



## CITY COUNCIL AGENDA REPORT

**Meeting Date:** 12/15/2022

**From:** Stuart Schillinger, Assistant City Manager

**Subject:** Review Projected Water and Sewer Rate Increases and Direct Staff to begin the 218 Process to increase Rates

### **Community Goal/Result**

Community Prudent

Safe Community

Ecological Sustainability

### **Purpose**

Ensure the City's water and sewer rates reflect the full cost of providing clean water and effective wastewater disposal to the various users while encouraging conservation of resources.

### **Recommendation**

Direct staff to begin the Proposition 218 process for increasing water and sewer rates.

### **Background**

On August 13, 2001, the City Council discussed Ordinance No. 458, which set the process for determining future water and sewer rate increases.

Subsequent to passing Ordinance No. 458, the California Supreme Court ruled that water and sewer charges are property related and subject to Proposition 218, the Right to Vote on Taxes Act. As such, we are required to notify property owners regarding any increase and hold a public hearing at least 45 days later to allow time for community input. As a courtesy to our customers, we also notify renters of the forthcoming change in rates.

The last rate study the City had performed was in 2000. The City hired FCSG and Carollo Engineers to complete a rate structure study and Capital Improvement Plan. The City has been working from this rate study for the last twenty years. The City has taken the rates recommended in the Plan and adopted them based on need. The last operational rate increase went into effect in 2012. Additionally, the City has implemented its first capital improvement charge to pay for bonds issued in 2015. This was the first of an anticipated series of Capital Rate Charges in order to pay for the water and wastewater Capital Improvement Plan. The plan is to sell bonds approximately every five years over 20 years. The bonds would have a duration

Review Projected Water and Sewer Rate Increases and Direct Staff to begin the 218 Process to increase Rates

of 20 years so after 20 years there will be a set Capital Charge that will only be reviewed to ensure it can continue to pay for the necessary Capital Improvements.

A drought reserve charge was implemented in 2019. This would ensure that during a drought the City would not need to raise rates as customers lowered their water usage as other water providers do.

In 2022 the City Council approved the second of four increases for capital improvements.

Since 2012 the amount we have paid for water has increased from \$2.69 per unit to \$4.50 per unit, an increase of 67%. Wastewater treatment has gone from \$4.81 per unit to \$11.63 per unit, an increase of 242%. The City has been able to keep operational rates constant due to an increase in usage among users and the use of one-time revenue sources (i.e. Connection fees).

In April 2021 the City retained the firm Lechowicz and Tseng to review the City's operational water and sewer rates.

Over the past 18 months, the City Council Infrastructure Subcommittee has worked with Lechowicz and Tseng to develop the proposed rate increases presented this evening.

## **Discussion**

### Water and Sewer rates to pay for the operations of the system

Currently the City's water and sewer bill has a number of lines:

- Water Service Charge – This is the charge for having a meter connected to the system and for the City to ensure that we have enough treated water available to provide the full capacity of that meter and all other meters at any given time.
- Water Usage – This is based on the number of units of water used during the billing period (Billing is every two months). 1 unit equals 100 cubic ft. of water or approximately 748 gallons
- Sewer Charge – For residential customers it is based on the average water usage from October through January. It changes every April. For commercial customers it is based on the actual water used during the billing period.
- Capital Project Charge – This is to pay for capital projects. The current charge is for the repayment of the 2015 water and sewer bonds. It is anticipated that this charge will be increased every 5 years between 2015 and 2035. City Council previously approved a plan to create a 20 year capital project plan paid for by the Capital Project Charge. Overtime the Capital Project Charge will get to a rate which will provide a source of funding for Capital Projects without a need for large increases. The charge is based on the amount of water used between February and June.

- Drought Contingency Fund – This charge was adopted on February 1, 2018. It was set to create a reserve fund to cover loss of revenue during a drought. Traditionally, utilities have increased rates during droughts since lower water usage, due to customers conserving water, results in lower revenues but often not as large of a decrease in costs. The reason for this is approximately 70% of our costs are fixed but 70% of revenue is dependent on water usage. The City anticipates that the Drought Reserve will be fully funded by 2025 if a drought does not occur.

Lechowicz and Tseng reviewed the City's Water Service Charge, Water Usage, and Sewer Charge. The firm reviewed the City's rates, usage and revenue produced from the rates. Their analysis showed that for FY 2020/21 and FY 2021/22 the Utility Fund was operating at a loss. The City used fund balance to cover these losses. However, in the long term the Utility Fund should be able to operate at least at a breakeven and possibly at net positive.

There are two reasons the Utility Fund has operated at a net loss over the past two years. First, there has been a decrease of water usage among our commercial accounts due to COVID. Many of our main users had a reduction in their water usage. Six of largest 25 users in 2018/19 reduced their water usage by 12,300 units during 2019/20. Additionally, the cost of wastewater treatment has increased. For wastewater treatment the cost per unit has increased from \$7.26 per unit in 2019/20 to \$11.63 in 2021/22. This is an increase of 60% in two years.

