554,500	4,920,500	5,369,500	5,755,500	6,173,500	6,624,500	7,111,500	7,636,500
21													
22	**EXPENSES**												
23	*Operating & Maintenance*												
24	Salaries	499,125	519,000	540,000	562,000	584,000	607,000	631,000	656,000	682,000	709,000	737,000	766,000
25	Payroll Taxes	7,112	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000
26	Benefits	277,746	289,000	301,000	313,000	326,000	339,000	353,000	367,000	382,000	397,000	413,000	430,000
27	Insurance	58,938	65,000	68,000	71,000	75,000	79,000	83,000	87,000	91,000	96,000	101,000	106,000
28	Supplies and Services	1,666,998	1,932,000	2,125,000	2,338,000	2,572,000	2,829,000	3,112,000	3,423,000	3,765,000	4,142,000	4,556,000	5,012,000
29	Admin Charges and Credit	473,044	487,000	502,000	517,000	533,000	549,000	565,000	582,000	599,000	617,000	636,000	655,000
30	Subtotal O&M	2,982,962	3,299,000	3,543,000	3,808,000	4,097,000	4,410,000	4,751,000	5,122,000	5,526,000	5,968,000	6,450,000	6,976,000
31													
32	Net Operating Revenue	473,538	243,500	367,500	410,500	457,500	510,500	618,500	633,500	647,500	656,500	661,500	660,500
33													
34	**Debt Service**												
35	2015 Utility Bonds (2)	318,344	316,000	313,000	315,000	311,000	315,000	312,000	315,000	314,000	312,000	318,000	159,000
36	New Bonds	0	0	0	0	0	0	150,000	150,000	150,000	150,000	150,000	150,000
37	Subtotal Debt Service	318,344	316,000	313,000	315,000	311,000	315,000	462,000	465,000	464,000	462,000	468,000	309,000
38													
39	**Capital Projects**	0	267,500	352,500	352,500	352,500	352,500	0	0	0	0	0	0
40													
41	**Total Expenses**	3,301,305	3,882,500	4,208,500	4,475,500	4,760,500	5,077,500	5,213,000	5,587,000	5,990,000	6,430,000	6,918,000	7,285,000
42													
43	**Total Net Revenues**	155,195	(340,000)	(298,000)	(257,000)	(206,000)	(157,000)	156,500	168,500	183,500	194,500	193,500	351,500
44													
45	**ENDING FUND BALANCE**	2,983,640	2,643,640	2,345,640	2,088,640	1,882,640	1,725,640	1,882,140	2,050,640	2,234,140	2,428,640	2,622,140	2,973,640
46													
47													
48	*Reserve Funds*												
49	Operating Reserve Target (25% of O&M)	745,700	824,800	885,800	952,000	1,024,300	1,102,500	1,187,800	1,280,500	1,381,500	1,492,000	1,612,500	1,744,000
50	Drought Reserve ($700,000)	447,499	547,499	647,499	747,499	847,499	947,499	947,499	947,499	947,499	947,499	947,499	947,499
51	Total Water Reserves	1,193,199	1,372,299	1,533,299	1,699,499	1,871,799	2,049,999	2,135,299	2,227,999	2,328,999	2,439,499	2,559,999	2,691,499
52	*Target Met?*	*yes*	*yes*	*yes*	*yes*	*yes*	*yes*	*yes*	*yes*	*yes*	*yes*	*yes*	*yes*
53													
54	Debt Service Coverage - 1.25x (3)	1.49	0.77	1.17	1.30	1.47	1.62	1.34	1.36	1.40	1.42	1.41	2.14
55	*Target Met?*	*yes*	*no*	*no*	*yes*	*yes*	*yes*	*yes*	*yes*	*yes*	*yes*	*yes*	*yes*
56													

1 - Assumes Capital Charge will increase every 5 years. First increase will go into effect on Dec 1, 2022. Second increase is anticipated in 2027/28 and assumes that the City will issue $5M in new debt (combined water & sewer
2 - Total debt service for New Bonds is estimated at $300,000 and is split evenly with the Sewer Utility.
3 - (Net Operating Revenue less Projected Grant Revenue) divided by (Total Debt Service)

2.3.11 Water Scenario Comparison

Table 19 includes a summary of the proposed rate adjustments and the three financial goals for all three scenarios. Based on the proposed rate adjustments, only *Water Scenario #3: 9.0% Annual Rate Increases* meets the three financial objectives by the end of the rate study period.

Table 19: Water Scenario Comparison
City of Brisbane
Water Utility Rate Study 2022

GOAL 1 : MEET DEBT SERVICE COVERAGE

	Budget	Projected	Proposed				
	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28
Debt Service Coverage Ratio Required	1.25	1.25	1.25	1.25	1.25	1.25	1.25
Scenario 1: No Rate Increases	1.49	0.77	0.27	(0.57)	(1.51)	(2.48)	(2.32)
Target Met?	yes	no	no	no	no	no	no
Scenario 2: 8% Annual Rate Increases	1.49	0.77	1.08	1.09	1.12	1.12	0.87
Target Met?	yes	no	no	no	no	no	no
Scenario 3: 9% Annual Rate Increases	1.49	0.77	1.17	1.30	1.47	1.62	1.34
Target Met?	yes	no	no	yes	yes	yes	yes

GOAL 2: MEET RESERVE FUND TARGETS

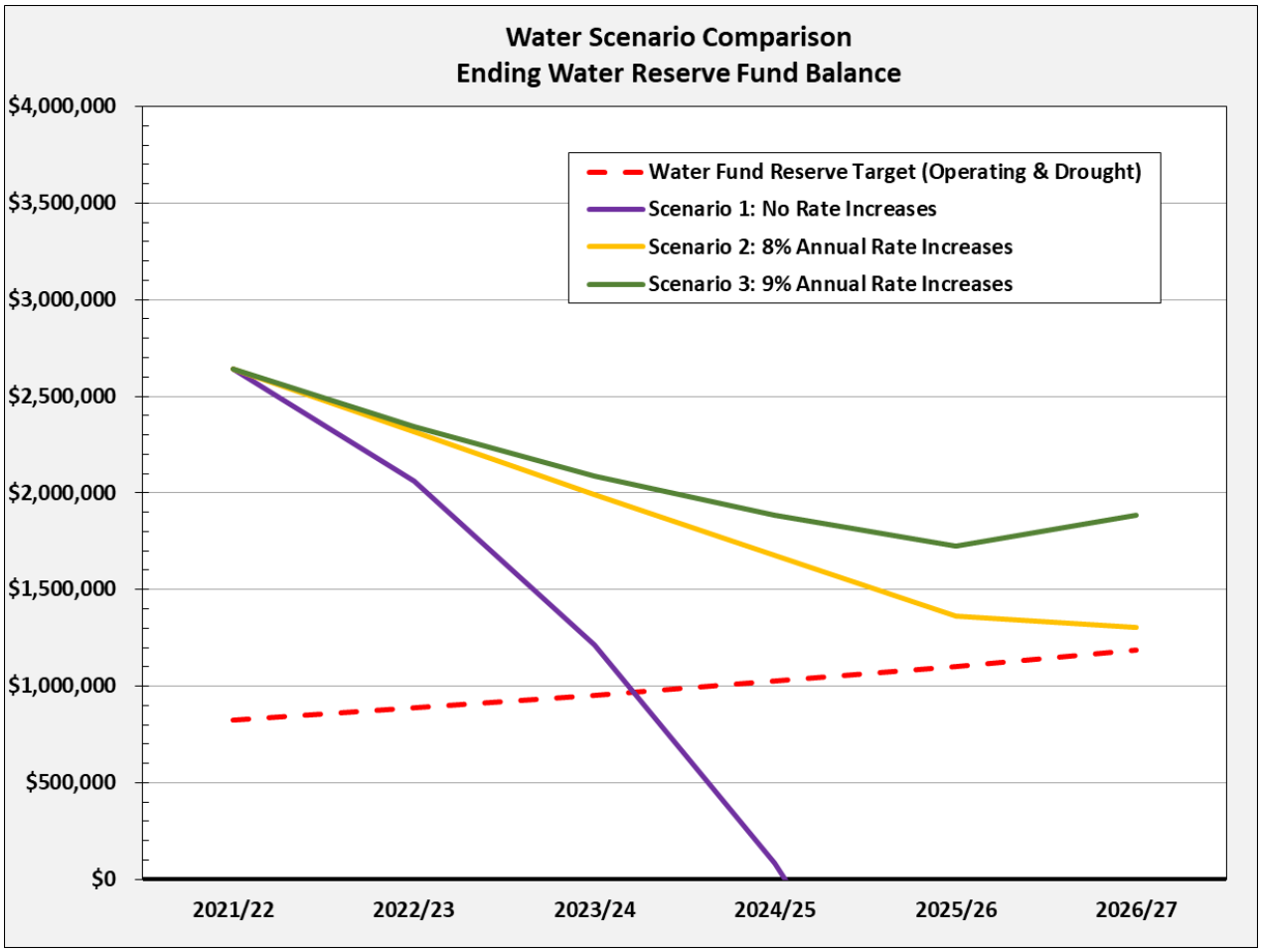
	Budget	Projected	Proposed				
	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28
Water Fund Reserve Target (Operating & Drought)	$824,800	$885,800	$952,000	$1,024,300	$1,102,500	$1,187,800	$1,280,500
Scenario 1: No Rate Increases	$2,643,640	$2,062,640	$1,214,640	$81,640	($1,368,360)	($2,903,860)	($4,813,360)
Target Met?	yes	yes	yes	no	no	no	no
Scenario 2: 8% Annual Rate Increases	$2,643,640	$2,314,640	$1,990,640	$1,675,640	$1,360,640	$1,302,140	$1,239,640
Target Met?	yes	yes	yes	yes	yes	yes	no
Scenario 3: 9% Annual Rate Increases	$2,643,640	$2,345,640	$2,088,640	$1,882,640	$1,725,640	$1,882,140	$2,050,640
Target Met?	yes	yes	yes	yes	yes	yes	yes

GOAL 3: POSITIVE TOTAL NET REVENUES

	Budget	Projected	Proposed				
	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28
Scenario 1: No Rate Increases	$155,195	($340,000)	($581,000)	($848,000)	($1,133,000)	($1,450,000)	($1,535,500)
Target Met?	yes	no	no	no	no	no	no
Scenario 2: 8% Annual Rate Increases	$155,195	($340,000)	($329,000)	($324,000)	($315,000)	($315,000)	($58,500)
Target Met?	yes	no	no	no	no	no	no
Scenario 3: 9% Annual Rate Increases	$155,195	($340,000)	($298,000)	($257,000)	($206,000)	($157,000)	$156,500
Target Met?	yes	no	no	no	no	no	yes

Figure 4 graphically shows the projected total ending reserve fund balance under each scenario. The red dotted line represents the total reserve fund target. The purple line represents *Water Scenario #1: No Rate Increases.* The yellow line represents *Water Scenario #2: 8.0% Annual Rate Increases.* The green line represents *Water Scenario #3: 9.0% Annual Rate Increases*. It is projected that the Water Fund will meets its reserve fund targets through 2026/27 in each scenario except for *Water Scenario #1*.

Figure 4: Water Scenario Comparison - Ending Water Fund Reserve Fund Balance
City of Brisbane
Water Utility Rate Study 2022



2.4 Water Cost Allocation

The water revenue requirement detailed in the previous section determines the amount of revenue to be recovered from water rates. The cost of service allocation determines how revenues will be recovered from customers based on how they use the water system. Proposition 218 requires that agencies providing "property-related services" (including water utility service) set rates and charges that are based on the cost of providing those services and are proportional to how customers use the system.

2.4.1 Overview of Water Cost of Service Methodology

The purpose of the cost allocation is to classify costs and to determine the amount of revenue that will be recovered from fixed rates and from consumption charges. The American Water Works Association (AWWA) recommends methods to classify costs among various customers. Using the Base-Extra Capacity Method as recommended by the AWWA, water operating expenses are allocated to the following categories: (a) *Base*, (b) *Extra*, (c) *Meters and Services*, and (d) *Customer Service*. The *Base* and *Extra* categories are intended to recover variable (consumption) costs, while the *Customer Service* and *Meters and Services* categories are intended to recover fixed expenses that are incurred regardless of water used.

- *Base:* Base costs include the expenses related to providing water under average, "base" demand conditions.
- *Extra:* The extra category includes costs related to providing water above the system average demand (ie. related to peak, "extra" usage).
- *Meters and Services:* These include costs related to maintaining and replacing water meters.
- C*ustomer Service:* This category contains costs associated with serving customers, such as billing and answering customer inquiries.

2.4.2 Cost Allocation

Table 20 provides the proposed cost allocation for the water utility based on input from City staff. Fiscal year 2022/23 is used as the test year for the cost allocation. Costs are allocated according to how they are incurred by the City. Based on Table 20, 15.5% of costs will be recovered from the Fixed Charges while the remaining 84.5% will be recovered from the Consumption Charges, which is in line with the current split (15.0% from Fixed Charges / 85.0% from Consumption Charges).

Table 20: Water Cost Allocation
City of Brisbane
Water Utility Rate Study 2022

Operating Expense	2022/23 Budget	FIXED CHARGES		CONSUMPTION CHARGES		Total	Notes
		Meters & Services	Customer Service	Base	Extra		
Salaries	$519,000	10%	10%	25%	55%	100%	Staff Estimate
Payroll Taxes	$7,000	10%	10%	25%	55%	100%	Staff Estimate
Benefits	$289,000	10%	10%	25%	55%	100%	Staff Estimate
Insurance (2)	$65,000	10%	10%	25%	55%	100%	Staff Estimate
Supplies and Services	$1,932,000	2%	2%	25%	71%	100%	Peaking
Admin Charges and Credits	$487,000	25%	25%	25%	25%	100%	Even
Debt Service	$316,000	10%	10%	25%	55%	100%	Staff Estimate
Total Water Operating Expenses	$3,615,000	$280,000	$280,000	$903,800	$2,151,300	$3,615,100	
Total Allocation %		**7.8%**	**7.8%**	**25.0%**	**59.5%**	**100.0%**	

2.5 Water Rate Design Considerations

Following the allocation of costs, the next step is to derive the total cost responsibility for each customer class by developing unit costs of service for each cost function and then assigning those costs to the customer classes based on the respective service requirements of each.

2.5.1 Rate Structure Modifications

The proposed modifications to the existing water rate structure are as follows:

- **Fixed Charges**
  - All customer classes will be charged the same Fixed Charges which will vary by meter size.
    - L&T recommends developing a single fixed rate structure based on meter size that applies to all customer classes. Additionally, we propose to use the AWWA meter capacity ratios to calculate rates for the larger meter sizes. The re-alignment will amend the fixed charges so that each meter size will be charged based on their proportional impact on the system.

  - All customers will receive 1 unit of water with the Fixed Charges.
    - Currently, only customers with a 5/8" meter receive 1 unit of water with the Fixed Charges. To comply with Proposition 218, L&T recommends that the City extend the 1 ccf water allotment to all customers.

- **Consumption Charges**
  - All Customers --> Transition to a two-tiered rate structure
    - Proposed Bimonthly Tiers:
      - Tier 1: 1- 20 ccf
      - Tier 2: Over 20 ccf
    - To comply with Proposition 218, each water rate tier breakpoint (i.e. the consumption used in each tier) and the price of each tier must be individually cost-justified. Higher use must be directly tied to specific costs such as imported water, higher electricity costs associated with peak pumping, increased maintenance, and/or conservation programs. Tiers can no longer be assigned to customers solely based on conservation objectives. For example, public agencies may not arbitrarily raise the price of higher use tiers in order to offer a discount to lower water users.
    - Based on input from the Infrastructure, Utilities, & Franchise Subcommittee, the first tier will be set at 20 ccf per two-month billing period. The current average bimonthly use for residential customers is 10 ccf.

2.5.2 Projected Customer Growth & Water Consumption

Table 21 estimates water consumption by customer class for the next 5 years using 2019/20 usage data as a baseline. The table also shows the estimated reduction in billed consumption with the proposed 1 ccf allotment for all customers. The estimated billed consumption is used to determine the unit costs for water consumption charges. For 2022/23, total consumption is projected at 289,715 ccf. However, 11,602 ccf will be unbilled as the proposed Fixed Charge will include 1 ccf of water for all customers. Therefore, the total amount of billed water is 278,113 ccf.

Table 21: Projected Water Consumption with 1 Unit Allotment
City of Brisbane
Water Utility Rate Study 2022

	CURRENT	PROJECTED			PROJECTED - RATE STUDY PERIOD				
	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28
Residential									
Annual Increase %		*0.0%*	*0.0%*	*1.0%*	*1.0%*	*1.0%*	*1.0%*	*1.0%*	*1.0%*
Annual Consumption (ccf)	109,065	109,065	109,065	110,156	111,257	112,370	113,493	114,628	115,775
Less 1 ccf Allotment	9,655	9,655	9,655	9,752	9,849	9,948	10,047	10,148	10,249
Total Consumption for Consumption Charges	99,410	99,410	99,410	100,404	101,408	102,422	103,446	104,481	105,526
Commercial									
Annual Increase %		*0.0%*	*0.0%*	*3.0%*	*3.0%*	*3.0%*	*3.0%*	*3.0%*	*3.0%*
Annual Consumption (ccf)	95,700	95,700	95,700	98,571	101,528	104,574	107,711	110,943	114,271
Less 1 ccf Allotment	1,400	1,400	1,400	1,442	1,485	1,530	1,576	1,623	1,672
Total Consumption for Consumption Charges	94,300	94,300	94,300	97,129	100,043	103,044	106,135	109,320	112,599
Irrigation									
Annual Increase %		*0.0%*	*0.0%*	*2.0%*	*2.0%*	*2.0%*	*2.0%*	*2.0%*	*2.0%*
Annual Consumption (ccf)	79,400	79,400	79,400	80,988	82,608	84,260	85,945	87,664	89,417
Less 1 ccf Allotment	400	400	400	408	416	424	433	442	450
Total Consumption for Consumption Charges	79,000	79,000	79,000	80,580	82,192	83,835	85,512	87,222	88,967
Total Consumption									
Total Consumption	284,165	284,165	284,165	289,715	295,393	301,204	307,150	313,235	319,463
Less 1 ccf Allotment	11,455	11,455	11,455	11,602	11,750	11,902	12,056	12,212	12,371
TOTAL CONSUMPTION (CCF) FOR CONSUMPTION CHARGES	**272,710**	**272,710**	**272,710**	**278,113**	**283,643**	**289,302**	**295,094**	**301,023**	**307,092**

1 - The May 25, 2021 memo prepared by Jerry Flanagan shows projected SFPUC water purchases in 2025 to be 435,800 ccf/year, representing s a 44.3% increase from the 2020 total water purchases of 302,003 ccf. His projections assume that Biotech Developments in Sierra Point will be built out by 2025 and does not include the UPC parcel at Sierra Point nor the future Baylands Development.

Table 22 shows a projection of water meters, meter equivalents, and consumption for the rate study period. The number of meter equivalents is based on the total number of meters (Table 4) and the ratio of each meter size to that of the 5/8" meter. The amount of consumption that will be billed under the consumption charges is taken from Table 21 and is divided between Tier 1 and Tier 2 based on the City's bimonthly billing data history. The number of customers is estimated to increase at 0.5% each year. Residential consumption is conservatively estimated to increase 1.0% each year. Commercial consumption is estimated to increase by 3.0% each year. Irrigation consumption is increased each year by 2.0%.