This means it is time for the City to look at increasing its rates for both water and wastewater. One proposal from our consultant is to increase the base charge for water service from \$22.67 to \$33.52 for 5/8<sup>th</sup> inch meters (the prevalent meter for residential and small business use). This will help the City move from a variable rate for water usage to a fixed so that we will not be as impacted by reduced water usage in the future. This is an increase of 50% in the first year and the proposal is 9% each year thereafter through 2026/27. In 2026/27 the Fixed Charge would be \$46.38.

The proposal is also to reduce the number of tiers of charges for water users. The reason for this is to ensure that users are not subsidizing other users. State law over the past 20 years has been interpreted by the courts to be stricter on the use of tier rates and using them to allow smaller users to pay less of the cost of the overall system. Therefore, the proposal is to reduce the number of tiers from six to two.

Since the cost of wastewater, treatment has increased so dramatically over the years the increase needed for sewer is higher. The proposal is to decrease the flat charge in the first year by 7% but increase it by 25% each year through 2027/28. The proposal for the variable charge is to combine both tiers into one and increase the variable charge to \$8.29 for each unit used and then increase it by 25% for each year through 2027/28. The flat charge would range from

\$64.20 in 2023/24 to \$153.66 in 2027/28. The Variable Charge for residential customers would range from \$8.29 in 2023/24 to \$18.67 in 2027/28.

If Council approves this proposal, we would probably still reduce our cash reserves for fiscal years 2023/24 through 2026/27 but would see a replenishment of reserves in 2027/28.

As stated in the background the City has not increased its operational rate since 2012. By controlling costs, increases to usage in the early years, and one-time revenue sources the City has been able to postpone needed increases until this year. The City reviewed the rates and determined due to recessions, COVID, and increases for the drought contingency fund and capital projects it was better to delay the increases. If the City had increased the rates incrementally throughout the last 10 years the average customer who uses 10 units of water every two months would have paid an additional \$5,100 more over the decade.

#### Low Income Rate Assistance Program

The City offers all users who are enrolled in the PG&E CARE program the ability to be enrolled in the City's Low Income Rate Assistance (LIRA) Program. Over the years the percentage reduction in rates has increased. As the City Council increased rates it determined it did not want to increase water and sewer rates on low-income individuals. However, there is no LIRA reduction for either the Capital Charge or Drought Contingency Charge. The reason for this is an absolute dollar amount was being raised by these rates. The decrease in revenue due to the LIRA program is offset by the City's General Fund. This is because, according to State Law, users can not offset the cost for other users. Currently, the City spends approximately \$40,000 a year from the General Fund for the LIRA program. The current reductions are as follows:

Water Service 36.75% discount  
Water Use 49.90% discount  
Sewer 42.40% discount  
Fire Service 36.75% discount

If the City Council wishes to allocate the same dollar amount in the future then a discount of 25% on the bill would do this. If the Council wishes to allocate additional General Fund dollars to this program it can increase the amount of the discount. Staff would recommend setting a flat discount rate for the bill instead of different discount rates for each type service.

#### Proposition 218 Process

As stated in the background we will need to mail a letter letting our property owners and our utility users know about the proposed rate increase. If more than 50% of the property owners and utility users protest the rate increase it cannot be imposed and the City will not be able to

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increase the rates to ensure the continued ability to provide clean drinking water and safe conveyance of wastewater to the treatment plan.

**Fiscal Impact**

	<b>Current Bill</b>	<b>Proposed Rates – July 1, 2023</b>
<b>4 units</b>	Water Charge - \$22.67 Water Usage – \$14.80 Sewer Charge - \$80.11 Drought Reserve -\$2.32	Water Charge - \$33.35 Water Usage - \$18.89 Sewer Charge -\$97.36 Drought Reserve -\$2.32
<b>10 units</b>	Water Charge - \$22.67 Water Usage - \$60.18 Sewer Charge - \$106.67 Drought Reserve \$2.32	Water Charge-\$33.35 Water Usage - \$56.68 Sewer Charge - \$147.09 Drought Reserve -\$2.32
<b>20 units</b>	Water Charge - \$22.67 Water Usage - \$ 170.68 Sewer Charge - \$183.27 Drought Reserve \$6.99	Water Charge- \$33.35 Water Usage - \$183.18 Sewer Charge - \$229.98 Drought Reserve - \$6.99
<b>100 units irrigation – 2 inch meter</b>	Water Charge – \$92.47 Water Usage -\$1,225.46 Sewer Charge \$0 Drought Reserve \$102.14	Water Charge - \$88.95 Water Usage - \$1,131.64 Sewer Charge - \$0 Drought Reserve - \$102.14

**Measure of Success**

The City is able to provide clean-safe drinking water and effectively disposes of wastewater as economically as possible while being financially sustainable.