Table 22: Projected Customer Growth & Water Consumption
City of Brisbane
Water Utility Rate Study 2022

	CURRENT	PROJECTED			PROJECTED - RATE STUDY PERIOD				
	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28
NUMBER OF METERS									
Growth Increase %		0.00%	0.00%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%
Total Water Meters	2,038	2,038	2,038	2,048	2,058	2,069	2,079	2,089	2,090
Total Meter Equivalents	3,259	3,259	3,259	3,275	3,292	3,308	3,325	3,341	3,358
WATER CONSUMPTION									
Residential									
Annual Increase %		*0.0%*	*0.0%*	*1.0%*	*1.0%*	*1.0%*	*1.0%*	*1.0%*	*1.0%*
Consumption									
Tier 1: 1 - 20 ccf	86,634	86,634	86,634	87,501	88,376	89,259	90,152	91,054	91,964
Tier 2: Over 20 ccf	12,776	12,776	12,776	12,903	13,032	13,163	13,294	13,427	13,562
Subtotal Residential	99,410	99,410	99,410	100,404	101,408	102,422	103,446	104,481	105,526
Commercial									
Annual Increase %		*0.0%*	*0.0%*	*3.0%*	*3.0%*	*3.0%*	*3.0%*	*3.0%*	*3.0%*
Consumption (1)									
Tier 1: 1 - 20 ccf	26,948	26,948	26,948	27,757	28,590	29,447	30,331	31,241	32,178
Tier 2: Over 20 ccf	67,352	67,352	67,352	69,372	71,453	73,597	75,805	78,079	80,421
Subtotal Commercial	94,300	94,300	94,300	97,129	100,043	103,044	106,135	109,320	112,599
Irrigation									
Annual Increase %		*0.0%*	*0.0%*	*2.0%*	*2.0%*	*2.0%*	*2.0%*	*2.0%*	*2.0%*
Consumption									
Tier 1: 1 - 20 ccf	12,344	12,344	12,344	12,591	12,843	13,100	13,362	13,629	13,902
Tier 2: Over 20 ccf	66,656	66,656	66,656	67,989	69,349	70,736	72,150	73,593	75,065
Subtotal Irrigation	79,000	79,000	79,000	80,580	82,192	83,835	85,512	87,222	88,967
Total Consumption									
Annual Increase %		*0.0%*	*0.0%*	*2.0%*	*2.0%*	*2.0%*	*2.0%*	*2.0%*	*2.0%*
Consumption									
Tier 1: 1 - 20 ccf	125,927	125,927	125,927	127,849	129,808	131,807	133,845	135,923	138,044
Tier 2: Over 20 ccf	146,783	146,783	146,783	150,264	153,834	157,495	161,249	165,099	169,048
Total Consumption	272,710	272,710	272,710	278,113	283,643	289,302	295,094	301,023	307,092

1 - The May 25, 2021 memo prepared by Jerry Flanagan shows projected SFPUC water purchases in 2025 to be 435,800 ccf/year, representing s a 44.3% increase from the 2020 total water purchases of 302,003 ccf. His projections assume that Biotech Developments in Sierra Point will be built out by 2025 and does not include the UPC parcel at Sierra Point nor the future Baylands Development

2.6 Water Rate Design for Water Scenario #3

2.6.1 Current Water Rate Revenues - Fixed vs. Consumption Revenue Recovery

Table 23 summarizes the percentage of service charge revenues derived from the Fixed Charges versus the Consumption Charges. On average, the City collects roughly 15.0%% of revenues from the Fixed Charges and 85.0% from the Consumption Charge. Based on input from staff, the City would like to maintain the current 15% fixed / 85% variable revenue recovery because the largest expense for the Water Utility is wholesale water purchases from SFPUC.

Table 23: Current Water Sales - Fixed vs. Variable Water Service Revenue
City of Brisbane
Water Utility Rate Study 2022

	Fixed Charges	Consumption Charges	Total Water Sales Revenues
Total Revenues City vs. GVMID			
City	$283,555	$1,351,795	$1,635,350
GVMID	$198,935	$1,410,981	$1,609,916
Total Water Sales Revenues	$482,490	$2,762,776	$3,245,267
% of Total	*14.9%*	*85.1%*	*100.0%*
Total Revenues by Customer Class			
Residential	$261,029	$735,794	$996,824
Commercial	$179,813	$1,010,745	$1,190,557
Irrigation	$41,648	$1,016,237	$1,057,886
Total Water Sales Revenues	$482,490	$2,762,776	$3,245,267
% of Total	*14.9%*	*85.1%*	*100.0%*

Source: Utility Billing Data 2018-202 Water & sewer Export

2.6.2 Water Scenario #3: Annual Revenue Requirement Allocation

Table 24 shows the annual revenue requirement for *Scenario #3: 9.0% Annual Rate Increases* for the rate study period based on the cost allocation percentages from Table 20 and the total water rate revenue requirements for each year from the cash flow projection (Table 18). The fixed charge revenue requirement is based on the *Meters and Services* and *Customer Service* categories from the cost allocation. The consumption charge revenue requirement is based on the *base* and *extra* categories.

Table 24: Annual Revenue Requirement Allocation
City of Brisbane
Water Utility Rate Study 2022

	Cost Allocation %	PROJECTED - RATE STUDY PERIOD				
		2023/24	2024/25	2025/26	2026/27	2027/28
Total Revenue Requirement (1)		$3,270,000	$3,564,000	$3,885,000	$4,235,000	$4,616,000
FIXED CHARGES						
Meters & Services	7.8%	$253,425	$276,210	$301,088	$328,213	$357,740
Customer Service Charge	7.8%	$253,425	$276,210	$301,088	$328,213	$357,740
Total Fixed Charges	15.5%	$506,850	$552,420	$602,175	$656,425	$715,480
CONSUMPTION CHARGES						
Base	25.0%	$817,500	$891,000	$971,250	$1,058,750	$1,154,000
Extra	59.5%	$1,945,977	$2,120,936	$2,311,964	$2,520,249	$2,746,982
Total Consumption Charges	84.5%	$2,763,477	$3,011,936	$3,283,214	$3,578,999	$3,900,982
TOTAL	100.0%	$3,270,327	$3,564,356	$3,885,389	$4,235,424	$4,616,462

1 - From Cash Flow (Table 18, line 5)

2.6.3 Water Scenario #3: Water Fixed Charge Derivation

The rate derivation for the Fixed Charges is shown on Table 25. The total revenue requirement for *Meter and Services* are divided by the *Total Number of Meter Equivalents*. *Customer Service* costs are divided amongst the *Total Number of Meters*. These two categories are then combined into a single bimonthly Fixed Charge that increases based on meter size.

For 2023/24, the proposed meter equivalent charge $12.83 is multiplied by the corresponding meter equivalent ratio to calculate a charge for each meter size. The customer service charge of $20.52 is added to the meter equivalent charge to derive a total fixed meter charge. The proposed total bimonthly Fixed Charge for a 5/8" or 3/4" meter is $33.35 for 2023/24.

Table 25: Water Fixed Charge Derivation
City of Brisbane
Water Utility Rate Study 2022

		PROJECTED - RATE STUDY PERIOD				
		2023/24	2024/25	2025/26	2026/27	2027/28
REVENUE REQUIREMENT						
Meters & Services		$253,425	$276,210	$301,088	$328,213	$357,740
Customer Service Charge		$253,425	$276,210	$301,088	$328,213	$357,740
Total Fixed Charge Revenue Requirement		$506,850	$552,420	$602,175	$656,425	$715,480
METER EQUIVALENT CHARGE						
Total Meter Equivalent Charge Revenue Requirement		$253,425	$276,210	$301,088	$328,213	$357,740
Total Number of Meter Equivalents		3,292	3,308	3,325	3,341	3,358
Total Meter Equivalent Charge		$12.83	$13.92	$15.09	$16.37	$17.76
Meter Equivalent Charge by Meter Size						
Meter Size	Meter Ratio					
5/8"	1.00	$12.83	$13.92	$15.09	$16.37	$17.76
3/4"	1.00	$12.83	$13.92	$15.09	$16.37	$17.76
1"	1.67	$21.38	$23.20	$25.15	$27.28	$29.60
1-1/2"	3.33	$42.77	$46.40	$50.30	$54.57	$59.20
2"	5.33	$68.43	$74.24	$80.48	$87.31	$94.72
3"	10.67	$136.85	$148.48	$160.96	$174.61	$189.44
4"	16.67	$213.83	$232.00	$251.50	$272.83	$296.00
6"	33.33	$427.67	$464.00	$503.00	$545.67	$592.00
CUSTOMER SERVICE CHARGE						
Total Customer Service Charge Revenue Requirement		$253,425	$276,210	$301,088	$328,213	$357,740
Total Number of Meters		2,058	2,069	2,079	2,089	2,090
Total Customer Service Charge per Account		$20.52	$22.25	$24.14	$26.18	$28.52
TOTAL BIMONTHLY FIXED CHARGE (1)						
Meter Size						
5/8"		$33.35	$36.17	$39.23	$42.55	$46.28
3/4"		$33.35	$36.17	$39.23	$42.55	$46.28
1"		$41.90	$45.45	$49.29	$53.46	$58.12
1-1/2"		$63.29	$68.65	$74.44	$80.75	$87.72
2"		$88.95	$96.49	$104.62	$113.49	$123.24
3"		$157.37	$170.73	$185.10	$200.79	$217.96
4"		$234.35	$254.25	$275.64	$299.01	$324.52
6"		$448.19	$486.25	$527.14	$571.85	$620.52

1 - Total Bimonthly Fixed Charge is the sum of the "Meter Equivalent Charge" by meter size plus the "Total Customer Service Charge per Account"

2.6.4 Water Scenario #3: Consumption Charge Derivation

Consumption charges are calculated based on the revenue requirements derived in Table 24 and the projected total consumption per tier calculated in Table 22. The revenue requirement for each year is divided by the projected consumption to derive a per unit cost, see Table 26. The *Base* revenue requirement is used for Tier 1 and the *Extra* revenue requirement is used for Tier 2. For 2023/24, the proposed rates are $6.30 per ccf for Tier 1 and $12.65 per ccf for Tier 2.

Table 26: Consumption Charge Rate Derivation
City of Brisbane
Water Utility Rate Study 2022

	PROJECTED - RATE STUDY PERIOD				
	2023/24	**2024/25**	**2025/26**	**2026/27**	**2027/28**
REVENUE REQUIREMENT					
Base Charge Revenue Requirement	$817,500	$891,000	$971,250	$1,058,750	$1,154,000
Extra Charge Revenue Requirement	$1,945,977	$2,120,936	$2,311,964	$2,520,249	$2,746,982
Total Consumption Charge Revenue Requirement	$2,763,477	$3,011,936	$3,283,214	$3,578,999	$3,900,982
CONSUMPTION CHARGE DERIVATION					
All Customers					
Tier 1 Revenue Requirement	$817,500	$891,000	$971,250	$1,058,750	$1,154,000
Tier 1: 1-20 ccf Consumption (ccf)	129,808	131,807	133,845	135,923	138,044
Tier 1 Rate per ccf	**$6.30**	**$6.76**	**$7.26**	**$7.79**	**$8.36**
Tier 2 Revenue Requirement	$1,945,977	$2,120,936	$2,311,964	$2,520,249	$2,746,982
Tier 2: Over 20 ccf Consumption (ccf)	153,834	157,495	161,249	165,099	169,048
Tier 2 Rate per ccf	**$12.65**	**$13.47**	**$14.34**	**$15.27**	**$16.25**

2.6.5 Water Scenario #3: Proposed 5-Year Schedule of Rates

Table 27 summarizes the proposed bimonthly water rates. All customers including residential, commercial, and irrigation customers are proposed to be charged according to the proposed rate schedule shown. The first rate change is proposed to take effect on July 1, 2023, with subsequent rate increases each July 1 through 2027.

Table 27: Proposed Bimonthly Water Rates
City of Brisbane
Water Utility Rate Study 2022

	RATE STUDY PERIOD				
	July 1, 2023	**July 1, 2024**	**July 1, 2025**	**July 1, 2026**	**July 1, 2027**
FIXED CHARGES					
Meter Size					
5/8"	$33.35	$36.17	$39.23	$42.55	$46.28
3/4"	$33.35	$36.17	$39.23	$42.55	$46.28
1"	$41.90	$45.45	$49.29	$53.46	$58.12
1-1/2"	$63.29	$68.65	$74.44	$80.75	$87.72
2"	$88.95	$96.49	$104.62	$113.49	$123.24
3"	$157.37	$170.73	$185.10	$200.79	$217.96
4"	$234.35	$254.25	$275.64	$299.01	$324.52
6"	$448.19	$486.25	$527.14	$571.85	$620.52
CONSUMPTION CHARGES (per ccf) (1)					
All Customers (Usage over 1 ccf)					
Tier 1: 1- 20 ccf	$6.30	$6.76	$7.26	$7.79	$8.36
Tier 2: Over 20 ccf	$12.65	$13.47	$14.34	$15.27	$16.25

1 - 1 ccf (hundred cubic feet) = 748 gallons

2.6.6 Scenario #3: Water Bill Impacts

For FY 2023/24, the proposed 9.0% revenue adjustment in the cash flow does not directly correlate to a 9.0% increase in rates due to the cost of service reallocation and the updated rate structure. Because of the reallocation, the bill impacts to customers for the first year will vary based on customer class, meter size, and actual consumption. Moreover, water consumption, particularly for single family customers, typically varies due to seasonal variations in weather and/or other factors. Hence, a single customer could face a range of impacts throughout the year. Table 28 includes a sample of bill impacts for residential, commercial, and irrigation customers at different levels of water use.

Table 28: Sample Bimonthly Water Bill Impacts
City of Brisbane
Water Utility Rate Study 2022

RESIDENTIAL BILL IMPACTS - 5/8" METER

	Bimonthly	Current	Proposed				
	Use (ccf)	Bill	July 1, 2023	July 1, 2024	July 1, 2025	July 1, 2026	July 1, 2027
Residential: 5/8" meter, 1 ccf							
Fixed Meter Charge - 5/8""		$22.67	$33.35	$36.17	$39.23	$42.55	$46.28
Consumption Charge							
Tier 1: 0 - 1 ccf	1	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Tier 2: 2 - 3 ccf	0	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Tier 3: 3 ccf	0	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Tier 4: 4 - 8 ccf	0	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Tier 5: 9 - 16 ccf	0	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Tier 6: Over 16 ccf	0	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Subtotal Consumption Charge	1	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Total Bimonthly Water Bill		$22.67	$33.35	$36.17	$39.23	$42.55	$46.28
$ Change			*$10.68*	*$2.82*	*$3.06*	*$3.32*	*$3.73*
% Change			*47.1%*	*8.5%*	*8.5%*	*8.5%*	*8.8%*
Residential: 5/8" meter, 4 ccf							
Fixed Meter Charge - 5/8""		$22.67	$33.35	$36.17	$39.23	$42.55	$46.28
Consumption Charge							
Tier 1: 0 - 1 ccf	1	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Tier 2: 2 - 3 ccf	1	$2.17	$6.30	$6.76	$7.26	$7.79	$8.36
Tier 3: 3 ccf	1	$5.63	$6.30	$6.76	$7.26	$7.79	$8.36
Tier 4: 4 - 8 ccf	1	$7.00	$6.30	$6.76	$7.26	$7.79	$8.36
Tier 5: 9 - 16 ccf	0	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Tier 6: Over 16 ccf	0	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Subtotal Consumption Charge	4	$14.80	$18.89	$20.28	$21.77	$23.37	$25.08
Total Bimonthly Water Bill		$37.47	$52.24	$56.45	$61.00	$65.92	$71.36
$ Change			*$14.77*	*$4.21*	*$4.55*	*$4.92*	*$5.44*
% Change			*39.4%*	*8.1%*	*8.1%*	*8.1%*	*8.3%*

	Bimonthly	Current	Proposed				
	Use (ccf)	Bill	July 1, 2023	July 1, 2024	July 1, 2025	July 1, 2026	July 1, 2027
Residential: 5/8" meter, 10 ccf							
Fixed Meter Charge - 5/8""		$22.67	$33.35	$36.17	$39.23	$42.55	$46.28
Consumption Charge							
Tier 1: 0 - 1 ccf	1	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Tier 2: 2 - 3 ccf	1	$2.17	$6.30	$6.76	$7.26	$7.79	$8.36
Tier 3: 3 ccf	1	$5.63	$6.30	$6.76	$7.26	$7.79	$8.36
Tier 4: 4 - 8 ccf	5	$35.00	$31.49	$33.80	$36.28	$38.95	$41.80
Tier 5: 9 - 16 ccf	2	$17.38	$12.60	$13.52	$14.51	$15.58	$16.72
Tier 6: Over 16 ccf	0	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Subtotal Consumption Charge	10	$60.18	$56.68	$60.84	$65.31	$70.10	$75.24
Total Bimonthly Water Bill		$82.85	$90.03	$97.01	$104.54	$112.65	$121.52
$ Change			*$7.18*	*$6.98*	*$7.53*	*$8.11*	*$8.86*
% Change			*8.7%*	*7.8%*	*7.8%*	*7.8%*	*7.9%*
Residential: 5/8" meter, 20 ccf							
Fixed Meter Charge - 5/8""		$22.67	$33.35	$36.17	$39.23	$42.55	$46.28
Consumption Charge							
Tier 1: 0 - 1 ccf	1	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Tier 2: 2 - 3 ccf	1	$2.17	$6.30	$6.76	$7.26	$7.79	$8.36
Tier 3: 3 ccf	1	$5.63	$6.30	$6.76	$7.26	$7.79	$8.36
Tier 4: 4 - 8 ccf	5	$35.00	$31.49	$33.80	$36.28	$38.95	$41.80
Tier 5: 9 - 16 ccf	8	$69.52	$50.38	$54.08	$58.05	$62.31	$66.88
Tier 6: Over 16 ccf	4	$44.20	$25.19	$27.04	$29.03	$31.16	$33.44
Subtotal Consumption Charge	20	$156.52	$119.66	$128.44	$137.87	$148.00	$158.83
Total Bimonthly Water Bill		$179.19	$153.01	$164.61	$177.10	$190.55	$205.11
$ Change			*($26.18)*	*$11.60*	*$12.50*	*$13.44*	*$14.57*
% Change			*-14.6%*	*7.6%*	*7.6%*	*7.6%*	*7.6%*
Residential: 5/8" meter, 40 ccf							
Fixed Meter Charge - 5/8""		$22.67	$33.35	$36.17	$39.23	$42.55	$46.28
Consumption Charge							
Tier 1: 0 - 1 ccf	1	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Tier 2: 2 - 3 ccf	1	$2.17	$6.30	$6.76	$7.26	$7.79	$8.36
Tier 3: 3 ccf	1	$5.63	$6.30	$6.76	$7.26	$7.79	$8.36
Tier 4: 4 - 8 ccf	5	$35.00	$31.49	$33.80	$36.28	$38.95	$41.80
Tier 5: 9 - 16 ccf	8	$69.52	$50.38	$54.08	$58.05	$62.31	$66.88
Tier 6: Over 16 ccf	24	$265.20	$278.19	$296.37	$315.78	$336.46	$358.43
Subtotal Consumption Charge	40	$377.52	$372.65	$397.77	$424.63	$453.30	$483.83
Total Bimonthly Water Bill		$400.19	$406.00	$433.94	$463.86	$495.85	$530.11
$ Change			*$5.81*	*$27.94*	*$29.92*	*$31.99*	*$34.26*
% Change			*1.5%*	*6.9%*	*6.9%*	*6.9%*	*6.9%*

RESIDENTIAL BILL IMPACTS - 3/4" METER

	Bimonthly Use (ccf)	Current Bill	Proposed				
			July 1, 2023	July 1, 2024	July 1, 2025	July 1, 2026	July 1, 2027
Residential: 3/4" meter, 1 ccf							
Fixed Meter Charge – 3/4"		$22.67	$33.35	$36.17	$39.23	$42.55	$46.28
Consumption Charge							
Tier 1: 0 - 3 ccf	1	$5.19	$0.00	$0.00	$0.00	$0.00	$0.00
Tier 2: 4 - 8 ccf	0	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Tier 3: 9 - 16 ccf	0	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Tier 4: Over 16 ccf	0	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Subtotal Consumption Charge	1	$5.19	$0.00	$0.00	$0.00	$0.00	$0.00
Total Bimonthly Water Bill		$27.86	$33.35	$36.17	$39.23	$42.55	$46.28
$ Change			*$5.49*	*$2.82*	*$3.06*	*$3.32*	*$3.73*
% Change			*19.7%*	*8.5%*	*8.5%*	*8.5%*	*8.8%*
Residential: 3/4" meter, 4 ccf							
Fixed Meter Charge – 3/4"		$22.67	$33.35	$36.17	$39.23	$42.55	$46.28
Consumption Charge							
Tier 1: 0 - 3 ccf	3	$15.57	$12.60	$13.52	$14.51	$15.58	$16.72
Tier 2: 4 - 8 ccf	1	$7.00	$6.30	$6.76	$7.26	$7.79	$8.36
Tier 3: 9 - 16 ccf	0	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Tier 4: Over 16 ccf	0	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Subtotal Consumption Charge	4	$22.57	$18.89	$20.28	$21.77	$23.37	$25.08
Total Bimonthly Water Bill		$45.24	$52.24	$56.45	$61.00	$65.92	$71.36
$ Change			*$7.00*	*$4.21*	*$4.55*	*$4.92*	*$5.44*
% Change			*15.5%*	*8.1%*	*8.1%*	*8.1%*	*8.3%*
Residential: 3/4" meter, 10 ccf							
Fixed Meter Charge – 3/4"		$22.67	$33.35	$36.17	$39.23	$42.55	$46.28
Consumption Charge							
Tier 1: 0 - 3 ccf	3	$15.57	$12.60	$13.52	$14.51	$15.58	$16.72
Tier 2: 4 - 8 ccf	5	$35.00	$31.49	$33.80	$36.28	$38.95	$41.80
Tier 3: 9 - 16 ccf	2	$17.38	$12.60	$13.52	$14.51	$15.58	$16.72
Tier 4: Over 16 ccf	0	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Subtotal Consumption Charge	10	$67.95	$56.68	$60.84	$65.31	$70.10	$75.24
Total Bimonthly Water Bill		$90.62	$90.03	$97.01	$104.54	$112.65	$121.52
$ Change			*($0.59)*	*$6.98*	*$7.53*	*$8.11*	*$8.86*
% Change			*-0.7%*	*7.8%*	*7.8%*	*7.8%*	*7.9%*