*Stuart Schillinger*

Stuart Schillinger, Assistant City Manager

Attachment Report from Lechowicz and Tseng

*Clayton L. Holstine*

Clay Holstine, City Manager



# **CITY OF BRISBANE**

## **Water and Sewer Utility Rate Study**

**DRAFT REPORT**  
**December 7, 2022**



**LECHOWICZ + TSENG**  
MUNICIPAL CONSULTANTS

909 Marina Village Parkway #135  
Alameda, CA 94501  
(510) 545-3182  
[www.LTmuniconsultants.com](http://www.LTmuniconsultants.com)



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## SECTION 1: INTRODUCTION

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### 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 XIII C and XIII D 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:

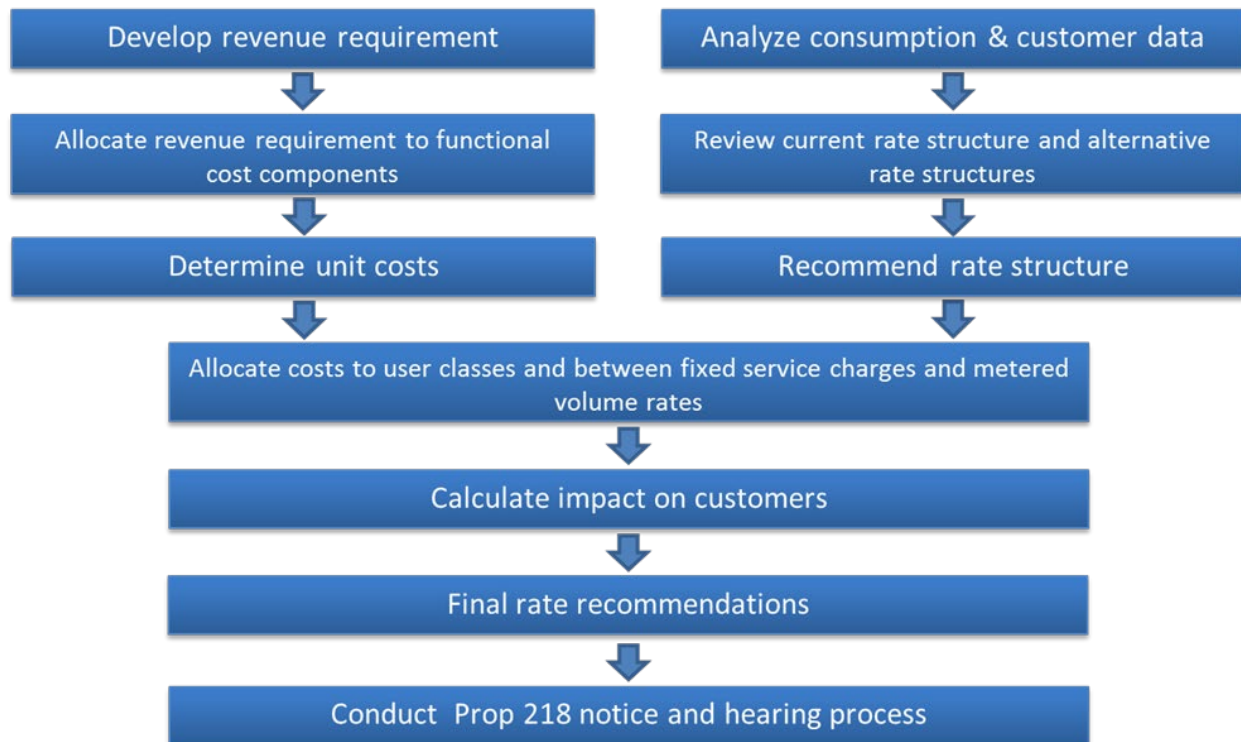
1. **Cost of Service** – Revenues derived from the fee or charge cannot exceed the funds required to provide the service. In essence, fees cannot exceed the “cost of service”.
2. **Intended Purpose** – Revenues derived from the fee or charge can only be used for the purpose for which the fee was imposed.
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**

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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**

<b>RESIDENTIAL WATER RATES</b>		
<b>FIXED CHARGES</b>		
<u>Meter Size</u>		<u>Bimonthly Charge</u>
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
<b>CONSUMPTION CHARGES</b>		
<u>Meter Size</u>	<u>Tier</u>	<u>Bimonthly Charge</u>
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**

<b>COMMERCIAL WATER RATES</b>		
<b>FIXED CHARGES</b>		
<u>Meter Size</u>		<u>Bimonthly Charge</u>
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
<b>CONSUMPTION CHARGES</b>		
<u>Meter Size</u>	<u>Tier</u>	<u>Bimonthly Charge</u>
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**

<b>IRRIGATION WATER RATES</b>		
<b>FIXED CHARGES</b>		
<u>Meter Size</u>		<u>Bimonthly Charge</u>
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
<b>CONSUMPTION CHARGES</b>		
<u>Meter Size</u>	<u>Tier</u>	<u>Bimonthly Charge</u>
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
<b>CITY</b>									
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%
<b>GVMID</b>									
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%
<b>Customer Class</b>									
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%
<b>TOTAL WATER ACCOUNTS</b>	<b>1,409</b>	<b>156</b>	<b>192</b>	<b>164</b>	<b>80</b>	<b>33</b>	<b>4</b>	<b>2,038</b>	<b>100.0%</b>

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**

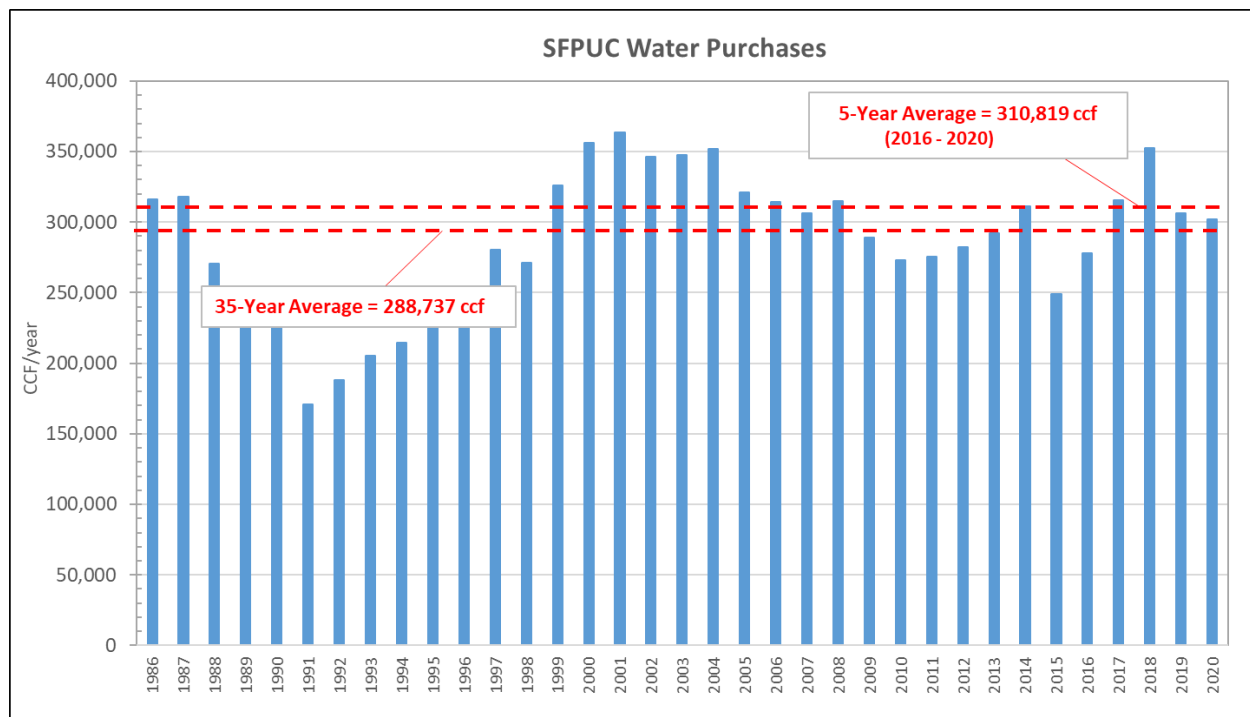
Calendar Year	2018	2019	2020	3-Year Average	% of Total
<b>CITY</b>					
Single Family Residential	56,169	55,666	61,134	57,656	20.4%
Multi-Family Residential	15,312	16,603	17,437	16,451	5.8%
Commercial/Government	33,983	32,443	28,959	31,795	11.2%
Landscape	37,177	31,786	39,283	36,082	12.7%
Hydrant	0	0	22,998	7,666	2.7%
Total City	142,641	136,498	169,811	149,650	52.9%
Percent Change		-4%	24%		
<b>GVMID</b>					
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%		
<b>TOTAL</b>					
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%
<b>TOTAL WATER USE</b>	<b>286,731</b>	<b>270,309</b>	<b>292,013</b>	<b>283,018</b>	<b>100.0%</b>
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**