	Bimonthly Use (ccf)	Current Bill	Proposed July 1, 2023	July 1, 2024	July 1, 2025	July 1, 2026	July 1, 2027
Residential: 3/4" meter, 20 ccf							
Fixed Meter Charge – 3/4"		$22.67	$33.35	$36.17	$39.23	$42.55	$46.28
Consumption Charge							
Tier 1: 0 - 3 ccf	3	$15.57	$12.60	$13.52	$14.51	$15.58	$16.72
Tier 2: 4 - 8 ccf	5	$35.00	$31.49	$33.80	$36.28	$38.95	$41.80
Tier 3: 9 - 16 ccf	8	$69.52	$50.38	$54.08	$58.05	$62.31	$66.88
Tier 4: Over 16 ccf	4	$44.20	$25.19	$27.04	$29.03	$31.16	$33.44
Subtotal Consumption Charge	20	$164.29	$119.66	$128.44	$137.87	$148.00	$158.83
Total Bimonthly Water Bill		$186.96	$153.01	$164.61	$177.10	$190.55	$205.11
$ Change			*($33.95)*	*$11.60*	*$12.50*	*$13.44*	*$14.57*
% Change			*-18.2%*	*7.6%*	*7.6%*	*7.6%*	*7.6%*
Residential: 3/4" meter, 40 ccf							
Fixed Meter Charge – 3/4"		$22.67	$33.35	$36.17	$39.23	$42.55	$46.28
Consumption Charge							
Tier 1: 0 - 3 ccf	3	$15.57	$12.60	$13.52	$14.51	$15.58	$16.72
Tier 2: 4 - 8 ccf	5	$35.00	$31.49	$33.80	$36.28	$38.95	$41.80
Tier 3: 9 - 16 ccf	8	$69.52	$50.38	$54.08	$58.05	$62.31	$66.88
Tier 4: Over 16 ccf	24	$265.20	$278.19	$296.37	$315.78	$336.46	$358.43
Subtotal Consumption Charge	40	$385.29	$372.65	$397.77	$424.63	$453.30	$483.83
Total Bimonthly Water Bill		$407.96	$406.00	$433.94	$463.86	$495.85	$530.11
$ Change			*($1.96)*	*$27.94*	*$29.92*	*$31.99*	*$34.26*
% Change			*-0.5%*	*6.9%*	*6.9%*	*6.9%*	*6.9%*

COMMERCIAL BILL IMPACTS

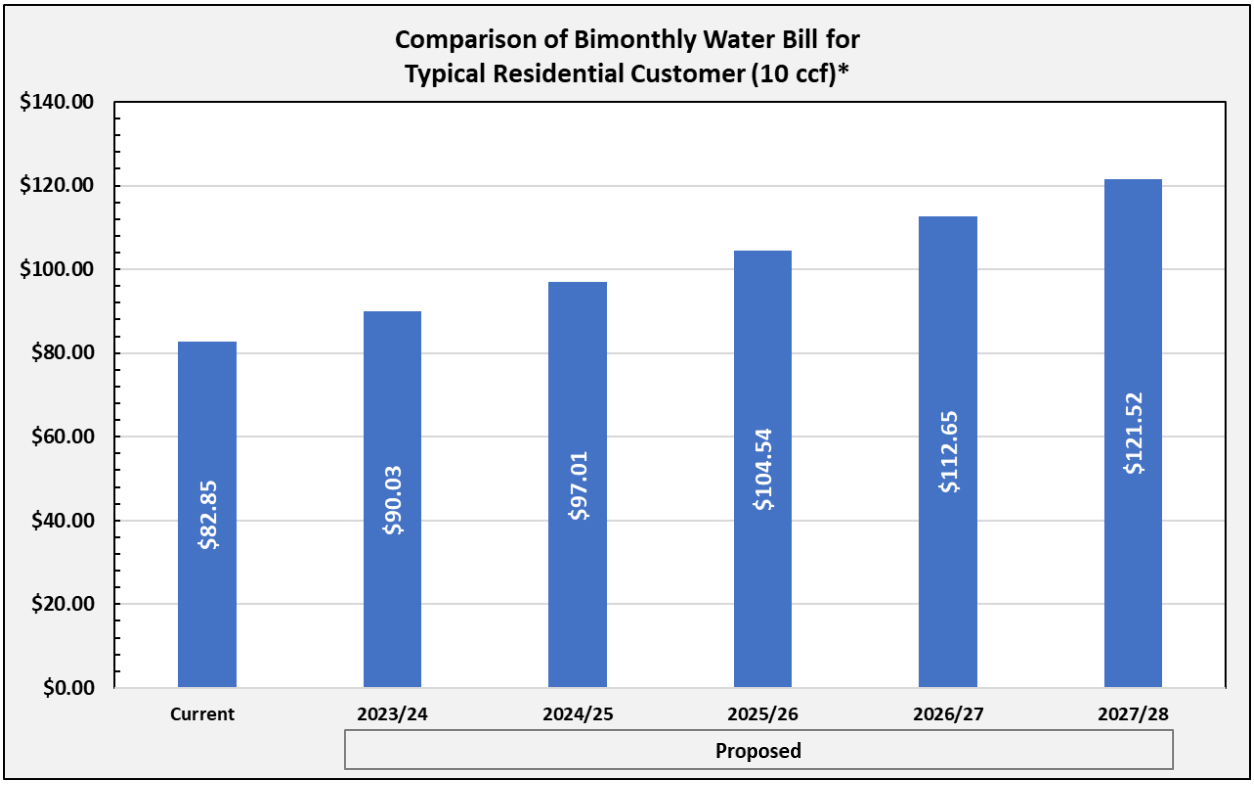
	Bimonthly Use (ccf)	Current Bill	Proposed July 1, 2023	July 1, 2024	July 1, 2025	July 1, 2026	July 1, 2027
Commercial: 5/8" meter, 10 ccf							
Fixed Meter Charge - 5/8"		$35.07	$33.35	$36.17	$39.23	$42.55	$46.28
Consumption Charge							
Tier 1: 0 - 8 ccf	8	$41.58	$44.08	$47.32	$50.80	$54.53	$58.52
Tier 2: 9 - 16 ccf	2	$17.38	$12.60	$13.52	$14.51	$15.58	$16.72
Tier 3: Over 16 ccf	0	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Subtotal Consumption Charge	10	$58.96	$56.68	$60.84	$65.31	$70.10	$75.24
Total Bimonthly Water Bill		$94.03	$90.03	$97.01	$104.54	$112.65	$121.52
$ Change			*($4.00)*	*$6.98*	*$7.53*	*$8.11*	*$8.86*
% Change			*-4.3%*	*7.8%*	*7.8%*	*7.8%*	*7.9%*
Commercial: 1-1/2" meter, 40 ccf							
Fixed Meter Charge - 1-1/2"		$0.00	$33.35	$36.17	$39.23	$42.55	$46.28
Consumption Charge							
Tier 1: 0 - 8 ccf	8	$56.00	$44.08	$47.32	$50.80	$54.53	$58.52
Tier 2: 9 - 16 ccf	8	$69.52	$50.38	$54.08	$58.05	$62.31	$66.88
Tier 3: Over 16 ccf	24	$265.20	$278.19	$296.37	$315.78	$336.46	$358.43
Subtotal Consumption Charge	40	$390.72	$372.65	$397.77	$424.63	$453.30	$483.83
Total Bimonthly Water Bill		$390.72	$406.00	$433.94	$463.86	$495.85	$530.11
$ Change			*$15.28*	*$27.94*	*$29.92*	*$31.99*	*$34.26*
% Change			*3.9%*	*6.9%*	*6.9%*	*6.9%*	*6.9%*

IRRIGATION BILL IMPACTS

	Bimonthly Use (ccf)	Current Bill	Proposed July 1, 2023	Proposed July 1, 2024	Proposed July 1, 2025	Proposed July 1, 2026	Proposed July 1, 2027
Irrigation: 1-1/2" meter, 50 ccf							
Fixed Meter Charge - 5/8"		$92.47	$88.95	$96.49	$104.62	$113.49	$123.24
Consumption Charge							
Tier 1: 0 - 8 ccf	8	$41.42	$44.08	$47.32	$50.80	$54.53	$58.52
Tier 2: 9 - 16 ccf	8	$90.80	$50.38	$54.08	$58.05	$62.31	$66.88
Tier 3: Over 16 ccf	34	$448.46	$455.29	$484.91	$516.51	$550.17	$585.93
Subtotal Consumption Charge	50	$580.68	$549.75	$586.31	$625.36	$667.01	$711.32
Total Bimonthly Water Bill		$673.15	$638.70	$682.80	$729.98	$780.49	$834.56
$ Change			*($34.46)*	*$44.10*	*$47.18*	*$50.51*	*$54.07*
% Change			*-5.1%*	*6.9%*	*6.9%*	*6.9%*	*6.9%*
Irrigation: 2" meter, 100 ccf							
Fixed Meter Charge - 2"		$92.47	$88.95	$96.49	$104.62	$113.49	$123.24
Consumption Charge							
Tier 1: 0 - 8 ccf	8	$41.42	$44.08	$47.32	$50.80	$54.53	$58.52
Tier 2: 9 - 16 ccf	8	$90.80	$50.38	$54.08	$58.05	$62.31	$66.88
Tier 3: Over 16 ccf	84	$1,107.96	$1,087.78	$1,158.24	$1,233.40	$1,313.42	$1,398.42
Subtotal Consumption Charge	100	$1,240.18	$1,182.24	$1,259.64	$1,342.25	$1,430.26	$1,523.81
Total Bimonthly Water Bill		$1,332.65	$1,271.19	$1,356.13	$1,446.87	$1,543.75	$1,647.05
$ Change			*($61.46)*	*$84.94*	*$90.74*	*$96.88*	*$103.30*
% Change			*-4.6%*	*6.7%*	*6.7%*	*6.7%*	*6.7%*

Figure 5 below demonstrates the typical bimonthly water bill a residential customer with a 5/8" or 3/4" meter will be charged during each year of the five-year Proposition 218 period.

Figure 5: Comparison of Bimonthly Water Bill for Typical Residential Customer
City of Brisbane
Water Utility Rate Study 2022

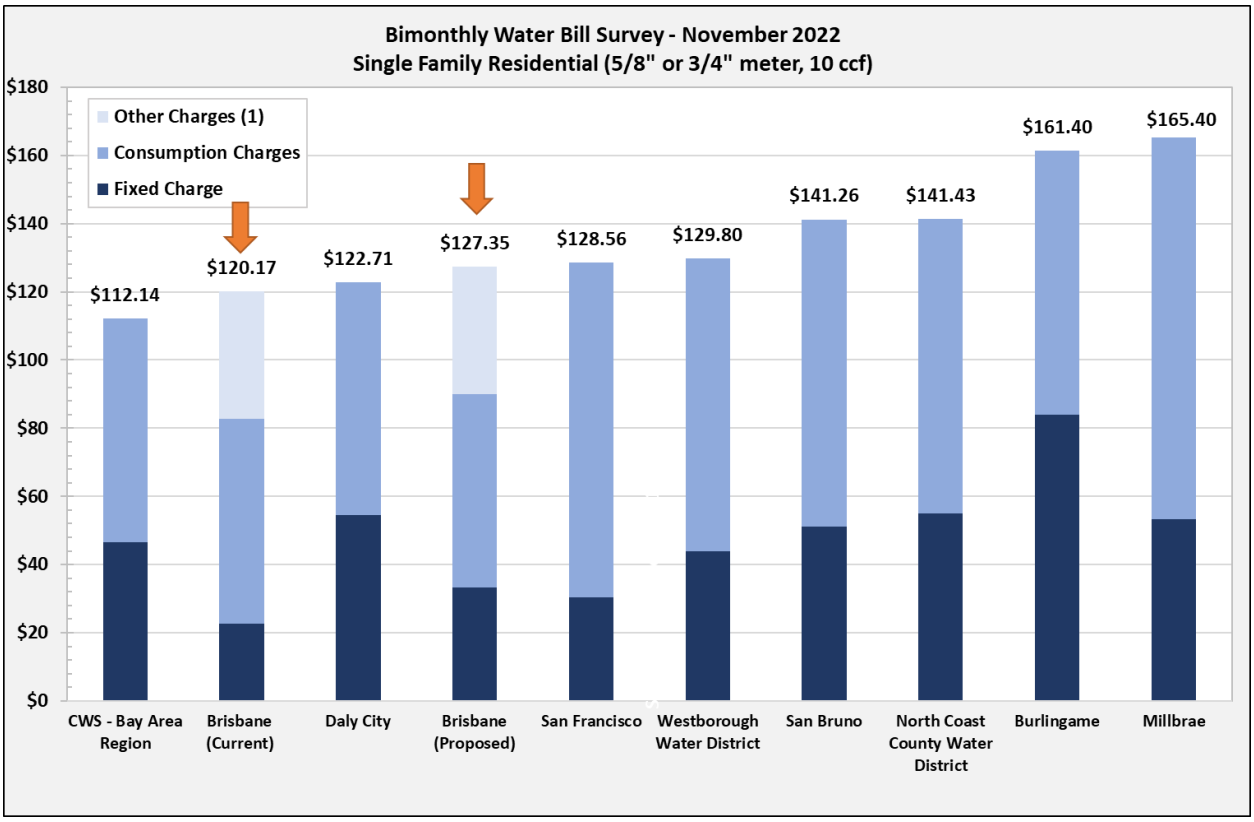


* Does not include Drought Surcharge or Capital Charge

2.6.7 Regional Water Bill Survey

The bar graph in Figure 6 below compares the City's current typical bimonthly residential water bill based on a 5/8" or 3/4" meter using 10 ccf over a 2-month period with the proposed 2023/24 bill. The bill estimates also include the Drought Contingency Charge ($2.32) and half of the Capital Projects Charge that is evenly split with the Sewer Bill ($70/2 = $35). The City's bill is compared with those of other local agencies.

Figure 6: Bimonthly Water Bill Survey
City of Brisbane
Water Utility Rate Study 2022



2.7 Water Low Income Discount

To comply with Proposition 218's cost of service requirements, water rate revenues from one group of customers cannot be used to subsidize the rates of another group. Instead, the City could utilize non-rate revenues, such as General Fund revenues, interest earnings, or delinquent penalties to fund a low income discount program. Moreover, to eliminate the administrative burden of the City developing its own low-income criteria, it is recommended that the City provide assistance to low income residents who meet the criteria of other local assistance programs such as PG&E's CARE program.

The low income discount program should be reviewed annually by the City to determine whether the water fund has adequate non-rate revenues to fund the program. Because non-water rate revenues will be used to pay for the discount, the amount of the low income discount is based on the discretion of the City.

Table 29 calculates a sample low income discount for water that is funded from a General Fund transfer. This transfer is estimated at $37,500 for the current year. The City estimates that approximately 400 customers or about 24.0% of all accounts could qualify for a discount based on the PG&E's CARE program requirements. Based on 400 customers, the table shows a bimonthly discount of approximately $15.60 per customer. For an average residential customer (10 ccf bimonthly use), this equates to a 17.3% discount off the proposed bimonthly bill for July 1, 2023.

Table 29: Water Low Income Discount
City of Brisbane
Water Utility Rate Study 2022

Total Number of Residential Water Customers	1,650
Estimated Number of Customers Eligible for Discount	400
Total Est. Water Low Income Discount Revenue	$37,500
Annual Discount per Customer	$93.80
Bimonthly Discount per Customer	$15.60
Proposed Average Bimonthly Water Bill (10 ccf) for July 1, 2023	$90.03
Proposed Average Bimonthly Water Bill (10 ccf) with Discount for July 1, 2023	$74.43
% of Discount	*17.3%*

SECTION 3: SEWER RATE STUDY

The City of Brisbane provides sewer service to approximately 1,900 residents, several commercial areas, and some light industrial development. On average, the City's sewage effluent totals approximately 173,000 ccf each year. The last sewer rate study was conducted in 2001, and sewer rates for operations have not increased since 2012. Based on City billing records, the current average monthly residential sewer flow is 5 ccf per month, or a total of 10 ccf per bimonthly billing period. The average sewer bill is currently $106.67 per bimonthly billing period (not including Capital Project Charges).

3.1 Current Wastewater Rates

A schedule of current bimonthly wastewater rates is provided in Table 30. The City's current rate structure includes two components: (a) a Fixed Charge and (b) a Variable Rate.

3.1.1 Fixed Charge

All customers are charged the same Fixed Charge. The Fixed Charge is the minimum charge for all customers. Even when a customer does not use the sewer system, the City incurs fixed costs associated with maintaining the ability or readiness to serve each connection.

The Fixed Charges are intended to recover the City's fixed expenses and currently generate about 40.0% of total wastewater rate revenues. Fixed costs include staffing, customer service, debt service, system maintenance, and repairs.

3.1.2 Variable Rate

In addition to the Fixed Charge, customers pay a Variable Rate per ccf based on a two-tiered rate structure that varies based on customer class. For residential customers, sewer flow is approximated using winter consumption for the four-month period between October and January. Commercial accounts are billed according to three customer strength categories.

The Variable Rate is intended to recover costs that vary based on the amount of sewer flow and currently generate roughly 60.0% of total wastewater rate revenues. Variable expenses include treatment costs from the City of San Francisco, utilities, and chemicals.

3.1.3 Capital Project Charge

In April of 2014, the City Council approved the first Capital Project Charge to pay for infrastructure projects for the water and sewer systems. The projects are based on the City's Capital Improvement Plan which outlines the need for approximately $5 million in projects every five years. The policy adopted in 2014 included placing a new Capital Project Charge on the water and sewer bill four times over a twenty-year period. The second charge should have been implemented in 2020 but was delayed due to the impacts of COVID. To prevent further delays in completing the projects, the City Council adopted the second of four increases to the Capital Project Charge in October 2022.

The Capital Project Charge is levied according to a tiered rate system based on springtime usage (mid-February through mid-June) to ensure that lower water users pay less than higher users. Total Capital Project Charge revenue is evenly split between the water and sewer funds. The Capital Project Charge will not be reviewed or analyzed in this study.

Table 30: Current Bi-Monthly Sewer Rates (Effective 10/15/12)
City of Brisbane
Sewer Utility Rate Study 2022

RESIDENTIAL	**Bimonthly Charge**
Flat Charge	$68.87
Variable Charge [1]	
Tier 1: 0 - 8 ccf	$2.81
Tier 2: Over 8 ccf	$7.66
COMMERCIAL [2]	**Bimonthly Charge**
Standard	
Flat Charge	$68.87
Variable Charge	
Tier 1: 0 - 8 ccf	$3.84
Tier 2: Over 8 ccf	$7.66
Medium	
Flat Charge	$68.87
Variable Charge	
Tier 1: 0 - 8 ccf	$5.68
Tier 2: Over 8 ccf	$9.74
Heavy	
Flat Charge	$68.87
Variable Charge	
Tier 1: 0 - 8 ccf	$7.59
Tier 2: Over 8 ccf	$11.82

1 - Residential bill is based on winter consumption (Oct, Nov, Dec & Jan)
2 - Standard: offices, retail establishments without restaurant, warehouses, churches, and schools
Medium: automotive services, retail establishments or offices with restaurant, laundromats, and markets
Heavy: restaurants, food preparation establishments, printing shops, metal fabrication shops, and laboratories.