<b>Fund</b>	<b>Beginning Balance as of June 30, 2021</b>
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: Proprietary 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	2020/21	2021/22
<b>WATER ONLY (1)</b>				
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
<u>Drought Reserve Charge</u>	<u>\$95,481</u>	<u>\$120,000</u>	<u>\$100,000</u>	<u>\$100,000</u>
<b>Total Water Only</b>	<b>\$3,340,862</b>	<b>\$3,212,500</b>	<b>\$2,992,500</b>	<b>\$3,242,500</b>
<b>SEWER ONLY (2)</b>				
40820 Sewer Service Charges	\$2,188,866	\$2,200,000	\$2,000,000	\$2,000,000
40821 <u>Sewer Connection Fees</u>	<u>\$123,706</u>	<u>\$3,000</u>	<u>\$3,000</u>	<u>\$3,000</u>
<b>Total Sewer Only</b>	<b>\$2,312,572</b>	<b>\$2,203,000</b>	<b>\$2,003,000</b>	<b>\$2,003,000</b>
<b>GVMID ONLY (3)</b>				
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 <u>ERAF</u>	<u>\$134</u>	<u>\$100</u>	<u>\$100</u>	<u>\$100</u>
<b>Total GVMID</b>	<b>\$32,918</b>	<b>\$30,700</b>	<b>\$30,700</b>	<b>\$30,700</b>
<b>ALL OTHER REVENUES (4)</b>				
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 <u>Transfers from Other Funds</u>	<u>\$43,000</u>	<u>\$50,000</u>	<u>\$75,000</u>	<u>\$75,000</u>
<b>Total All Other Revenues</b>	<b>\$629,172</b>	<b>\$428,100</b>	<b>\$428,100</b>	<b>\$428,100</b>
<b>TOTAL REVENUES</b>	<b>\$6,315,524</b>	<b>\$5,874,300</b>	<b>\$5,454,300</b>	<b>\$5,704,300</b>

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 2018/19	Budget		
		2019/20	2020/21	2021/22
<b>WATER REVENUES</b>				
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
<u>All Other Revenues (2)</u>	<u>\$314,586</u>	<u>\$214,050</u>	<u>\$214,050</u>	<u>\$214,050</u>
Total	\$3,655,448	\$3,426,550	\$3,206,550	\$3,456,550
<i>Percent Change</i>		-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			Avg Annual Increase
		2019/20	2020/21	2021/22	
Salaries	\$176,372	\$270,136	\$369,070	\$383,832	
<i>Percent Change</i>	12.9%	53.2%	36.6%	4.0%	21.5%
Payroll Taxes	\$2,642	\$3,884	\$5,308	\$5,522	
<i>Percent Change</i>	13.1%	47.0%	36.7%	4.0%	20.2%
Benefits	\$112,905	\$180,750	\$186,854	\$217,088	
<i>Percent Change</i>	28.0%	60.1%	3.4%	16.2%	17.8%
Insurance	\$26,657	\$28,196	\$45,594	\$45,764	
<i>Percent Change</i>	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	
<i>Percent Change</i>	4.8%	1.7%	12.2%	-0.9%	3.2%
Admin Charges and Credits	\$300,162	\$323,897	\$322,357	\$346,290	
<i>Percent Change</i>	7.0%	7.9%	-0.5%	7.4%	3.6%
<b>TOTAL FUND 1110 OPERATING EXPENSES</b>	<b>\$1,711,033</b>	<b>\$1,918,160</b>	<b>\$2,176,599</b>	<b>\$2,235,080</b>	
<i>Percent Change</i>	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			Avg Annual Increase	2021/22 Budget per Utility (2)
		2019/20	2020/21	2021/22		
Salaries	\$180,809	\$179,236	\$333,150	\$345,879		\$115,293
<i>Percent Change</i>	-5.3%	-0.9%	85.9%	3.8%	17.6%	
Payroll Taxes	\$3,987	\$2,306	\$4,584	\$4,769		\$1,590
<i>Percent Change</i>	39.2%	-42.2%	98.8%	4.0%	4.6%	
Benefits	\$98,172	\$95,450	\$153,452	\$181,974		\$60,658
<i>Percent Change</i>	0.8%	-2.8%	60.8%	18.6%	16.7%	
Insurance	\$15,567	\$16,406	\$39,376	\$39,521		\$13,174
<i>Percent Change</i>	-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
<i>Percent Change</i>	41.8%	5.5%	-0.1%	10.8%	4.0%	
Admin Charges and Credits	\$303,900	\$335,321	\$341,554	\$380,262		\$126,754
<i>Percent Change</i>	-2.0%	10.3%	1.9%	11.3%	5.8%	
<b>TOTAL GVMID UTILITY OPERATING EXPENSES</b>	<b>\$1,708,239</b>	<b>\$1,795,263</b>	<b>\$2,037,171</b>	<b>\$2,243,645</b>		<b>\$747,882</b>
<i>Percent Change</i>	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 utilities (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	2020/21	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	<u>\$401,462</u>	<u>\$435,670</u>	<u>\$436,209</u>	<u>\$473,044</u>
<b>TOTAL WATER OPERATING EXPENSES</b>	<b>\$2,280,446</b>	<b>\$2,516,581</b>	<b>\$2,855,656</b>	<b>\$2,982,962</b>
<i>Percent Change</i>	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	<u>\$473,044</u>	3.0%	<u>\$487,000</u>	<u>\$502,000</u>	<u>\$517,000</u>	<u>\$533,000</u>	<u>\$549,000</u>	<u>\$565,000</u>
<b>TOTAL WATER OPERATING EXPENSES</b>	<b>\$2,982,962</b>		<b>\$3,299,000</b>	<b>\$3,543,000</b>	<b>\$3,808,000</b>	<b>\$4,097,000</b>	<b>\$4,410,000</b>	<b>\$4,751,000</b>
<i>Percent Change</i>	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.

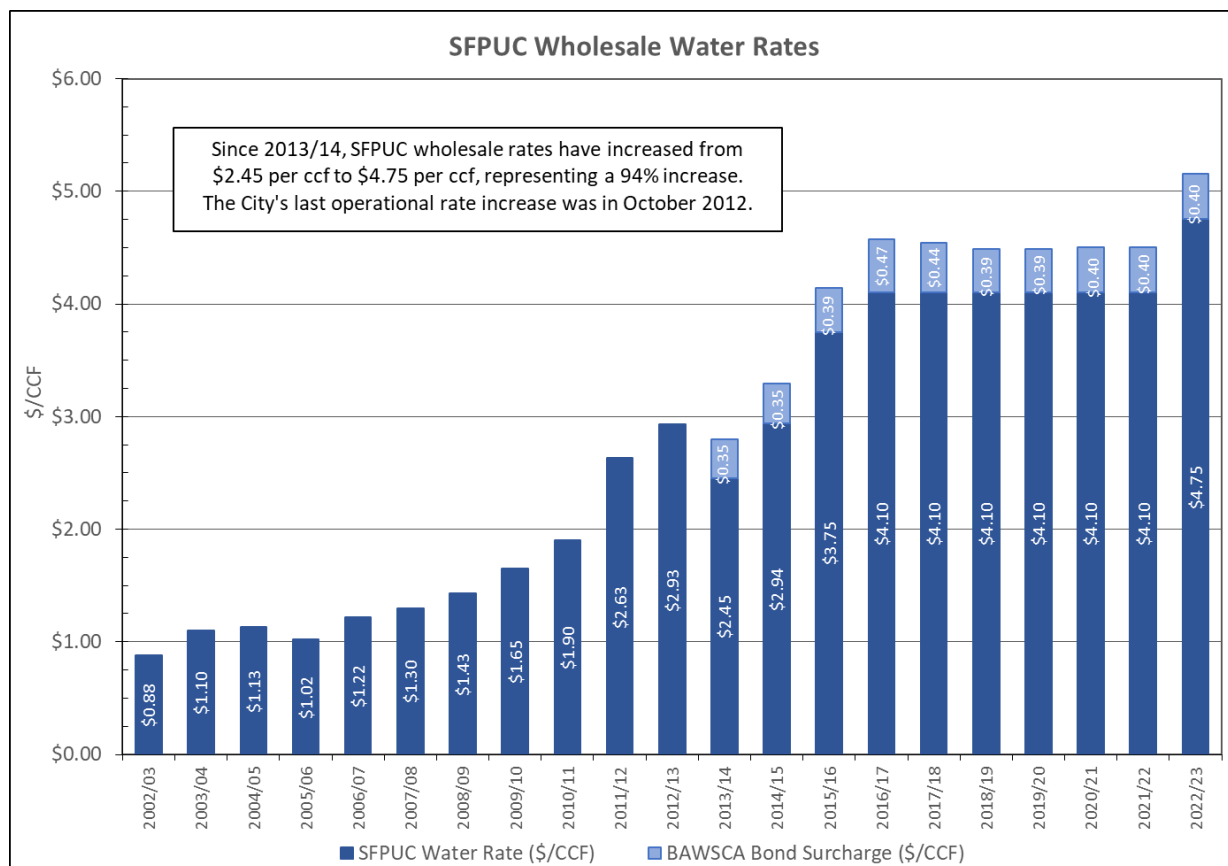
**Table 13: SFPUC Water Purchase Costs**  
**City of Brisbane**  
**Water Utility Rate Study 2022**

	Budget				Projected 2022/23
	2018/19	2019/20	2020/21	2021/22	
<b>Estimated SFPUC Rate (\$ per ccf) (1)</b>	\$4.49	\$4.49	\$4.50	\$4.50	\$5.15
<i>% Increase</i>		0.0%	0.2%	0.0%	14.5%
<b>Estimated Total Water Purchased (ccf)</b>	352,347	306,221	302,003	302,003	311,063
<i>% Increase</i>		-13.1%	-1.4%	0.0%	3.0%
<b>Total Water Purchases</b>	\$1,582,038	\$1,374,932	\$1,359,014	\$1,359,014	\$1,602,566
<i>% Increase</i>		-13.1%	-1.2%	0.0%	17.9%
<b>Total Water Operating Expenses</b>	\$2,280,446	\$2,516,581	\$2,855,656	\$2,982,962	\$3,299,000
<i>% Increase</i>		10.4%	13.5%	4.5%	10.6%
<b>% of Water Purchases / Total Operating Expenses</b>	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 2018/19	Budget		
		2019/20	2020/21	2021/22
<b>WATER REVENUES</b>				
Water Sales Revenues	\$3,050,110	\$2,950,000	\$2,750,000	\$3,000,000
<u>Other Revenues</u>	<u>\$605,338</u>	<u>\$476,550</u>	<u>\$456,550</u>	<u>\$456,550</u>
Total	\$3,655,448	\$3,426,550	\$3,206,550	\$3,456,550
<b>WATER EXPENSES</b>				
Operating	\$2,280,446	\$2,516,581	\$2,855,656	\$2,982,962
<u>Debt Service</u>	<u>\$312,156</u>	<u>\$313,906</u>	<u>\$315,156</u>	<u>\$318,344</u>
Subtotal	\$2,592,602	\$2,830,487	\$3,170,812	\$3,301,305
<b>TOTAL NET REVENUES</b>	<b>\$1,062,846</b>	<b>\$596,063</b>	<b>\$35,738</b>	<b>\$155,245</b>