3.2 Wastewater System Overview

3.2.1 Wastewater System

Wastewater is collected and conveyed by the sewer gravity system, force mains, and four City-owned lift stations: Hitachi Lift Station, Harbor Lift Station, Sierra Point Lift Station, and Valley Drive Lift Station.

The sewer collection system consists of more than 80,000 feet of laterals, mains, trunks, and 20,000 feet of forcemains ranging in size from 6 to 24 inches in diameter. The majority of the wastewater collected within the City's service area flows by gravity or is pumped by privately owned lift stations to one of the City's lift stations. From the Valley Drive Lift Station, all wastewater in the City and GVMID service areas is then pumped to the Southeast Water Pollution Control Plant in San Francisco via the Candlestick Interceptor Trunk Line.

3.2.2 Sewer Customers and Flow

Table 31 includes the current number of accounts and flow by customer strength. Residential customers represent about 87.0% of total accounts and roughly 52.0% of total flow.

Table 31: Current Sewer Accounts & Flow by Customer Class
City of Brisbane
Sewer Utility Rate Study 2022

	Current	% of Total
NO. OF ACCOUNTS (1)		
Residential	1,669	87.0%
Standard Commercial	215	11.2%
Medium Commercial	8	0.4%
Heavy Commercial	26	1.4%
Total	1,918	100.0%
SEWER FLOW		
Residential	89,719	51.9%
Standard Commercial	37,290	21.6%
Medium Commercial	4,261	2.5%
Heavy Commercial	41,651	24.1%
Total	172,921	100.0%

1 - Based on 2021 billing data

3.3 Wastewater Financial Plan

3.3.1 Sewer Reserves

For accounting purposes, the City's Utility Fund (Fund 540) combines water and sewer finances into one fund. As of July 1, 2020, the total fund balance for the Utility Fund (Fund 540) in "Cash and investments" was approximately $7.7 million. However, for the purposes of this study, the total reserves have been allocated between the water and sewer funds as shown on Table 32. Because the Sewer Utility has been operating in a deficit, additional reserves have been assigned to sewer to mitigate rate increases.

Table 32: Utility Fund (Fund 540) Reserves
City of Brisbane
Sewer Utility Rate Study 2022

Fund	Beginning Balance as of June 30, 2021
Total Utility Fund (Fund 540) Reserves (1)	$7,656,890
Water Utility Reserves (2)	$2,828,445
Sewer Utility Reserves (2)	$4,828,445

1) Cash and investments (Unaudited Financials).
Source: Proprietry Funds, Statement of Net Position, June 30, 2020
2) Includes GVMID

Adequate fund reserves protect the City when faced with unforeseen financial challenges such as emergency expenses or revenue deficits. Fund reserves allow the City to maintain its financial health and positive credit ratings, especially during emergencies. Moreover, funding can be drawn from reserves to supplement rate revenues lost during drought conditions or other unexpected situations. It is acceptable if reserves dip below the target on a temporary basis, provided the City takes action to attain the target over the longer run.

The City currently has the following sewer reserve fund target:

- *Operating Reserve:* The fund balance target is equal to 25% of annual operating expenses per City policy. This is in line with industry standards that recommend an operating reserve target of at least 25% of annual expenses to account for the time (at least 4 months) that it would take an agency to approve new rate increases to comply with Proposition 218.

3.3.2 Sewer Revenues

Table 33 shows a history of revenues for the City's Utility Fund (Fund 540). The "Water Sales" revenues are evenly split between City Water and GVMID Water. "Sewer Service Charges" are evenly split between City Sewer and GVMID Sewer. The "GVMID Only" tax revenues are divided evenly by the three GVMID utilities (GVMID water, sewer, and storm drain) to ensure that storm drain revenues are not included in this study. All Other Revenues including "Investment Earnings," "Low Income Rate Assistance," and "Capital Charge" are divided evenly amongst the four utilities.

Table 33: Utility Fund (Fund 540) Budgeted Revenues
City of Brisbane
Sewer Utility Rate Study 2022

	REVENUE CATEGORY	Actual 2018/19	Budgeted 2019/20	Budgeted 2020/21	Budgeted 2021/22
WATER ONLY (1)					
40801	Water Sales	$3,050,110	$2,950,000	$2,750,000	$3,000,000
40804	Meter Connection Fees	$68,663	$20,000	$20,000	$20,000
40805	Fire Service Charges	$118,952	$115,000	$115,000	$115,000
40806	Altamar Meter Reading Fee	$7,656	$7,500	$7,500	$7,500
	Drought Reserve Charge	$95,481	$120,000	$100,000	$100,000
	Total Water Only	**$3,340,862**	**$3,212,500**	**$2,992,500**	**$3,242,500**
SEWER ONLY (2)					
40820	Sewer Service Charges	$2,188,866	$2,200,000	$2,000,000	$2,000,000
40821	Sewer Connection Fees	$123,706	$3,000	$3,000	$3,000
	Total Sewer Only	**$2,312,572**	**$2,203,000**	**$2,003,000**	**$2,003,000**
GVMID ONLY (3)					
40101	Current Secured Tax	$27,358	$29,000	$29,000	$29,000
40102	Current Unsecured Tax	$1,513	$1,500	$1,500	$1,500
40103	Prior Year Tax	($1)	$0	$0	$0
40105	Supplemental Property Taxes	$1,048	$0	$0	$0
40108	Property Tax from RDA	$2,866	$100	$100	$100
40150	ERAF	$134	$100	$100	$100
	Total GVMID	**$32,918**	**$30,700**	**$30,700**	**$30,700**
ALL OTHER REVENUES (4)					
40501	Investment Earnings	$133,599	$50,000	$50,000	$50,000
40503	Unrealized-Gain/Loss	$96,152	$0	$0	$0
40609	H.O.P.T R	$121	$100	$100	$100
40770	Processing Fee	$5,472	$0	$0	$0
40802	Account Open/Reconnections	$2,987	$3,000	$3,000	$3,000
40803	Late Payment Charges	$8,117	$10,000	$10,000	$10,000
40810	Less: Low Income Rate Assistance	($42,336)	($50,000)	($75,000)	($75,000)
40825	Capital Charge	$378,443	$365,000	$365,000	$365,000
40941	Returned Check Fees	$75	$0	$0	$0
40959	Reimbursed Expenses - Current Year	$3,541	$0	$0	$0
40961	Transfers from Other Funds	$43,000	$50,000	$75,000	$75,000
	Total All Other Revenues	**$629,172**	**$428,100**	**$428,100**	**$428,100**
	TOTAL REVENUES	**$6,315,524**	**$5,874,300**	**$5,454,300**	**$5,704,300**

Source: Budget 2020_2022

1 - Divided by 2 between City Water & GVMID Water

2 - Divided by 2 between City Sewer & GVMID Sewer

3 - Divided by 3 between GVMID Water, Sewer, & Stormwater

4 - Divided by 4 between City Water, City Sewer, GVMID Water, & GVMID Sewer

Table 34 summarizes total revenues for the Sewer Utility. For 2022/23, Sewer Service Revenues are estimated at $2 million with total sewer revenues projected at $2.2 million.

Table 34: Sewer Utility Revenues
City of Brisbane
Sewer Utility Rate Study 2022

	Actual	Budget		
	2018/19	2019/20	2020/21	2021/22
SEWER REVENUES				
Sewer Service Revenues	$2,188,866	$2,200,000	$2,000,000	$2,000,000
Sewer Connection Fees	$123,706	$3,000	$3,000	$3,000
All Other Revenues (1)	$314,586	$214,050	$214,050	$214,050
Total	$2,627,158	$2,417,050	$2,217,050	$2,217,050
Percent Change		*-8.0%*	*-8.3%*	*0.0%*

1 – All other revenues divided by 2 (Table 33)

3.3.3 Sewer Expenses

Table 35 summarizes the operating expenses for the Sewer Utility (Fund 6130) based on the budget. On average, operating expenses have increased by 9.1% over the past 4 years. The most significant increase was for "Service and Supplies" which includes treatment costs from the City of San Francisco.

Table 35: Sewer Utility (Fund 6130) Operating Expenses
City of Brisbane
Sewer Utility Rate Study 2022

Expense	Actual 2018/19	Budgeted 2019/20	Budgeted 2020/21	Budgeted 2021/22	Avg Annual Increase
Salaries	$267,242	$233,759	$322,891	$335,165	
Percent Change	*1.9%*	*-12.5%*	*38.1%*	*3.8%*	*5.0%*
Payroll Taxes	$4,062	$3,357	$4,421	$4,599	
Percent Change	*3.6%*	*-17.4%*	*31.7%*	*4.0%*	*3.2%*
Benefits	$122,495	$143,745	$158,152	$184,923	
Percent Change	*1.9%*	*17.3%*	*10.0%*	*16.9%*	*9.0%*
Insurance	$24,716	$24,664	$37,974	$38,113	
Percent Change	*22.5%*	*-0.2%*	*54.0%*	*0.4%*	*13.6%*
Supplies and Services	$1,125,704	$1,128,565	$1,230,164	$1,487,945	
Percent Change	*32.0%*	*0.3%*	*9.0%*	*21.0%*	*11.8%*
Admin Charges and Credits	$258,621	$289,277	$331,504	$337,027	
Percent Change	*3.2%*	*11.9%*	*14.6%*	*1.7%*	*6.1%*
TOTAL CITY SEWER OPERATING EXPENSES	**$1,887,323**	**$1,927,367**	**$2,170,105**	**$2,472,772**	
Percent Change	*18.1%*	*2.1%*	*12.6%*	*13.9%*	*9.1%*

Source: Budget 2020_2022

Table 36 summarizes the operating expenses for GVMID Utility (Fund 6120). On average, operating expenses have increased by 7.0% over the past 4 years. Each expense category is divided by 3 to determine how much should be allocated to the Water Utility, Sewer Utility, and GVMID storm water. GVMID storm water expenses are not included in this study.

Table 36: GVMID Combined Utility (Fund 6120) Operating Expenses
City of Brisbane
Sewer Utility Rate Study 2022

Expense (1)	Actual 2018/19	Budgeted 2019/20	Budgeted 2020/21	Budgeted 2021/22	Avg Annual Increase	2021/22 Budget per Utility (2)
Salaries	$180,809	$179,236	$333,150	$345,879		$115,293
Percent Change	*-5.3%*	*-0.9%*	*85.9%*	*3.8%*	*17.6%*	
Payroll Taxes	$3,987	$2,306	$4,584	$4,769		$1,590
Percent Change	*39.2%*	*-42.2%*	*98.8%*	*4.0%*	*4.6%*	
Benefits	$98,172	$95,450	$153,452	$181,974		$60,658
Percent Change	*0.8%*	*-2.8%*	*60.8%*	*18.6%*	*16.7%*	
Insurance	$15,567	$16,406	$39,376	$39,521		$13,174
Percent Change	*-7.8%*	*5.4%*	*140.0%*	*0.4%*	*26.2%*	
Supplies and Services	$1,105,804	$1,166,543	$1,165,054	$1,291,240		$430,413
Percent Change	*41.8%*	*5.5%*	*-0.1%*	*10.8%*	*4.0%*	
Admin Charges and Credits	$303,900	$335,321	$341,554	$380,262		$126,754
Percent Change	*-2.0%*	*10.3%*	*1.9%*	*11.3%*	*5.8%*	
TOTAL GVMID UTILITY OPERATING EXPENSES	**$1,708,239**	**$1,795,263**	**$2,037,171**	**$2,243,645**		**$747,882**
Percent Change	*22.2%*	*5.1%*	*13.5%*	*10.1%*	*7.1%*	

Source: Budget 2020_2022

1 - Does not include expenses to "Operate a Storm Drain System" or Depreciation

2 - Budget divided by the 3 GVMID utilties (water, sewer, & storm water)

Table 37 combines the Sewer Utility (Fund 6130) Operating Expenses from Table 35 with the GVMID Combined Utility (Fund 6120) Operating Expenses from Table 36 to determine total Sewer Utility expenses for the past 4 years.

Table 37: Sewer Utility Combined Operating Expenses
City of Brisbane
Sewer Utility Rate Study 2022

Expense (1)	Actual 2018/19	Budget 2019/20	Budget 2020/21	Budget 2021/22
Salaries	$327,511	$293,505	$433,940	$450,458
Payroll Taxes	$5,391	$4,125	$5,949	$6,188
Benefits	$155,219	$175,562	$209,302	$245,581
Insurance	$29,905	$30,133	$51,099	$51,287
Supplies and Services	$1,494,306	$1,517,413	$1,618,515	$1,918,359
Admin Charges and Credits	$359,921	$401,051	$445,356	$463,781
TOTAL SEWER OPERATING EXPENSES	**$2,372,253**	**$2,421,788**	**$2,764,162**	**$3,135,654**
Percent Change	*20.1%*	*2.1%*	*14.1%*	*13.4%*

Source: Budget 2020_2022

1 - Does not include Depreciation

Table 38 below provides a projection of estimated costs for the next 5 years through 2027/28. Escalation factors were determined using City input. Supplies and Services which includes treatment costs is projected to increase by 10.0% each year. Salaries and Benefits are projected to increase by 4.0% each year. Insurance is increased by 5.0% per year, and Admin Charges and Credits are escalated by 3.0% each year. Overall, based on the escalation factors shown, total sewer operating expenses are projected to increase by approximately 8.0% each year.

Table 38: Sewer Utility Projection of Future Operating Expenses
City of Brisbane
Sewer Utility Rate Study 2022

Expense (1)	Budget 2021/22	Escalation Factor	Projected 2022/23	Years 1 -5: Proposition 218 2023/24	2024/25	2025/26	2026/27	2027/28
Salaries	$450,458	4.0%	$468,000	$487,000	$506,000	$526,000	$547,000	$569,000
Payroll Taxes	$6,188	4.0%	$6,000	$6,000	$6,000	$6,000	$6,000	$6,000
Benefits	$245,581	4.0%	$255,000	$265,000	$276,000	$287,000	$298,000	$310,000
Insurance (2)	$51,287	5.0%	$56,000	$59,000	$62,000	$65,000	$68,000	$71,000
Supplies and Services	$1,918,359	10.0%	$2,115,000	$2,327,000	$2,560,000	$2,816,000	$3,098,000	$3,408,000
Admin Charges and Credits	$463,781	4.0%	$482,000	$501,000	$521,000	$542,000	$564,000	$587,000
TOTAL SEWER OPERATING EXPENSES	**$3,135,654**		**$3,382,000**	**$3,645,000**	**$3,931,000**	**$4,242,000**	**$4,581,000**	**$4,951,000**
Percent Change	*13.4%*		*7.9%*	*7.8%*	*7.8%*	*7.9%*	*8.0%*	*8.1%*

Source: Budget 2020_2022
1 - Does not include Depreciation
2 - Insurance anticipated to increase by 10% in 2023/23

3.3.4 Sewer Treatment Costs

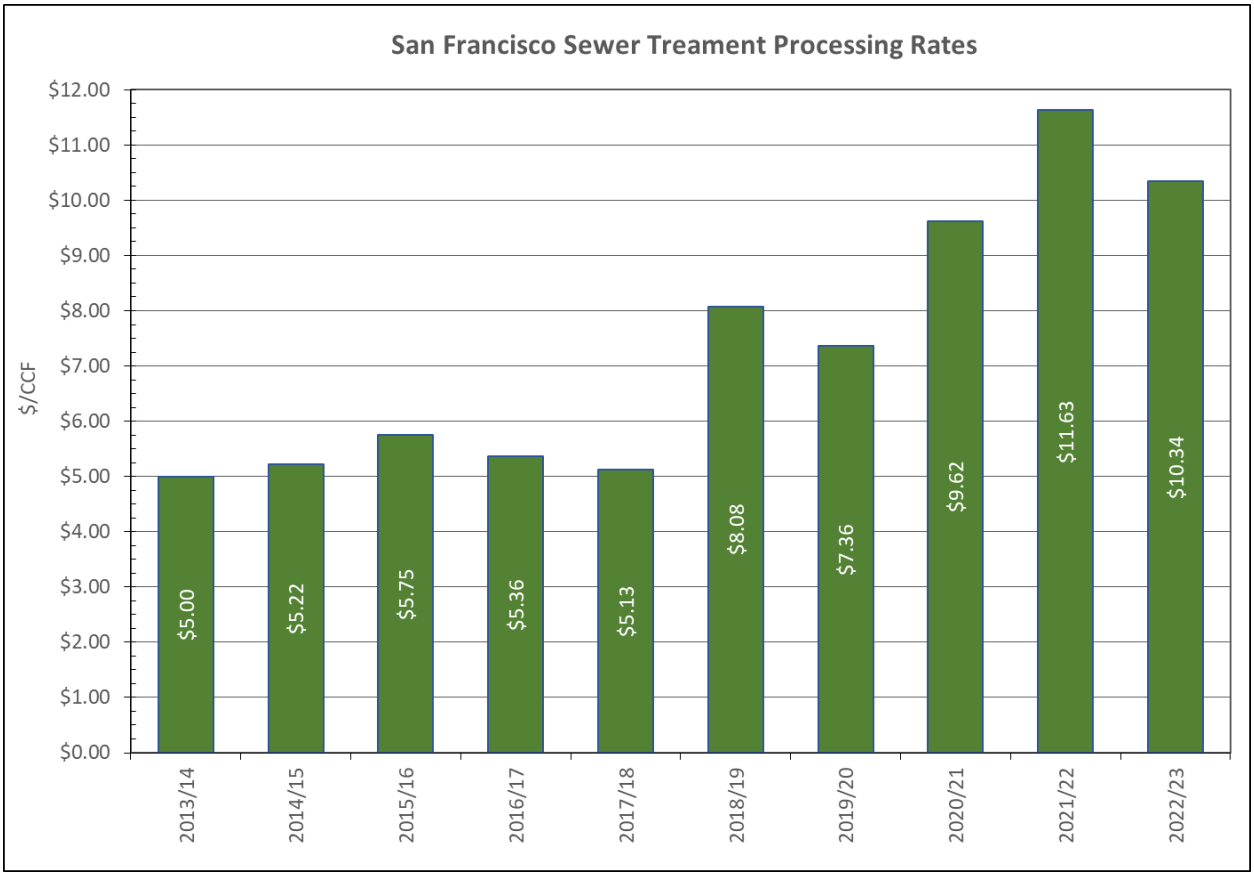
As shown on Table 39, sewer treatment costs are the largest expense for the Sewer Utility, accounting for 54.1% of total operating expenses in 2022/23.

Table 39: Sewer Treatment Processing Costs
City of Brisbane
Sewer Utility Rate Study 2022

	Budget 2018/19	2019/20	2020/21	2021/22	Projected 2022/23
Treatment Rate per ccf	$8.08	$7.36	$9.62	$11.63	$10.34
Estimated Total Sewer Flow	172,000	172,000	173,000	173,000	177,000
Total Treatment Costs	$1,389,760	$1,265,920	$1,664,260	$2,011,990	$1,830,180
Total Sewer Operating Expenses	$2,372,253	$2,421,788	$2,764,162	$3,135,654	$3,382,000
% of Total Treatment Costs/ Total Sewer Operating Expenses	58.6%	52.3%	60.2%	64.2%	54.1%

Figure 7 shows a history of treatment processing rates set by San Francisco. Since 2013/14, the cost for treatment has more than doubled from $5.00 per ccf to $10.34 per ccf for 2022/23. Meanwhile, the City has not increased its operational sewer rates since 2012. To be conservative, this study estimates that rates will increase by 10.0% each year during the rate study period.

Figure 7: Historical San Francisco Treatment Processing Rates
City of Brisbane
Sewer Utility Rate Study 2022



3.3.5 Sewer Net Revenues

Table 40 shows a history of the Sewer Utility's net revenues. The Sewer Utility has been operating in a deficit in which expenses exceed revenues. The 2021/22 budget is projecting a deficit of approximately $1.2 million which means that the Sewer Fund will need to rely on reserves to cover expenses and will not meet debt coverage.