### 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**

<b>Fiscal Year Ending June 30</b>	<b>Principal</b>	<b>Interest</b>	<b>Total Debt Service (1)</b>
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	<u>\$340,000</u>	<u>\$6,375</u>	<u>\$346,375</u>
<b>TOTALS</b>	<b>\$8,310,000</b>	<b>\$3,584,471</b>	<b>\$11,894,471</b>

(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 2021/22	Projected 2022/23	Years 1 -5: Proposition 218					Years 6 - 10: Extended Projection					
			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%	0.0%	0.0%
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	Jul 1, 2032
4													
5 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)	(\$13,118,860)
6													
7 REVENUES													
8 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	3,000,000
9 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	20,000
10 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	115,000
11 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	8,000
12 Drought Reserve Charge	100,000	100,000	100,000	100,000	100,000	100,000	0	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	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	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	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	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	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)	(37,500)
19 Grant Revenue	0	0	0	0	0	0	0	0	0	0	0	0	0
20 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	3,677,500
21													
22 EXPENSES													
23 <i>Operating &amp; Maintenance</i>													
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	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	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	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	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	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	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	6,976,000
31													
32 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)	(3,298,500)
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	159,000
36 New Bonds	0	0	0	0	0	0	150,000	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	309,000
38													
39 Capital Projects	0	267,500	352,500	352,500	352,500	352,500	0	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	7,285,000
42													
43 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)	(3,607,500)
44													
45 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)	(16,726,360)
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	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	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	2,691,499
52 Target Met?	yes	yes	yes	yes	no	no	no	no	no	no	no	no	no
53													
54 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	-10.67
55 Target Met?	yes	no	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)

### 2.3.9 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 2021/22	Projected 2022/23	Years 1 - 5: Proposition 218					Years 6 - 10: Extended Projection					
			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%	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	Jul 1, 2032
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	\$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	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	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	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	18,000
12 Drought Reserve Charge	100,000	100,000	100,000	100,000	100,000	100,000	0	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	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	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	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	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	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)	(37,500)
19 Grant Revenue	0	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	7,323,500
21													
22 EXPENSES													
23 <u>Operating &amp; Maintenance</u>													
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	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	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	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	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	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	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	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	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	159,000
36 New Bonds	0	0	0	0	0	0	150,000	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	309,000
38													
39 Capital Projects	0	267,500	352,500	352,500	352,500	352,500	0	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	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	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	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	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	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	2,691,499
52 Target Met?	yes	yes	yes	yes	yes	yes	yes	no	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	1.12
55 Target Met?	yes	no	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 2021/22	Projected 2022/23	Years 1 - 5: Proposition 218					Years 6 - 10: Extended Projection				
			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
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
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
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
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
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
39 Capital Projects	0	267,500	352,500	352,500	352,500	352,500	0	0	0	0	0	0
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
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
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
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
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

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 2021/22	Projected 2022/23	Proposed				
			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 <i>Target Met?</i>	1.49 yes	0.77 no	0.27 no	(0.57) no	(1.51) no	(2.48) no	(2.32) no
Scenario 2: 8% Annual Rate Increases <i>Target Met?</i>	1.49 yes	0.77 no	1.08 no	1.09 no	1.12 no	1.12 no	0.87 no
Scenario 3: 9% Annual Rate Increases <i>Target Met?</i>	1.49 yes	0.77 no	1.17 no	1.30 yes	1.47 yes	1.62 yes	1.34 yes

#### GOAL 2: MEET RESERVE FUND TARGETS

	Budget 2021/22	Projected 2022/23	Proposed				
			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 <i>Target Met?</i>	\$2,643,640 yes	\$2,062,640 yes	\$1,214,640 yes	\$81,640 no	(\$1,368,360) no	(\$2,903,860) no	(\$4,813,360) no
Scenario 2: 8% Annual Rate Increases <i>Target Met?</i>	\$2,643,640 yes	\$2,314,640 yes	\$1,990,640 yes	\$1,675,640 yes	\$1,360,640 yes	\$1,302,140 yes	\$1,239,640 no
Scenario 3: 9% Annual Rate Increases <i>Target Met?</i>	\$2,643,640 yes	\$2,345,640 yes	\$2,088,640 yes	\$1,882,640 yes	\$1,725,640 yes	\$1,882,140 yes	\$2,050,640 yes