Table 40: Sewer Net Revenues
City of Brisbane
Sewer Utility Rate Study 2022

	Actual	Budget		
	2018/19	2019/20	2020/21	2021/22
SEWER REVENUES				
Sewer Service Revenues	$2,188,866	$2,200,000	$2,000,000	$2,000,000
Other Revenues	$438,292	$217,050	$217,050	$217,000
Total	$2,627,158	$2,417,050	$2,217,050	$2,217,000
SEWER EXPENSES				
Operating	$2,372,253	$2,421,788	$2,764,162	$3,135,654
Debt Service	$312,156	$313,906	$315,156	$318,344
Subtotal	$2,684,409	$2,735,695	$3,079,318	$3,453,998
TOTAL NET REVENUES	**($57,251)**	**($318,645)**	**($862,268)**	**($1,236,998)**

3.3.6 Debt Service

The Sewer Utility currently has one outstanding debt obligation that is shared with the Water Utility – the 2015 Utility Revenue Bonds for $8.3 million. Total debt service for 2022/23 is $632,063. Debt service payments are split evenly between the Water Utility and Sewer Utility, see Table 41.

Table 41: 2015 Utility Revenue Bonds - Debt Service Schedule
City of Brisbane
Sewer Utility Rate Study 2022

Fiscal Year Ending June 30	Principal	Interest	Total Debt Service (1)
2016	$170,000	$247,103	$417,103
2017	$305,000	$327,763	$632,763
2018	$310,000	$318,513	$628,513
2019	$320,000	$304,313	$624,313
2020	$340,000	$287,813	$627,813
2021	$360,000	$270,313	$630,313
2022	$385,000	$251,688	$636,688
2023	$400,000	$232,063	$632,063
2024	$415,000	$211,688	$626,688
2025	$440,000	$190,313	$630,313
2026	$455,000	$167,938	$622,938
2027	$480,000	$149,363	$629,363
2028	$490,000	$134,813	$624,813
2029	$510,000	$119,175	$629,175
2030	$525,000	$102,356	$627,356
2031	$540,000	$84,713	$624,713
2032	$570,000	$65,625	$635,625
2033	$305,000	$50,313	$355,313
2034	$320,000	$39,175	$359,175
2035	$330,000	$23,063	$353,063
2036	$340,000	$6,375	$346,375
TOTALS	$8,310,000	$3,584,471	$11,894,471

(1) Debt service is allocated 50% to the Water Utility and 50% to the Sewer Utility.

Debt Service Coverage

A chief covenant for the City to secure State loans/grants or revenue bonds/Certificates of Participation (COPs) is to maintain a specific debt service coverage ratio. A debt service coverage ratio is a financial measure of an agency's ability to repay outstanding debt. For the 2015 Utility Revenue Bonds, the debt service coverage ratio means that annual water net revenues (gross revenues less operating and maintenance expenses) must be at least 1.25 times the combined annual debt service payments on all

parity obligations. Failure to meet the debt service coverage ratio on an annual basis is considered to be technical default, thereby making the revenue bonds/COPs callable or payable upon demand. Thus, rates and fees must be set to meet this legal requirement. Moreover, failing to meet debt service coverage may hinder the City's ability to qualify for future bond funding.

3.3.7 Sewer Cash Flow Objectives

With input from City Staff, L&T developed three sewer cash flow scenarios based on the following three financial objectives. These goals are indicators of the overall fiscal health of the Sewer Utility:

1. Meet debt service coverage
    a. The debt service coverage ratio for the 2015 bonds is 1.25x.
    b. Ratio is calculated as Net Operating Revenue/Total Debt service
2. Meet Sewer Utility reserve targets
    a. Operating Reserve Target = 25.0% of annual operating costs
3. Maintain positive net revenues
    a. To ensure that the Sewer Utility is covering its cost of service
    b. To avoid an operating deficit and dipping into reserves

3.3.8 Sewer Cash Flow Scenarios

The cash flow scenarios are as follows:

- *Sewer Scenario #1: No Rate Increases*
    - This scenario shows what would happen if the City did not increase the sewer rates. Without rate increases, the projections show that the Sewer Utility will continue to operate in a deficit and will not meet debt service coverage. Additionally, the Sewer Utility will draw down all of its reserves by the end of 2024/25.
- *Sewer Scenario #2: 8.0% Annual Rate Increases*
    - This scenario shows the impact to the Sewer Utility with 8.0% annual rate increases to cover operating cost inflation. With *Scenario #2*, the projections show that the Sewer Utility will continue to operate in a deficit and will not meet debt service coverage. Additionally, the Sewer Utility will draw down all of its reserves by the end of 2024/25.
- *Sewer Scenario #3: 25.0% Annual Rate Increases*
    - This scenario shows the impact to the Sewer Utility with annual 25.0% annual rate increases. With *Scenario #3*, the Sewer Utility would meet debt service coverage by 2026/27. The Sewer Utility will likely draw down its reserves by 2024/25 but will meet its operating reserve fund targets by 2029/30.

3.3.9 Sewer Cash Flow Assumptions

The cash flows are based on the 2021/22 budget and are based on the following assumptions:

- **Revenues**
    - Total Sewer Service Charge revenues are estimated at $2.0 million based on the 2021/22 budget.

    - Rate increases will go into effect on July 1 of each year, beginning in 2023 through 2027.
    - The Capital Charge is increased by $85,000 beginning in December 2022 and then $170,000 in 2023/24. The total estimated increase in the Capital Charge is estimated at $700,000 and is split evenly with the Sewer Utility.
    - Interest is increased by 1% each year.
- All other revenues are increased by 3% each year.
- The Low Income Rate Assistance contribution from the General Fund remains at $75,000 per year and is divided evenly between water and sewer.
- Growth is estimated at 0.5% each year.
- Total sewer flow is based on 2020 usage and is not anticipated to increase significantly over the next 5 years.

➢ **Expenses**

- Expenses are increased based on the escalation factors from Table 38.
- The only current debt obligation is the 2015 Utility Revenue Bonds. Total debt service is approximately $625,000 per year and is split evenly with the Water Utility.
- Debt service coverage is estimated at 1.25x and is calculated by dividing Net Revenues by Total Debt Service.
- Assuming that the City will issue $5 million in debt to pay for capital projects in 2027/28, total debt service is projected at $300,000 and is split evenly with the Sewer Utility beginning in 2027/28.
- No capital project expenditures are included.
- Annual depreciation is not included.

3.3.10 Sewer Scenario #1: Sewer Cash Flow Projection with No Rate Increases

Table 42 forecasts the financial health of the sewer utility over the next 10 years if the City does not implement any rate increases. Using 2021/22 as the base year, the cash flow for *Sewer Scenario #1* shows that the Sewer Utility is currently operating in a deficit (line 40). Moreover, the sewer fund is not meeting its debt service coverage requirement (line 49) and will draw down reserves by the end of 2024/25 (line 42).

Without rate increases, the sewer fund will continue to miss coverage and operate in a deficit, having to draw down reserves to pay for expenses.

Table 42: Sewer Scenario #1: No Rate Increases – Sewer Cash Flow Projection
City of Brisbane
Sewer Utility Rate Study 2022

		Budget	Projected	Years 1 -5: Proposition 218					Years 6 - 10: Extended Projection				
		2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33
1	Overall Revenue Adjustment			0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	14.0%
2	Rate Increase Effective			Jul 1, 2023	Jul 1, 2024	Jul 1, 2025	Jul 1, 2026	Jul 1, 2027	Jul 1, 2028	Jul 1, 2029	Jul 1, 2030	Jul 1, 2031	Jul 1, 2032
3													
4													
5	**BEGINNING FUND BALANCE**	$4,828,445	$3,591,447	$1,929,416	$8,072	($950,084)	($3,464,553)	($6,320,234)	($9,040,140)	($12,314,228)	($16,026,406)	($20,215,262)	($24,932,575)
6													
7	**REVENUES**												
8	Sewer Service Charges	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,280,000
9	Investment Earnings	25,000	26,000	27,000	28,000	29,000	30,000	31,000	32,000	33,000	34,000	35,000	36,000
10	Sewer Connection Fees	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000
11	Account Open/Reconnections	1,500	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
12	Late Payment Charges	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000
13	Capital Charge (1)	182,500	267,500	352,500	352,500	352,500	352,500	502,500	502,500	502,500	502,500	502,500	502,500
14	Transfers from Other Funds	37,500	37,500	37,500	37,500	37,500	37,500	37,500	37,500	37,500	37,500	37,500	37,500
15	Less: Low Income Rate Assistance	(37,500)	(37,500)	(37,500)	(37,500)	(37,500)	(37,500)	(37,500)	(37,500)	(37,500)	(37,500)	(37,500)	(37,500)
16	Projected Grant Revenue	0	0	0	1,250,000	0	0	0	0	0	0	0	0
17	**Total Revenues**	2,217,000	2,303,500	2,389,500	3,640,500	2,391,500	2,392,500	2,543,500	2,544,500	2,545,500	2,546,500	2,547,500	2,828,500
18													
19	**EXPENSES**												
20	*Operating & Maintenance*												
21	Salaries	450,458	468,000	487,000	506,000	526,000	547,000	569,000	592,000	616,000	641,000	667,000	694,000
22	Payroll Taxes	6,188	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000
23	Benefits	245,581	255,000	265,000	276,000	287,000	298,000	310,000	322,000	335,000	348,000	362,000	376,000
24	Insurance	51,287	56,000	59,000	62,000	65,000	68,000	71,000	75,000	79,000	83,000	87,000	91,000
25	Supplies and Services	1,918,359	2,115,000	2,327,000	2,560,000	2,816,000	3,098,000	3,408,000	3,749,000	4,124,000	4,536,000	4,990,000	5,489,000
26	Admin Charges and Credit	463,781	482,000	501,000	521,000	542,000	564,000	587,000	610,000	634,000	659,000	685,000	712,000
27	Subtotal O&M	3,135,654	3,382,000	3,645,000	3,931,000	4,242,000	4,581,000	4,951,000	5,354,000	5,794,000	6,273,000	6,797,000	7,368,000
28													
29	Net Operating Revenues	(918,654)	(1,078,500)	(1,255,500)	(290,500)	(1,850,500)	(2,188,500)	(2,407,500)	(2,809,500)	(3,248,500)	(3,726,500)	(4,249,500)	(4,539,500)
30													
31	**Debt Service**												
32	2015 Utility Bonds	318,344	316,031	313,344	315,156	311,469	314,681	312,406	314,588	313,678	312,356	317,813	158,906
33	New Bonds (2)	0	0	0	0	0	0	0	150,000	150,000	150,000	150,000	150,000
34	Subtotal Debt Service	318,344	316,031	313,344	315,156	311,469	314,681	312,406	464,588	463,678	462,356	467,813	308,906
35													
36	**Capital Projects**	0	267,500	352,500	352,500	352,500	352,500	0	0	0	0	0	0
37													
38	**Total Expenses**	3,453,998	3,965,531	4,310,844	4,598,656	4,905,969	5,248,181	5,263,406	5,818,588	6,257,678	6,735,356	7,264,813	7,676,906
39													
40	**Net Revenues**	(1,236,998)	(1,662,031)	(1,921,344)	(958,156)	(2,514,469)	(2,855,681)	(2,719,906)	(3,274,088)	(3,712,178)	(4,188,856)	(4,717,313)	(4,848,406)
41													
42	**ENDING FUND BALANCE**	3,591,447	1,929,416	8,072	(950,084)	(3,464,553)	(6,320,234)	(9,040,140)	(12,314,228)	(16,026,406)	(20,215,262)	(24,932,575)	(29,780,981)
43													
44													
45	*Reserve Funds*												
46	Operating Reserve Target (25% of O&M)	783,900	845,500	911,300	982,800	1,060,500	1,145,300	1,237,800	1,338,500	1,448,500	1,568,300	1,699,300	1,842,000
47	*Target Met?*	*yes*	*yes*	*no*	*no*	*no*	*no*	*no*	*no*	*no*	*no*	*no*	*no*
48													
49	Debt Service Coverage - 1.25x (3)	(2.89)	(3.41)	(4.01)	(4.89)	(5.94)	(6.95)	(7.71)	(6.05)	(7.01)	(8.06)	(9.08)	(14.70)
50	*Target Met?*	*no*	*no*	*no*	*no*	*no*	*no*	*no*	*no*	*no*	*no*	*no*	*no*
51													

1 - Assumes Capital Charge will increase every 5 years. First increase will go into effect on Dec 1, 2022. Second increase is anticipated in 2027/28 and assumes that the City will issue $5M in new debt (combined water & sewer).

2 - Total debt service for New Bonds is estimated at $300,000 and is split evenly with the Sewer Utility.

3 - (Net Operating Revenue less Projected Grant Revenue) divided by (Total Debt Service)

3.3.11 Sewer Scenario #2: 8% Annual Rate Increases - Cash Flow Projection

Table 43 includes annual rate increases of 8.0% each year to cover operating cost inflation. With *Sewer Scenario #2*, the projections show that the Sewer Utility will continue to operate in a deficit (line 40) and will not meet debt service coverage (line 49). Additionally, the Sewer Utility will draw down all of its reserves by the end of 2024/25 (line 42).

Table 43: Sewer Scenario #2: 8% Annual Rate Increases – Sewer Cash Flow Projection
City of Brisbane
Sewer Utility Rate Study 2022

		Budget	Projected	Years 1 -5: Proposition 218					Years 6 - 10: Extended Projection				
		2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33
1	Overall Revenue Adjustment			8.0%	8.0%	8.0%	8.0%	8.0%	4.0%	4.0%	4.0%	8.0%	8.0%
2	Rate Increase Effective			Jul 1, 2023	Jul 1, 2024	Jul 1, 2025	Jul 1, 2026	Jul 1, 2027	Jul 1, 2028	Jul 1, 2029	Jul 1, 2030	Jul 1, 2031	Jul 1, 2032
3													
4													
5	**BEGINNING FUND BALANCE**	$4,828,445	$3,591,447	$1,929,416	$168,072	($457,084)	($2,451,553)	($4,585,234)	($6,515,140)	($8,731,228)	($11,263,406)	($14,145,262)	($17,290,575)
6													
7	**REVENUES**												
8	Sewer Service Charges	2,000,000	2,000,000	2,160,000	2,333,000	2,520,000	2,722,000	2,940,000	3,058,000	3,180,000	3,307,000	3,572,000	3,858,000
9	Investment Earnings	25,000	26,000	27,000	28,000	29,000	30,000	31,000	32,000	33,000	34,000	35,000	36,000
10	Sewer Connection Fees	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000
11	Account Open/Reconnections	1,500	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
12	Late Payment Charges	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000
13	Capital Charge (1)	182,500	267,500	352,500	352,500	352,500	352,500	502,500	502,500	502,500	502,500	502,500	502,500
14	Transfers from Other Funds	37,500	37,500	37,500	37,500	37,500	37,500	37,500	37,500	37,500	37,500	37,500	37,500
15	Less: Low Income Rate Assistance	(37,500)	(37,500)	(37,500)	(37,500)	(37,500)	(37,500)	(37,500)	(37,500)	(37,500)	(37,500)	(37,500)	(37,500)
16	Projected Grant Revenue	0	0	0	1,250,000	0	0	0	0	0	0	0	0
17	**Total Revenues**	2,217,000	2,303,500	2,549,500	3,973,500	2,911,500	3,114,500	3,483,500	3,602,500	3,725,500	3,853,500	4,119,500	4,406,500
18													
19	**EXPENSES**												
20	*Operating & Maintenance*												
21	Salaries	450,458	468,000	487,000	506,000	526,000	547,000	569,000	592,000	616,000	641,000	667,000	694,000
22	Payroll Taxes	6,188	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000
23	Benefits	245,581	255,000	265,000	276,000	287,000	298,000	310,000	322,000	335,000	348,000	362,000	376,000
24	Insurance	51,287	56,000	59,000	62,000	65,000	68,000	71,000	75,000	79,000	83,000	87,000	91,000
25	Supplies and Services	1,918,359	2,115,000	2,327,000	2,560,000	2,816,000	3,098,000	3,408,000	3,749,000	4,124,000	4,536,000	4,990,000	5,489,000
26	Admin Charges and Credit	463,781	482,000	501,000	521,000	542,000	564,000	587,000	610,000	634,000	659,000	685,000	712,000
27	Subtotal O&M	3,135,654	3,382,000	3,645,000	3,931,000	4,242,000	4,581,000	4,951,000	5,354,000	5,794,000	6,273,000	6,797,000	7,368,000
28													
29	Net Operating Revenues	(918,654)	(1,078,500)	(1,095,500)	42,500	(1,330,500)	(1,466,500)	(1,467,500)	(1,751,500)	(2,068,500)	(2,419,500)	(2,677,500)	(2,961,500)
30													
31	**Debt Service**												
32	2015 Utility Bonds	318,344	316,031	313,344	315,156	311,469	314,681	312,406	314,588	313,678	312,356	317,813	158,906
33	New Bonds (2)	0	0	0	0	0	0	150,000	150,000	150,000	150,000	150,000	150,000
34	Subtotal Debt Service	318,344	316,031	313,344	315,156	311,469	314,681	462,406	464,588	463,678	462,356	467,813	308,906
35													
36	**Capital Projects**	0	267,500	352,500	352,500	352,500	352,500	0	0	0	0	0	0
37													
38	**Total Expenses**	3,453,998	3,965,531	4,310,844	4,598,656	4,905,969	5,248,181	5,413,406	5,818,588	6,257,678	6,735,356	7,264,813	7,676,906
39													
40	**Net Revenues**	(1,236,998)	(1,662,031)	(1,761,344)	(625,156)	(1,994,469)	(2,133,681)	(1,929,906)	(2,216,088)	(2,532,178)	(2,881,856)	(3,145,313)	(3,270,406)
41													
42	**ENDING FUND BALANCE**	3,591,447	1,929,416	168,072	(457,084)	(2,451,553)	(4,585,234)	(6,515,140)	(8,731,228)	(11,263,406)	(14,145,262)	(17,290,575)	(20,560,981)
43													
44													
45	*Reserve Funds*												
46	Operating Reserve Target (25% of O&M)	783,900	845,500	911,300	982,800	1,060,500	1,145,300	1,237,800	1,338,500	1,448,500	1,568,300	1,699,300	1,842,000
47	*Target Met?*	*yes*	*yes*	*no*	*no*	*no*	*no*	*no*	*no*	*no*	*no*	*no*	*no*
48													
49	Debt Service Coverage - 1.25x (3)	(2.89)	(3.41)	(3.50)	(3.83)	(4.27)	(4.66)	(3.17)	(3.77)	(4.46)	(5.23)	(5.72)	(9.59)
50	*Target Met?*	*no*	*no*	*no*	*no*	*no*	*no*	*no*	*no*	*no*	*no*	*no*	*no*
51													

1 - Assumes Capital Charge will increase every 5 years. First increase will go into effect on Dec 1, 2022. Second increase is anticipated in 2027/28 and assumes that the City will issue $5M in new debt (combined water & sewer).
2 - Total debt service for New Bonds is estimated at $300,000 and is split evenly with the Sewer Utility.
3 - (Net Operating Revenue less Projected Grant Revenue) divided by (Total Debt Service)

3.3.12 Sewer Scenario #3: 25% Annual Rate Increases – Cash Flow Projection

Sewer Scenario #3 includes 25.0% annual rate increases. With *Sewer Scenario #3*, the Sewer Utility would meet debt service coverage by 2026/27 (line 49) and would be out of the operating deficit by 2026/27 (line 42). The Sewer Utility will likely draw down its reserves by 2024/25 but will meet its operating reserve fund targets by 2029/30 (line 46).

Table 44: Sewer Scenario #3: 25% Annual Rate Increases – Sewer Cash Flow Projection
City of Brisbane
Sewer Utility Rate Study 2022

		Budget	Projected	Years 1 -5: Proposition 218					Years 6 - 10: Extended Projection				
		2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33
1	Overall Revenue Adjustment			25.0%	25.0%	25.0%	25.0%	25.0%	4.0%	4.0%	4.0%	4.0%	4.0%
2	Rate Increase Effective			Jul 1, 2023	Jul 1, 2024	Jul 1, 2025	Jul 1, 2026	Jul 1, 2027	Jul 1, 2028	Jul 1, 2029	Jul 1, 2030	Jul 1, 2031	Jul 1, 2032
3													
4													
5	**BEGINNING FUND BALANCE**	$4,828,445	$3,591,447	$1,929,416	$508,072	($575,084)	($1,183,553)	($1,156,234)	$77,860	$1,151,772	$2,041,594	$2,718,738	$3,142,425
6													
7	**REVENUES**												
8	Sewer Service Charges	2,000,000	2,000,000	2,500,000	3,125,000	3,906,000	4,883,000	6,104,000	6,348,000	6,602,000	6,866,000	7,141,000	7,427,000
9	Investment Earnings	25,000	26,000	27,000	28,000	29,000	30,000	31,000	32,000	33,000	34,000	35,000	36,000
10	Sewer Connection Fees	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000
11	Account Open/Reconnections	1,500	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
12	Late Payment Charges	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000
13	Capital Charge (1)	182,500	267,500	352,500	352,500	352,500	352,500	502,500	502,500	502,500	502,500	502,500	502,500
14	Transfers from Other Funds	37,500	37,500	37,500	37,500	37,500	37,500	37,500	37,500	37,500	37,500	37,500	37,500
15	Less: Low Income Rate Assistance	(37,500)	(37,500)	(37,500)	(37,500)	(37,500)	(37,500)	(37,500)	(37,500)	(37,500)	(37,500)	(37,500)	(37,500)
16	Projected Grant Revenue	0	0	0	0	0	0	0	0	0	0	0	0
17	**Total Revenues**	2,217,000	2,303,500	2,889,500	3,515,500	4,297,500	5,275,500	6,647,500	6,892,500	7,147,500	7,412,500	7,688,500	7,975,500
18													
19	**EXPENSES**												
20	*Operating & Maintenance*												
21	Salaries	450,458	468,000	487,000	506,000	526,000	547,000	569,000	592,000	616,000	641,000	667,000	694,000
22	Payroll Taxes	6,188	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000
23	Benefits	245,581	255,000	265,000	276,000	287,000	298,000	310,000	322,000	335,000	348,000	362,000	376,000
24	Insurance	51,287	56,000	59,000	62,000	65,000	68,000	71,000	75,000	79,000	83,000	87,000	91,000
25	Supplies and Services	1,918,359	2,115,000	2,327,000	2,560,000	2,816,000	3,098,000	3,408,000	3,749,000	4,124,000	4,536,000	4,990,000	5,489,000
26	Admin Charges and Credit	463,781	482,000	501,000	521,000	542,000	564,000	587,000	610,000	634,000	659,000	685,000	712,000
27	Subtotal O&M	3,135,654	3,382,000	3,645,000	3,931,000	4,242,000	4,581,000	4,951,000	5,354,000	5,794,000	6,273,000	6,797,000	7,368,000
28													
29	Net Operating Revenues	(918,654)	(1,078,500)	(755,500)	(415,500)	55,500	694,500	1,696,500	1,538,500	1,353,500	1,139,500	891,500	607,500
30													
31	**Debt Service**												
32	2015 Utility Bonds	318,344	316,031	313,344	315,156	311,469	314,681	312,406	314,588	313,678	312,356	317,813	158,906
33	New Bonds (2)	0	0	0	0	0	0	150,000	150,000	150,000	150,000	150,000	150,000
34	Subtotal Debt Service	318,344	316,031	313,344	315,156	311,469	314,681	462,406	464,588	463,678	462,356	467,813	308,906
35													
36	**Capital Projects**	0	267,500	352,500	352,500	352,500	352,500	0	0	0	0	0	0
37													
38	**Total Expenses**	3,453,998	3,965,531	4,310,844	4,598,656	4,905,969	5,248,181	5,413,406	5,818,588	6,257,678	6,735,356	7,264,813	7,676,906
39													
40	**Net Revenues**	(1,236,998)	(1,662,031)	(1,421,344)	(1,083,156)	(608,469)	27,319	1,234,094	1,073,913	889,822	677,144	423,688	298,594
41													
42	**ENDING FUND BALANCE**	3,591,447	1,929,416	508,072	(575,084)	(1,183,553)	(1,156,234)	77,860	1,151,772	2,041,594	2,718,738	3,142,425	3,441,019
43													
44													
45	*Reserve Funds*												
46	Operating Reserve Target (25% of O&M)	783,900	845,500	911,300	982,800	1,060,500	1,145,300	1,237,800	1,338,500	1,448,500	1,568,300	1,699,300	1,842,000
47	*Target Met?*	*yes*	*yes*	*no*	*no*	*no*	*no*	*no*	*no*	*yes*	*yes*	*yes*	*yes*
48													
49	Debt Service Coverage - 1.25x (3)	(2.89)	(3.41)	(2.41)	(1.32)	0.18	2.21	3.67	3.31	2.92	2.46	1.91	1.97
50	*Target Met?*	*no*	*no*	*no*	*no*	*no*	*yes*	*yes*	*yes*	*yes*	*yes*	*yes*	*yes*
51													

1 - Assumes Capital Charge will increase every 5 years. First increase will go into effect on Dec 1, 2022. Second increase is anticipated in 2027/28 and assumes that the City will issue $5M in new debt (combined water & sewer).
2 - Total debt service for New Bonds is estimated at $300,000 and is split evenly with the Sewer Utility.
3 - (Net Operating Revenue less Projected Grant Revenue) divided by (Total Debt Service)

3.3.13 Sewer Scenario Comparison

Table 45 includes a summary of the proposed rate adjustments and the three financial goals for all three scenarios. Based on the proposed rate adjustments, only *Sewer Scenario #3: 25% Annual Rate Increases* would allow the Sewer Utility to meet its debt service coverage ratio and have positive net revenues by 2027/28.

Table 45: Sewer Scenario Comparison
City of Brisbane
Sewer Utility Rate Study 2022

GOAL 1 : MEET DEBT SERVICE COVERAGE

	Projected	Proposed				
	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28
Debt Service Coverage Ratio Required	1.25	1.25	1.25	1.25	1.25	1.25
Scenario 1: No Rate Increases	(3.41)	(4.01)	(4.89)	(5.94)	(6.95)	(7.71)
Target Met?	no	no	no	no	no	no
Scenario 2: 8% Annual Rate Increases	(3.41)	(3.50)	(3.83)	(4.27)	(4.66)	(3.17)
Target Met?	no	no	no	no	no	no
Scenario 3: 25% Annual Rate Increases	(3.41)	(2.41)	(1.32)	0.18	2.21	3.67
Target Met?	no	no	no	no	yes	yes

GOAL 2: MEET SEWER RESERVE FUND TARGET

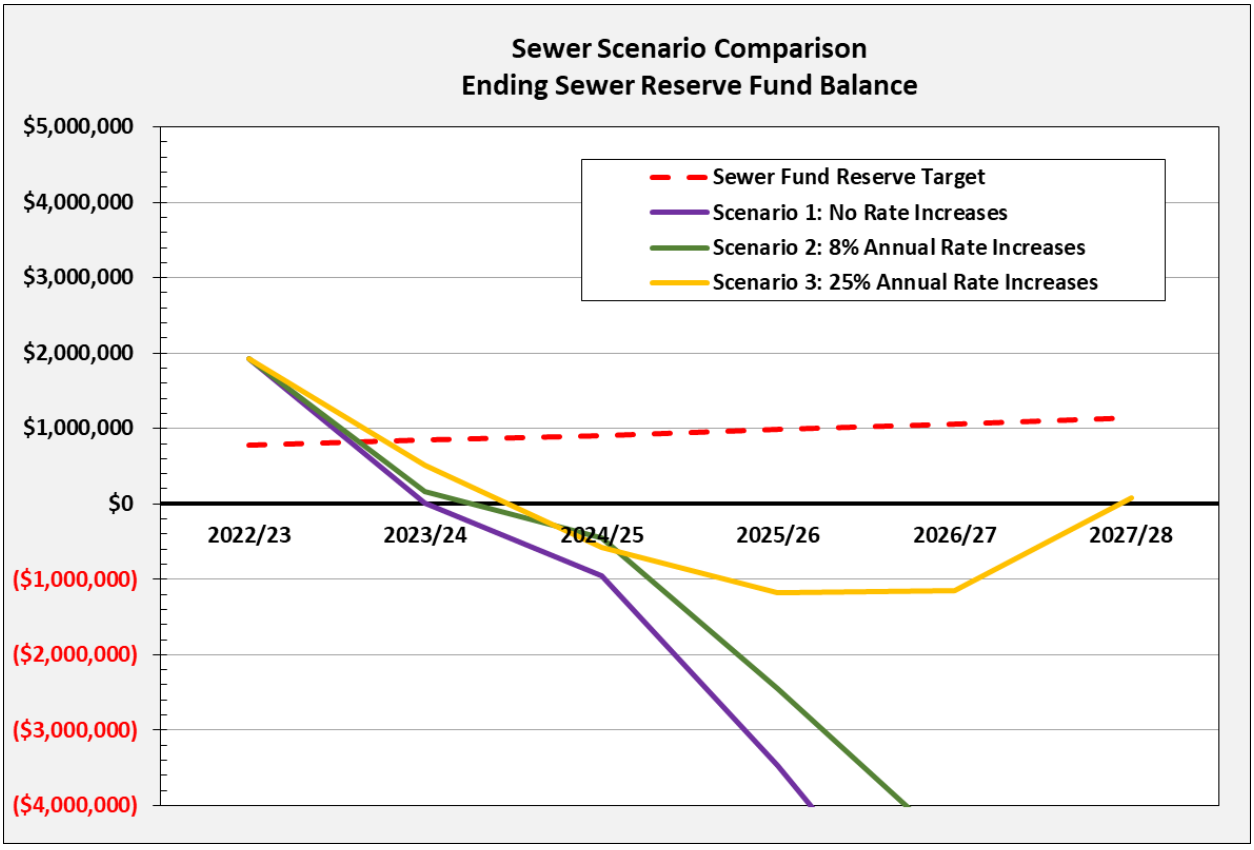
	Projected	Proposed				
	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28
Sewer Fund Reserve Target	$783,900	$845,500	$911,300	$982,800	$1,060,500	$1,145,300
Scenario 1: No Rate Increases	$1,929,416	$8,072	($950,084)	($3,464,553)	($6,320,234)	($9,040,140)
Target Met?	no	no	no	no	no	no
Scenario 2: 8% Annual Rate Increases	$1,929,416	$168,072	($457,084)	($2,451,553)	($4,585,234)	($6,515,140)
Target Met?	no	no	no	no	no	no
Scenario 3: 25% Annual Rate Increases	$1,929,416	$508,072	($575,084)	($1,183,553)	($1,156,234)	$77,860
Target Met?	no	no	no	no	no	no

GOAL 3: POSITIVE TOTAL NET REVENUES

	Projected	Proposed				
	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28
Scenario 1: No Rate Increases	($1,662,031)	($1,921,344)	($958,156)	($2,514,469)	($2,855,681)	($2,719,906)
Target Met?	no	no	no	no	no	no
Scenario 2: 8% Annual Rate Increases	($1,662,031)	($1,761,344)	($625,156)	($1,994,469)	($2,133,681)	($1,929,906)
Target Met?	no	no	no	no	no	no
Scenario 3: 25% Annual Rate Increases	($1,662,031)	($1,421,344)	($1,083,156)	($608,469)	$27,319	$1,234,094
Target Met?	no	no	no	no	yes	yes

Figure 8 graphically shows the projected total ending reserve fund balance under each scenario. The red dotted line represents the total reserve fund target. The purple line represents *Sewer Scenario #1: No Rate Increases.* The green line represents *Sewer Scenario #2: 8.0% Annual Rate Increases.* The yellow line represents *Sewer Scenario #3: 25.0% Annual Rate Increases*. It is projected that the Sewer Utility will reverse the operating deficit by the end of 2027/28 with *Sewer Scenario #3*.

Figure 8: Sewer Scenario Comparison - Ending Water Fund Reserve Fund Balance
City of Brisbane
Sewer Utility Rate Study 2022



3.4 Sewer Cost Allocation

The revenue requirements detailed in the previous section determine the amount of revenue to be recovered from sewer rates. The cost of service allocation determines how revenues will be recovered from customers based on their estimated impact on the sewer system. Proposition 218 requires that agencies providing "property-related services" (including sewer service) set rates and charges that are based on the cost of providing those services.

3.4.1 Overview of Sewer Cost Allocation Methodology

The determination of the sewer flows, sewer loadings, and the revenue requirements of the Sewer Utility provide the basis for performing the cost of service analysis. The concept of proportionate allocation to each customer class indicates that allocations should take into consideration the quantity of effluent a customer contributes in addition to the strength of sewer.

The key factors used to assign sewer utility costs are estimated effluent (flow) going to the wastewater treatment plant and effluent strengths, measured in biochemical oxygen demand (BOD) and total suspended solids (TSS). Higher levels of BOD or TSS typically equate to increased treatment costs. The total revenue requirement shown in the sewer cash flow projections is the net cost of providing service and is allocated to the flow, BOD, and TSS parameters. These allocations are then used as the basis to develop unit rates for the sewer parameters and to assign costs to each customer class in proportion to the sewer services rendered.

Using the 2021/22 budget as the base year, sewer expenses are allocated to the following categories (a) *Base*, (b) *Flow*, and (c) *Strength* which is typically measured in biochemical oxygen demand (BOD) and total suspended solids (TSS).

- *Base Costs:* Base costs represent the fixed expenditures of the sewer utility, including personnel costs and overhead expenses. These fixed costs are allocated based on the total number of sewer accounts or meters.

- *Flow Costs*: Volume- or flow-related costs that vary with the total quantity of wastewater collected. Because most agencies do not meter wastewater discharges, metered water consumption is used to estimate contributed average wastewater volume units of service.

- *Strength Costs:* Strength-related costs are those expenditures associated with the additional handling and treatment of high strength sewer. Sewer strength is typically measured in BOD and TSS. Increased levels of BOD or TSS typically equate to increased treatment costs.

3.4.2 Current Sewer Service Revenues – Fixed vs Variable Revenue Recovery

Table 46 summarizes the percentages of Sewer Service Revenues currently derived from the Fixed Charges vs. Variable Charges. On average, the City collects roughly 40.0% of total Sewer Service Revenues from the Fixed Charge and 60.0% from the Variable Charges. Based on input from staff, the City would like to transition to a 30% fixed / 70% variable revenue recovery because the largest expense for the Sewer Utility is treatment costs which vary each year based on the rates set by the City of San Francisco.

Table 46: Current Sewer Service Revenues – Fixed vs. Variable Revenue Recovery
City of Brisbane
Sewer Utility Rate Study 2022

	Fixed Charges	Variable Charges	Total Sewer Service Charge Revenues	% of Total
Total Revenues City vs. GVMID				
City	$506,195	$706,101	$1,212,295	59.8%
GVMID	$286,361	$526,929	$813,290	40.2%
Total Sewer Service Charge Revenues	$792,556	$1,233,030	$2,025,585	100.0%
% of Total	*39.1%*	*60.9%*	*100.0%*	
Total Revenues by Customer Class				
Residential	$689,664	$407,878	$1,097,542	54.2%
Commercial				
Standard	$88,842	$295,333	$384,175	19.0%
Medium	$3,306	$34,017	$37,323	1.8%
Heavy	$10,744	$495,801	$506,545	25.0%
Subtotal Commercial	$102,892	$825,151	$928,043	45.8%
Total Sewer Service Charge Revenues	$792,556	$1,233,030	$2,025,585	100%
% of Total	*39.1%*	*60.9%*	*100.0%*	

Source: Utility Billing Data 2018-2020 Water & sewer Export

3.4.3 Cost Allocation

Table 47 summarizes the cost allocation for a 30.0% fixed / 70.0% variable revenue recovery based on staff input. These allocations are then used as the basis to develop unit rates for each charge.

Table 47: Sewer Cost Allocation – 30% Fixed/70% Variable
City of Brisbane
Sewer Utility Rate Study 2022

	FY2022/23	Cost Allocation - %					Cost Allocation - $				
Expenses	Budget	Base	Flow	BOD	TSS	Total	Base	Flow	BOD	TSS	Total
Operating Expenses											
Salaries	$468,000	30%	23%	23%	23%	100%	$140,400	$109,200	$109,200	$109,200	$468,000
Payroll Taxes	$6,000	30%	23%	23%	23%	100%	$1,800	$1,400	$1,400	$1,400	$6,000
Benefits	$255,000	30%	23%	23%	23%	100%	$76,500	$59,500	$59,500	$59,500	$255,000
Insurance	$56,000	30%	23%	23%	23%	100%	$16,800	$13,067	$13,067	$13,067	$56,000
Supplies and Services	$2,115,000	30%	23%	23%	23%	100%	$634,500	$493,500	$493,500	$493,500	$2,115,000
Admin Charges and Credit	$482,000	30%	23%	23%	23%	100%	$144,600	$112,467	$112,467	$112,467	$482,000
Subtotal Operating Expenses	$3,382,000						$1,014,600	$789,133	$789,133	$789,133	$3,382,000
Debt Service											
2015 Utility Bonds	$316,031	30%	23%	23%	23%	100%	$94,809	$73,741	$73,741	$73,741	$316,031
New Bonds	$0	30%	23%	23%	23%	100%	$0	$0	$0	$0	$0
Subtotal Debt Service	$316,031						$94,809	$73,741	$73,741	$73,741	$316,031
Total Allocation	**$3,698,031**	**30.0%**	**23.3%**	**23.3%**	**23.3%**	**100.0%**	**$1,109,409**	**$862,874**	**$862,874**	**$862,874**	**$3,698,031**

3.5 Sewer Rate Design

The cost of service analysis calculated the revenue requirements for each customer class. The next step is rate design which determines how those revenue requirements are collected from each class based on their estimated impact on the sewer system.

The proposed sewer rate structure is as follows:

- Fixed Charges
  - All customer classes will continue to pay the same bimonthly flat charge.

- Variable Charges
  - Eliminate tiered rates for all customers and transition to single tier based on customer strength. Tiers are typically utilized for water rates to encourage conservation and are less relevant to sewer flow.
  - Residential customers will continue to only be charged for winter water use (October through January) while commercial customers will be charged for all consumption.

3.5.1 Sewer Flow and Loadings

Table 48 summarizes the flow and strength characteristics by customer class. Sewer flow is based on the City's 2019/20 billing data. The strength factors and sewer loadings are based on the guidelines from the State Water Resources Control Council (SWRCB) Revenue Program and standards utilized by other wastewater agencies.

Table 48: Sewer Flow and Loadings
City of Brisbane
Sewer Utility Rate Study 2022

	BASE	FLOW		BOD		TSS	
Customer Class	Accounts	Flow (ccf) (1)	Flow (MG)	Strength (mg/l)	Loadings (lbs)	Strength (mg/l)	Loadings (lbs)
Residential	1,669	89,719	67.1	165	92,350	165	92,350
Standard Commercial	208	37,290	27.9	200	46,525	200	46,525
Medium Commercial	6	4,261	3.2	300	7,974	300	7,974
Heavy Commercial	28	41,651	31.2	400	103,933	400	103,933
Total	1,911	172,921	129.3		250,783		250,783

1 - Based on 2019/20 billing data

3.5.2 Projected Sewer Accounts & Sewer Flow

Table 49 shows a projection of sewer accounts, flow, and loadings for the rate study period through 2027/28. Growth is estimated at 0.5% each year while sewer flow is anticipated to increase by 2.0% annually beginning in 2022/23.

Table 49: Projected Growth, Sewer Flow, and Loadings
City of Brisbane
Sewer Utility Rate Study 2022

	Actual	PROJECTED			PROJECTED - RATE STUDY PERIOD				
	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28
NUMBER OF ACCOUNTS									
Increase %		0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%
Residential	1,669	1,677	1,686	1,694	1,703	1,711	1,720	1,728	1,737
Standard Commercial	215	216	217	218	219	220	222	223	224
Medium Commercial	8	8	8	8	8	8	8	8	8
Heavy Commercial	26	26	26	26	27	27	27	27	27
Total Sewer Accounts	1,918	1,928	1,937	1,947	1,957	1,966	1,976	1,986	1,996
SEWER FLOW (ccf)									
Increase %		0.00%	0.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Residential	89,719	90,000	90,000	92,000	94,000	96,000	98,000	100,000	102,000
Standard Commercial	37,290	37,000	37,000	38,000	39,000	40,000	41,000	42,000	43,000
Medium Commercial	4,261	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000
Heavy Commercial	41,651	42,000	42,000	43,000	44,000	45,000	46,000	47,000	48,000
Total Estimated Flow (ccf)	172,921	173,000	173,000	177,000	181,000	185,000	189,000	193,000	197,000
SEWER LOADINGS (mg/l)									
Increase %		0.00%	0.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Residential	92,350	92,000	92,000	94,000	96,000	98,000	100,000	102,000	104,000
Standard Commercial	46,525	47,000	47,000	48,000	49,000	50,000	51,000	52,000	53,000
Medium Commercial	7,974	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000
Heavy Commercial	103,933	104,000	104,000	106,000	108,000	110,000	112,000	114,000	116,000
Total Estimated Loadings	250,783	251,000	251,000	256,000	261,000	266,000	271,000	276,000	281,000

3.6 Sewer Rate Design for Scenario #3

3.6.1 Scenario #3: Sewer Rate Derivation

Table 50 details the rate derivation for the Fixed Charge for *Sewer Scenario #3* based on a 30.0% fixed / 70.0% variable revenue recovery. For the rate study period, the "Fixed Charge Revenue Requirement" for each year is divided by the "Total Number of Accounts" to derive a "Bimonthly Fixed Charge per Account." The proposed 2023/24 Fixed Charge is $64.20, representing a $4.67 (or 6.8%) decrease from the current Fixed Charge of $68.87.

The rates have been calculated to increase total Sewer Service Revenues by 25.0% each year. However, for 2023/24, the proposed revenue adjustments in the cash flow do not directly correlate to the same increase in rates because of the shift to a 30% fixed/70% variable revenue recovery.

Table 50: Sewer Flat Charge Rate Derivation
City of Brisbane
Sewer Utility Rate Study 2022

	Current	PROJECTED - RATE STUDY PERIOD				
		2023/24	2024/25	2025/26	2026/27	2027/28
TOTAL REVENUE REQUIREMENT (1)		$2,500,000	$3,125,000	$3,906,000	$4,883,000	$6,104,000
Fixed/Variable Allocation						
Fixed Charge		30.0%	30.0%	30.0%	30.0%	30.0%
Variable Charge		70.0%	70.0%	70.0%	70.0%	70.0%
FIXED SERVICE CHARGE CALCULATION						
Fixed Revenue Requirement		$750,000	$937,500	$1,171,800	$1,464,900	$1,831,200
Total Number of Accounts	1,918	1,947	1,957	1,966	1,976	1,986
Bimonthly Flat Charge per Account	**$68.87**	**$64.20**	**$79.86**	**$99.32**	**$123.54**	**$153.66**
% Change		*-6.8%*	*24.4%*	*24.4%*	*24.4%*	*24.4%*

1 – Table 44, Line 5

3.6.2 Sewer Scenario #3: Variable Rate Derivation

Table 51 demonstrates how the Variable Charge for 2023/24 is calculated for *Sewer Scenario #3* based on a 30.0% fixed / 70.0% variable revenue recovery. The total "Variable Charge Recovery $" is first apportioned to flow, BOD and TSS (50.0% to Flow, 25.0 % to BOD, and.25.0% to SS). The City of San Francisco currently does not charge based on effluent strength but may do so in the future. Therefore, costs are evenly split between flow costs and strength costs. Next, the "Cost Allocation $" for each parameter is then divided by its "Total Annual Loadings" (Table 49) to derive unit costs. The unit costs for the remaining years in the study period are derived in the same manner, and the tables are included in the appendix.

Table 51: Sewer Scenario #3 - Sewer Variable Unit Rate Derivation for 2023/24
City of Brisbane
Sewer Utility Rate Study 2022

Allocation to Variable Charges			
FY2023/24 Revenue Requirement (1)		$2,500,000	
Variable Charge Recovery %		70%	
Variable Charge Recovery $		$1,750,000	
Allocation to Flow, BOD, SS	Flow	BOD	SS
Cost Allocation %	50%	25%	25%
Cost Allocation $	$875,000	$438,000	$438,000
Total Annual Loadings	181,000	261,000	261,000
Units	ccf	lbs	lbs
Unit Cost	$4.83 per ccf	$1.68 per lb	$1.68 per lb

1 - Table 44, Line 10

3 - Table 49

The unit rates from Table 51 are multiplied by each customer class's respective loadings to determine a "Total Variable Rate per ccf" for each customer class, see Table 52. The Variable Rate is the sum of the flow, BOD, and TSS unit costs. For Residential customers, the proposed "Total Variable Rate" for 2023/24 is $8.29 per ccf. The Variable Rates for the remaining years in the study period are derived in the same manner and the tables are included in the appendix.

Table 52: Sewer Scenario #3 - Volume Rate by Customer Classes for 2023/24
City of Brisbane
Sewer Utility Rate Study 2022

	Wastewater Strength (mg/l)		Unit Rates ($ per ccf or lb) (1)			Total
			Flow	BOD	SS	Variable Rate
Customer Class	BOD	SS	$4.83	$1.68	$1.68	per ccf
Residential	165	165	$4.83	$1.73	$1.73	$8.29
Standard Commercial	200	200	$4.83	$2.09	$2.09	$9.02
Medium Commercial	300	300	$4.83	$3.14	$3.14	$11.12
Heavy Commercial	400	400	$4.83	$4.19	$4.19	$13.21

1 - Table 51

3.6.3 Sewer Scenario #3: Proposed Bimonthly Sewer Rates

Table 53 summarizes the proposed bimonthly sewer rates. The proposed Flat Charges are the same for all customers. The proposed Variable Charges vary based on customer class.

Table 53: Proposed Bi-Monthly Sewer Rates
City of Brisbane
Sewer Utility Rate Study 2022

	RATE STUDY PERIOD				
	July 1, 2023	July 1, 2024	July 1, 2025	July 1, 2026	July 1, 2027
RESIDENTIAL (1)					
Flat Charge	$64.20	$79.86	$99.32	$123.54	$153.66
Variable Charge (per ccf) (2)	$8.29	$10.15	$12.43	$15.23	$18.67
COMMERCIAL					
Standard					
Flat Charge	$64.20	$79.86	$99.32	$123.54	$153.66
Variable Charge (per ccf)	$9.02	$11.04	$13.53	$16.59	$20.33
Medium					
Flat Charge	$64.20	$79.86	$99.32	$123.54	$153.66
Variable Charge (per ccf)	$11.12	$13.61	$16.68	$20.45	$25.07
Heavy					
Flat Charge	$64.20	$79.86	$99.32	$123.54	$153.66
Variable Charge (per ccf)	$13.21	$16.18	$19.83	$24.32	$29.81

1 - Residential bill is based on winter consumption (Oct, Nov, Dec & Jan)

2 - 1 ccf (hundred cubic feet) = 748 gallons

3.6.4 Sewer Scenario #3: Sewer Bill Impacts

Table 54 includes a sample of bill impacts for residential and commercial customers. For 2023/24, the proposed revenue adjustments in the cash flow do not directly correlate to the same increase in rates because the cost of service analysis reallocates the required revenue proportionate to each customer class's total flow. Therefore, actual bill impacts will vary based on customer class and consumption.

Table 54: Sewer Scenario #3 – Sample Bimonthly Sewer Bills
City of Brisbane
Sewer Utility Rate Study 2022

RESIDENTIAL BILL IMPACTS

	Bimonthly Use (ccf)	Current Bill	Proposed				
			July 1, 2023	July 1, 2024	July 1, 2025	July 1, 2026	July 1, 2027
Residential - 4 ccf							
Fixed Charge		$68.87	$64.20	$79.86	$99.32	$123.54	$153.66
Variable Charge							
Tier 1: 0 - 8 ccf	4	$11.24	$33.16	$40.59	$49.72	$60.93	$74.67
Tier 2: Over 8 ccf	0	$0.00					
Subtotal Variable Charge	4	$11.24					
Total Bimonthly Sewer Bill		$80.11	$97.36	$120.45	$149.04	$184.47	$228.33
$ Change			*$17.25*	*$23.09*	*$28.59*	*$35.43*	*$43.86*
% Change			*21.5%*	*23.7%*	*23.7%*	*23.8%*	*23.8%*
Residential - 10 ccf							
Fixed Charge		$68.87	$64.20	$79.86	$99.32	$123.54	$153.66
Variable Charge							
Tier 1: 0 - 8 ccf	8	$22.48	$82.89	$101.47	$124.29	$152.32	$186.67
Tier 2: Over 8 ccf	2	$15.32					
Subtotal Variable Charge	10	$37.80					
Total Bimonthly Sewer Bill		$106.67	$147.09	$181.33	$223.61	$275.86	$340.33
$ Change			*$40.42*	*$34.24*	*$42.28*	*$52.25*	*$64.47*
% Change			*37.9%*	*23.3%*	*23.3%*	*23.4%*	*23.4%*
Residential - 20 ccf							
Fixed Charge		$68.87	$64.20	$79.86	$99.32	$123.54	$153.66
Variable Charge							
Tier 1: 0 - 8 ccf	8	$22.48	$165.78	$202.94	$248.58	$304.64	$373.34
Tier 2: Over 8 ccf	12	$91.92					
Subtotal Variable Charge	20	$114.40					
Total Bimonthly Sewer Bill		$183.27	$229.98	$282.80	$347.90	$428.18	$527.00
$ Change			*$46.71*	*$52.82*	*$65.10*	*$80.29*	*$98.81*
% Change			*25.5%*	*23.0%*	*23.0%*	*23.1%*	*23.1%*

STANDARD COMMERCIAL

	Bimonthly Use (ccf)	Current Bill	Proposed				
			Jan 1, 2023	July 1, 2023	July 1, 2024	July 1, 2025	July 1, 2026
Standard Commercial - 10 ccf							
Fixed Charge		$68.87	$64.20	$79.86	$99.32	$123.54	$153.66
Variable Charge							
Tier 1: 0 - 8 ccf	8	$30.72	$90.22	$110.45	$135.31	$165.85	$203.27
Tier 2: Over 8 ccf	2	$15.32					
Subtotal Variable Charge	10	$46.04					
Total Bimonthly Sewer Bill		$114.91	$154.42	$190.31	$234.63	$289.39	$356.93
$ Change			*$39.51*	*$35.89*	*$44.32*	*$54.76*	*$67.54*
% Change			*34.4%*	*23.2%*	*23.3%*	*23.3%*	*23.3%*
Standard Commercial - 20 ccf							
Fixed Charge		$68.87	$64.20	$79.86	$99.32	$123.54	$153.66
Variable Charge							
Tier 1: 0 - 8 ccf	8	$30.72	$180.44	$220.90	$270.62	$331.70	$406.53
Tier 2: Over 8 ccf	12	$91.92					
Subtotal Variable Charge	20	$122.64					
Total Bimonthly Sewer Bill		$191.51	$244.64	$300.76	$369.94	$455.24	$560.19
$ Change			*$53.13*	*$56.12*	*$69.18*	*$85.30*	*$104.95*
% Change			*27.7%*	*22.9%*	*23.0%*	*23.1%*	*23.1%*

MEDIUM COMMERCIAL

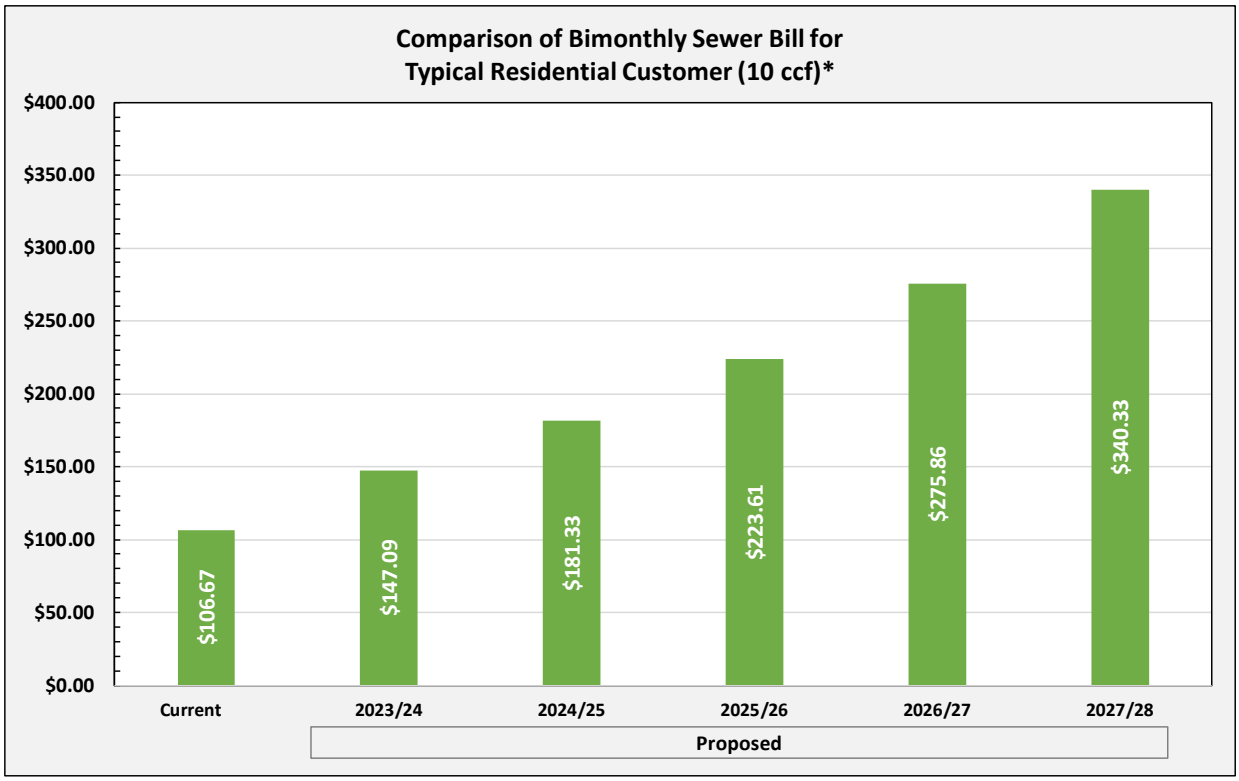
	Bimonthly Use (ccf)	Current Bill	Proposed				
			Jan 1, 2023	July 1, 2023	July 1, 2024	July 1, 2025	July 1, 2026
Medium Commercial - 30 ccf							
Fixed Charge		$68.87	$64.20	$79.86	$99.32	$123.54	$153.66
Variable Charge							
Tier 1: 0 - 8 ccf	8	$45.44	$333.47	$408.32	$500.40	$613.50	$752.06
Tier 2: Over 8 ccf	22	$214.28					
Subtotal Variable Charge	30	$259.72					
Total Bimonthly Sewer Bill		$328.59	$397.67	$488.18	$599.72	$737.04	$905.72
$ Change			*$69.08*	*$90.51*	*$111.54*	*$137.32*	*$168.68*
% Change			*21.0%*	*22.8%*	*22.8%*	*22.9%*	*22.9%*
Medium Commercial - 50 ccf							
Fixed Charge		$68.87	$64.20	$79.86	$99.32	$123.54	$153.66
Variable Charge							
Tier 1: 0 - 8 ccf	8	$45.44	$555.78	$680.53	$834.00	$1,022.50	$1,253.43
Tier 2: Over 8 ccf	42	$409.08					
Subtotal Variable Charge	50	$454.52					
Total Bimonthly Sewer Bill		$523.39	$619.98	$760.39	$933.32	$1,146.04	$1,407.09
$ Change			*$96.59*	*$140.41*	*$172.93*	*$212.72*	*$261.05*
% Change			*18.5%*	*22.6%*	*22.7%*	*22.8%*	*22.8%*

HEAVY COMMERCIAL

	Bimonthly Use (ccf)	Current Bill	Proposed				
			Jan 1, 2023	July 1, 2023	July 1, 2024	July 1, 2025	July 1, 2026
Heavy Commercial - 80 ccf							
		$68.87	$64.20	$79.86	$99.32	$123.54	$153.66
Variable Charge							
Tier 1: 0 - 8 ccf	8	$60.72	$1,056.75	$1,294.10	$1,586.33	$1,945.21	$2,384.85
Tier 2: Over 8 ccf	72	$848.51					
Subtotal Variable Charge	80	$909.23					
Total Bimonthly Sewer Bill		$978.10	$1,120.95	$1,373.96	$1,685.65	$2,068.75	$2,538.51
$ Change			*$142.85*	*$253.01*	*$311.69*	*$383.10*	*$469.77*
% Change			*14.6%*	*22.6%*	*22.7%*	*22.7%*	*22.7%*
Heavy Commercial - 100 ccf							
Fixed Charge		$68.87	$64.20	$79.86	$99.32	$123.54	$153.66
Variable Charge							
Tier 1: 0 - 8 ccf	8	$60.72	$1,320.94	$1,617.63	$1,982.91	$2,431.51	$2,981.07
Tier 2: Over 8 ccf	92	$1,084.91					
Subtotal Variable Charge	100	$1,145.63					
Total Bimonthly Sewer Bill		$1,214.50	$1,385.14	$1,697.49	$2,082.23	$2,555.05	$3,134.73
$ Change			*$170.64*	*$312.35*	*$384.75*	*$472.82*	*$579.68*
% Change			*14.1%*	*22.5%*	*22.7%*	*22.7%*	*22.7%*

Figure 9 shows the proposed bimonthly sewer bill for a typical residential customer using 10 ccf per 2-month period during each year of the five-year Proposition 218 period.

Figure 9: Comparison of Bimonthly Sewer Bill for Typical Residential Customer
City of Brisbane
Sewer Utility Rate Study 2022

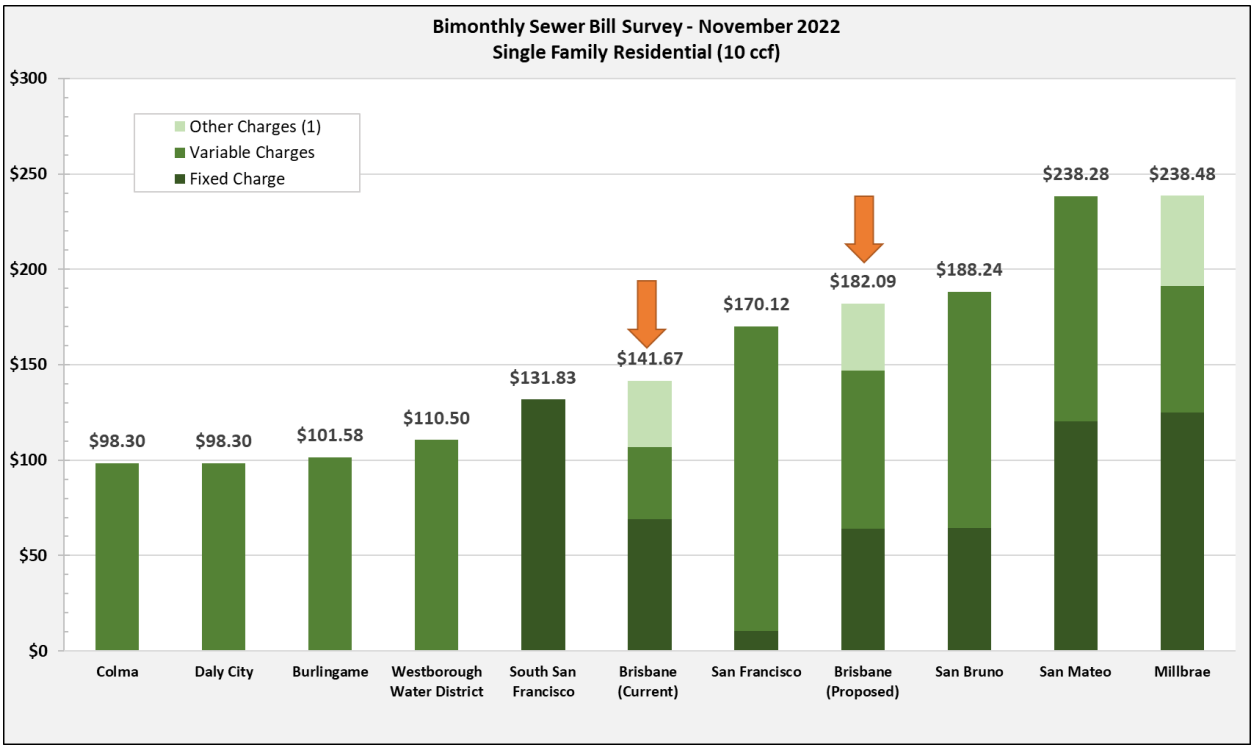


* Does not include Capital Charge

3.6.5 Regional Sewer Bill Survey

Figure 10 compares the City's current typical bimonthly residential sewer bill using 10 ccf over a 2-month period with those of surrounding agencies. The chart also includes the proposed 2023/24 bill which includes half of the Capital Projects Charge that is evenly split with the Water Bill ($70/2 = $35). It should be noted that many of the agencies shown on the chart will likely also be increasing their sewer rates over the next few years.

Figure 10: Bimonthly Sewer Bill Survey
City of Brisbane
Sewer Utility Rate Study 2022



3.7 Sewer Low Income Discount

To comply with Proposition 218's cost of service requirements, rate revenues from one group of customers cannot be used to subsidize the rates of another group. Instead, the City could utilize non-rate revenues, such as General Fund revenues, interest earnings, or delinquent penalties to fund a low income discount program. Moreover, to eliminate the administrative burden of the City developing its own low-income criteria, it is recommended that the City provide assistance to low income residents who meet the criteria of other local assistance programs such as PG&E's CARE program.

The low income discount program should be reviewed annually by the City to determine whether the Sewer Utility has adequate non-rate revenues to fund the program. Because non-sewer rate revenues will be used to pay for the discount, the amount of the low income discount is based on the discretion of the City.

Table 55 calculates a sample low income discount for sewer that is funded from a General Fund transfer. This transfer is estimated at $37,500 for the current year. The City estimates that approximately 400 customers or about 24.0% of all accounts could qualify for a discount based on the PG&E's CARE program requirements. Based on 400 customers, the table shows a bimonthly discount of $15.60 per customer. For an average residential customer (10 ccf bimonthly use), this equates to a 10.6% discount off the proposed bimonthly bill for July 1, 2023.

Table 55: Sewer Low Income Discount
City of Brisbane
Sewer Utility Rate Study 2022

Total Number of Residential Sewer Customers	1,669
Estimated Number of Customers Eligible for Discount	400
Total Est. Sewer Low Income Discount Revenue	$37,500
Annual Discount per Customer	$93.80
Bimonthly Discount per Customer	$15.60
Proposed Average Sewer Bill for July 1, 2023	$147.09
Proposed Average Sewer Bill with Discount for July 1, 2023	$131.49
% of Discount	*10.6%*

SECTION 4: UTILITY FUND 540 – COMBINED CASH FLOW

4.1 Combined Cash Flow Projection

Table 56 includes a combined Water Utility and Sewer Utility cash flow. The proposed rate increases will rectify the current operating deficit and restore financial stability to Utility Fund 540. With the proposed 9% annual water rate increases and 25% annual sewer rate increases, Fund 540 will meet debt service coverage by 2026/27. Fund 540 is projected to obtain positive net revenues by 2027/28 and will meet its fund reserve targets by 2028/29.

Table 56: Combined Water and Sewer Cash Flow Projection
City of Brisbane
Water and Sewer Utility Rate Study 2022

	Budget	Projected	Years 1 -5: Proposition 218					Years 6 - 10: Extended Projection				
	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33
BEGINNING FUND BALANCE	$7,656,890	$6,575,087	$4,573,056	$2,853,712	$1,513,556	$699,087	$569,406	$1,959,999	$3,202,412	$4,275,734	$5,147,377	$5,764,565
REVENUES												
Water Sales	3,000,000	3,000,000	3,270,000	3,564,000	3,885,000	4,235,000	4,616,000	4,985,000	5,384,000	5,815,000	6,280,000	6,782,000
Sewer Service Charges	2,000,000	2,000,000	2,500,000	3,125,000	3,906,000	4,883,000	6,104,000	6,348,000	6,602,000	6,866,000	7,141,000	7,427,000
Drought Reserve Charge	100,000	100,000	100,000	100,000	100,000	100,000	0	0	0	0	0	0
Capital Charge	365,000	535,000	705,000	705,000	705,000	705,000	1,005,000	1,005,000	1,005,000	1,005,000	1,005,000	1,005,000
Investment Earnings	50,000	51,000	52,000	53,000	54,000	55,000	56,000	57,000	58,000	59,000	60,000	61,000
Account Open/Reconnection Fees	3,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000
Late Payment Charges	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
Sewer & Meter Connection Fees	23,000	23,000	25,000	27,000	29,000	31,000	34,000	36,000	39,000	42,000	45,000	48,000
Fire Service Charges	115,000	115,000	125,000	136,000	148,000	161,000	175,000	189,000	204,000	220,000	238,000	257,000
Altamar Meter Reading Fee	7,500	8,000	9,000	10,000	11,000	12,000	13,000	14,000	15,000	16,000	17,000	18,000
Transfers from Other Funds	75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000
Less: Low Income Rate Assistance	(75,000)	(75,000)	(75,000)	(75,000)	(75,000)	(75,000)	(75,000)	(75,000)	(75,000)	(75,000)	(75,000)	(75,000)
Grant Revenue	0	0	0	0	0	0	0	0	0	0	0	0
Total Revenues	5,673,500	5,846,000	6,800,000	7,734,000	8,852,000	10,196,000	12,017,000	12,648,000	13,321,000	14,037,000	14,800,000	15,612,000
EXPENSES												
Operating & Maintenance												
Salaries	949,583	987,000	1,027,000	1,068,000	1,110,000	1,154,000	1,200,000	1,248,000	1,298,000	1,350,000	1,404,000	1,460,000
Payroll Taxes	13,300	13,000	13,000	13,000	13,000	13,000	13,000	13,000	13,000	13,000	13,000	13,000
Benefits	523,326	544,000	566,000	589,000	613,000	637,000	663,000	689,000	717,000	745,000	775,000	806,000
Insurance	110,225	121,000	127,000	133,000	140,000	147,000	154,000	162,000	170,000	179,000	188,000	197,000
Supplies and Services	3,585,356	4,047,000	4,452,000	4,898,000	5,388,000	5,927,000	6,520,000	7,172,000	7,889,000	8,678,000	9,546,000	10,501,000
Admin Charges and Credit	936,825	969,000	1,003,000	1,038,000	1,075,000	1,113,000	1,152,000	1,192,000	1,233,000	1,276,000	1,321,000	1,367,000
Subtotal O&M	6,118,616	6,681,000	7,188,000	7,739,000	8,339,000	8,991,000	9,702,000	10,476,000	11,320,000	12,241,000	13,247,000	14,344,000
Net Operating Revenue	(445,116)	(835,000)	(388,000)	(5,000)	513,000	1,205,000	2,315,000	2,172,000	2,001,000	1,796,000	1,553,000	1,268,000
Debt Service												
2015 Utility Bonds	636,688	632,031	626,344	630,156	622,469	629,681	624,406	629,588	627,678	624,356	635,813	317,906
New Bonds (1)	0	0	0	0	0	0	300,000	300,000	300,000	300,000	300,000	300,000
Subtotal Debt Service	636,688	632,031	626,344	630,156	622,469	629,681	924,406	929,588	927,678	924,356	935,813	617,906
Capital Projects	0	535,000	705,000	705,000	705,000	705,000	0	0	0	0	0	0
Total Expenses	6,755,303	7,848,031	8,519,344	9,074,156	9,666,469	10,325,681	10,626,406	11,405,588	12,247,678	13,165,356	14,182,813	14,961,906
Total Net Revenues	(1,081,803)	(2,002,031)	(1,719,344)	(1,340,156)	(814,469)	(129,681)	1,390,594	1,242,413	1,073,322	871,644	617,188	650,094
ENDING FUND BALANCE	6,575,087	4,573,056	2,853,712	1,513,556	699,087	569,406	1,959,999	3,202,412	4,275,734	5,147,377	5,764,565	6,414,659
Reserve Funds												
Operating Reserve Target (25% of O&M)	1,529,700	1,670,300	1,797,000	1,934,800	2,084,800	2,247,800	2,425,500	2,619,000	2,830,000	3,060,300	3,311,800	3,586,000
Drought Reserve ($700,000)	447,499	547,499	647,499	747,499	847,499	947,499	947,499	947,499	947,499	947,499	947,499	947,499
Total Combined Reserves	1,977,199	2,217,799	2,444,499	2,682,299	2,932,299	3,195,299	3,372,999	3,566,499	3,777,499	4,007,799	4,259,299	4,533,499
Target Met?	*yes*	*yes*	*yes*	*no*	*no*	*no*	*no*	*yes*	*yes*	*yes*	*yes*	*yes*
Debt Service Coverage - 1.25x (2)	-0.70	-1.32	-0.62	-0.01	0.82	1.91	2.50	2.34	2.16	1.94	1.66	2.05
Target Met?	*no*	*no*	*no*	*no*	*no*	*yes*	*yes*	*yes*	*yes*	*yes*	*yes*	*yes*

1 - Total debt service for New Bonds is estimated at $300,000

2 - (Net Operating Revenue less Projected Grant Revenue) divided by (Total Debt Service)

4.2 Combined Sample Bill Impacts

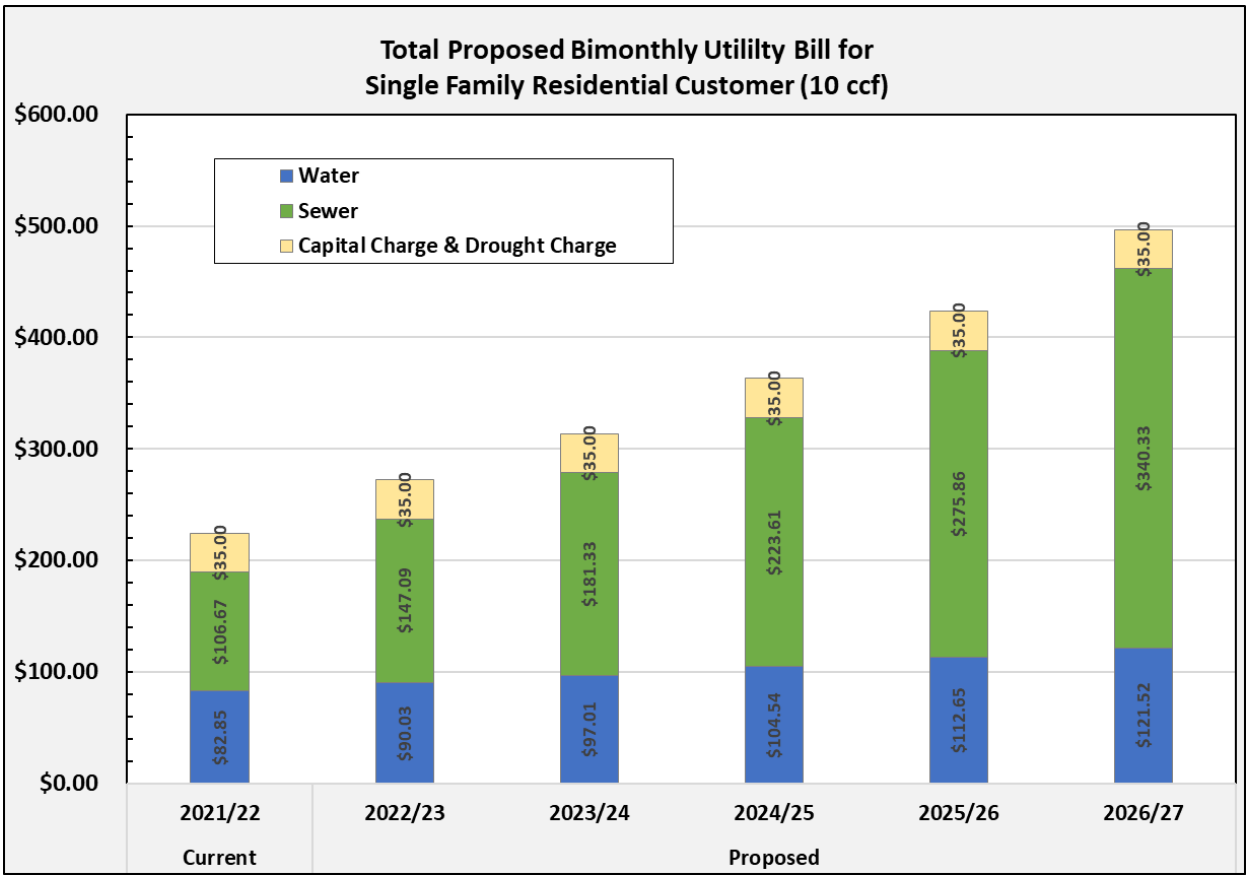
Table 57 includes a sample of residential bill impacts for a combined water and sewer bill based on the proposed rate increases. Combined, the average residential customer who uses 10 ccf bimonthly will see a $47.60 or 25.1% increase from their current bill. Actual bill impacts will vary based on customer class and consumption per billing period.

Table 57: Sample Residential Combined Bill Impacts
City of Brisbane
Water and Sewer Utility Rate Study 2022

	Bimonthly Use (ccf)	Current Bill	Proposed				
			2023/24	2024/25	2025/26	2026/27	2027/28
Residential: 5/8" meter, 4 ccf							
Water Bill	4	$37.47	$52.24	$56.45	$61.00	$65.92	$71.36
Sewer Bill	4	$80.11	$97.36	$120.45	$149.04	$184.47	$228.33
Total Utility Bill		$117.58	$149.60	$176.90	$210.03	$250.39	$299.69
$ Change			*$32.02*	*$27.30*	*$33.14*	*$40.35*	*$49.30*
% Change			*27.2%*	*18.2%*	*18.7%*	*19.2%*	*19.7%*
Residential: 5/8" meter, 10 ccf							
Water Bill	10	$82.85	$90.03	$97.01	$104.54	$112.65	$121.52
Sewer Bill	10	$106.67	$147.09	$181.33	$223.61	$275.86	$340.33
Total Utility Bill		$189.52	$237.12	$278.34	$328.15	$388.52	$461.85
$ Change			*$47.60*	*$41.22*	*$49.81*	*$60.37*	*$73.33*
% Change			*25.1%*	*17.4%*	*17.9%*	*18.4%*	*18.9%*
Residential: 5/8" meter, 20 ccf							
Water Bill	20	$193.35	$216.53	$231.68	$247.92	$265.30	$284.01
Sewer Bill	20	$183.27	$229.98	$282.80	$347.90	$428.18	$527.00
Total Utility Bill		$376.62	$446.51	$514.47	$595.81	$693.49	$811.01
$ Change			*$69.89*	*$67.97*	*$81.34*	*$97.68*	*$117.52*
% Change			*18.6%*	*15.2%*	*15.8%*	*16.4%*	*16.9%*

Figure 11 below shows the total bimonthly utility bill for the next five years, including Water, Sewer, Capital Project, and Drought Charges for a typical residential customer using 10 ccf per 2-month billing period. The current combined bill is $224.52. With the proposed rate increases, the combined bill is projected to increase to $496.85 by 2026/27.

Figure 11: Bimonthly Combined Utility Bill
City of Brisbane
Water Utility Rate Study 2022



APPENDIX A:

SEWER TABLES

Appendix 1: Sewer Variable Unit Rate Derivation

2023/24

Allocation to Variable Charges			
FY2023/24 Revenue Requirement (1)	$2,500,000		
Variable Charge Recovery %	70%		
Variable Charge Recovery $	$1,750,000		
Allocation to Flow, BOD, SS	Flow	BOD	SS
Cost Allocation %	50%	25%	25%
Cost Allocation $	$875,000	$438,000	$438,000
Total Annual Loadings (2)	181,000	261,000	261,000
Units	ccf	lbs	lbs
Unit Cost	$4.83 per ccf	$1.68 per lb	$1.68 per lb

1 - Table 34, Line 10
2 - Table 38
3 - Table 39

2024/25

Allocation to Variable Charges			
FY2024/25 Revenue Requirement (1)	$3,125,000		
Variable Charge Recovery %	70%		
Variable Charge Recovery $	$2,187,500		
Allocation to Flow, BOD, SS	Flow	BOD	SS
Cost Allocation %	50%	25%	25%
Cost Allocation $	$1,094,000	$547,000	$547,000
Total Annual Loadings (2)	185,000	266,000	266,000
Units	ccf	lbs	lbs
Unit Cost	$5.91 per ccf	$2.06 per lb	$2.06 per lb

2025/26

Allocation to Variable Charges			
FY2025/26 Revenue Requirement (1)	$3,906,000		
Variable Charge Recovery %	70%		
Variable Charge Recovery $	$2,734,200		
Allocation to Flow, BOD, SS	Flow	BOD	SS
Cost Allocation %	50%	25%	25%
Cost Allocation $	$1,367,000	$684,000	$684,000
Total Annual Loadings (2)	189,000	271,000	271,000
Units	ccf	lbs	lbs
Unit Cost	$7.23 per ccf	$2.52 per lb	$2.52 per lb

2026/27

Allocation to Variable Charges			
FY2026/27 Revenue Requirement (1)	$4,883,000		
Variable Charge Recovery %	70%		
Variable Charge Recovery $	$3,418,100		
Allocation to Flow, BOD, SS	Flow	BOD	SS
Cost Allocation %	50%	25%	25%
Cost Allocation $	$1,709,000	$855,000	$855,000
Total Annual Loadings (2)	193,000	276,000	276,000
Units	ccf	lbs	lbs
Unit Cost	$8.85 per ccf	$3.10 per lb	$3.10 per lb

2027/28

Allocation to Variable Charges			
FY2027/28 Revenue Requirement (1)	$6,104,000		
Variable Charge Recovery %	70%		
Variable Charge Recovery $	$4,272,800		
Allocation to Flow, BOD, SS	Flow	BOD	SS
Cost Allocation %	50%	25%	25%
Cost Allocation $	$2,136,000	$1,068,000	$1,068,000
Total Annual Loadings (2)	197,000	281,000	281,000
Units	ccf	lbs	lbs
Unit Cost	$10.84 per ccf	$3.80 per lb	$3.80 per lb

Appendix 2: Volume Rate by Customer Class

2023/24

Customer Class	Wastewater Strength (mg/l) BOD	SS	Unit Rates ($ per ccf or lb) (1) Flow $4.83	BOD $1.68	SS $1.68	Total Variable Rate per ccf
Residential	165	165	$4.83	$1.73	$1.73	$8.29
Standard Commercial	200	200	$4.83	$2.09	$2.09	$9.02
Medium Commercial	300	300	$4.83	$3.14	$3.14	$11.12
Heavy Commercial	400	400	$4.83	$4.19	$4.19	$13.21

2024/25

Customer Class	Wastewater Strength (mg/l) BOD	SS	Unit Rates ($ per ccf or lb) Flow $5.91	BOD $2.06	SS $2.06	Total Variable Rate per ccf
Residential	165	165	$5.91	$2.12	$2.12	$10.15
Standard Commercial	200	200	$5.91	$2.57	$2.57	$11.04
Medium Commercial	300	300	$5.91	$3.85	$3.85	$13.61
Heavy Commercial	400	400	$5.91	$5.13	$5.13	$16.18

2025/26

Customer Class	Wastewater Strength (mg/l) BOD	SS	Unit Rates ($ per ccf or lb) Flow $7.23	BOD $2.52	SS $2.52	Total Variable Rate per ccf
Residential	165	165	$7.23	$2.60	$2.60	$12.43
Standard Commercial	200	200	$7.23	$3.15	$3.15	$13.53
Medium Commercial	300	300	$7.23	$4.72	$4.72	$16.68
Heavy Commercial	400	400	$7.23	$6.30	$6.30	$19.83

2026/27

Customer Class	Wastewater Strength (mg/l) BOD	SS	Unit Rates ($ per ccf or lb) Flow $8.85	BOD $3.10	SS $3.10	Total Variable Rate per ccf
Residential	165	165	$8.85	$3.19	$3.19	$15.23
Standard Commercial	200	200	$8.85	$3.87	$3.87	$16.59
Medium Commercial	300	300	$8.85	$5.80	$5.80	$20.45
Heavy Commercial	400	400	$8.85	$7.73	$7.73	$24.32

2027/28

Customer Class	Wastewater Strength (mg/l) BOD	SS	Unit Rates ($ per ccf or lb) Flow $10.84	BOD $3.80	SS $3.80	Total Variable Rate per ccf
Residential	165	165	$10.84	$3.91	$3.91	$18.67
Standard Commercial	200	200	$10.84	$4.74	$4.74	$20.33
Medium Commercial	300	300	$10.84	$7.11	$7.11	$25.07
Heavy Commercial	400	400	$10.84	$9.48	$9.48	$29.81

1 - Table 12