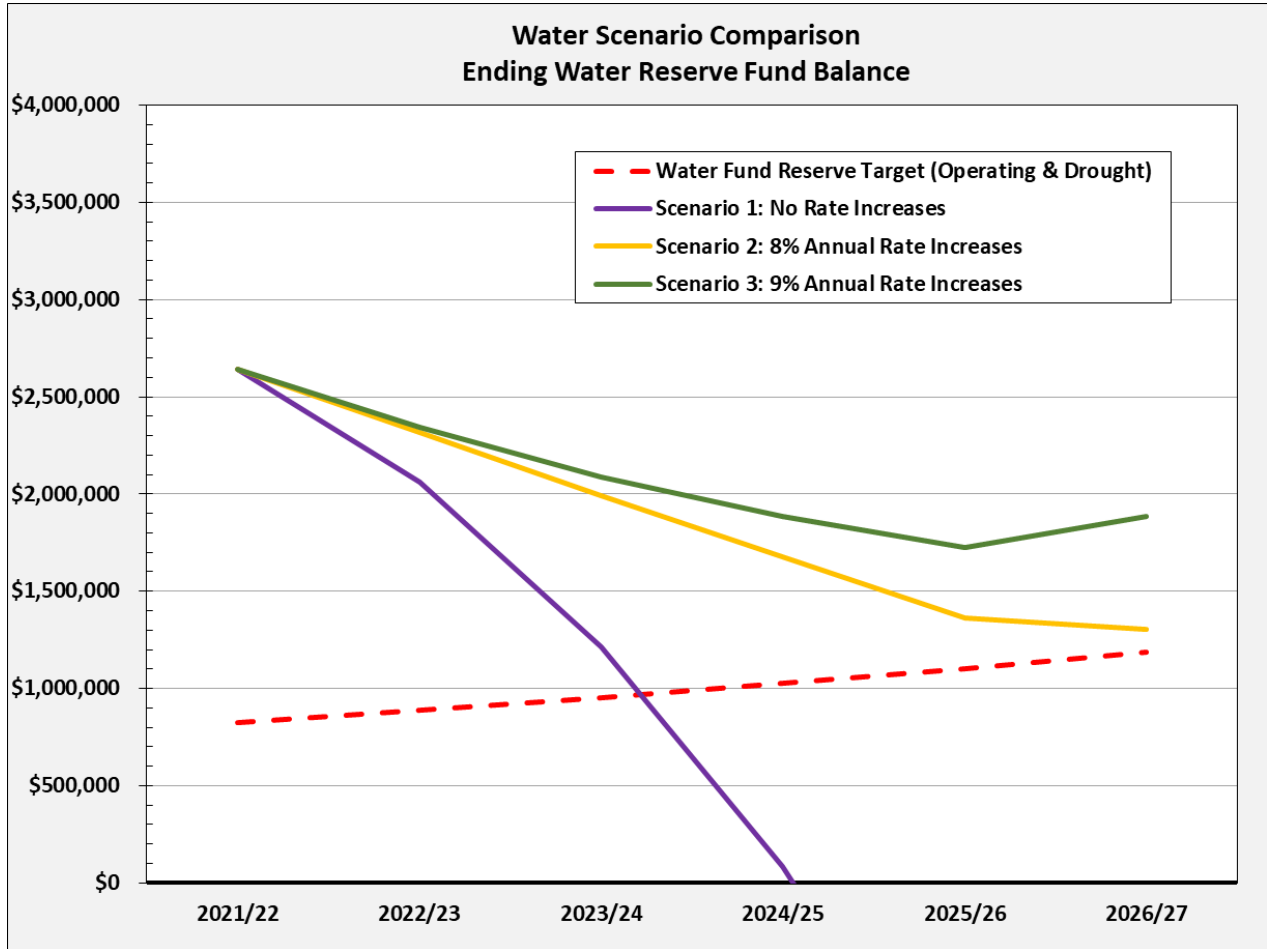
#### GOAL 3: POSITIVE TOTAL NET REVENUES

	Budget 2021/22	Projected 2022/23	Proposed				
			2023/24	2024/25	2025/26	2026/27	2027/28
Scenario 1: No Rate Increases <i>Target Met?</i>	\$155,195 yes	(\$340,000) no	(\$581,000) no	(\$848,000) no	(\$1,133,000) no	(\$1,450,000) no	(\$1,535,500) no
Scenario 2: 8% Annual Rate Increases <i>Target Met?</i>	\$155,195 yes	(\$340,000) no	(\$329,000) no	(\$324,000) no	(\$315,000) no	(\$315,000) no	(\$58,500) no
Scenario 3: 9% Annual Rate Increases <i>Target Met?</i>	\$155,195 yes	(\$340,000) no	(\$298,000) no	(\$257,000) no	(\$206,000) no	(\$157,000) no	\$156,500 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 meet 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.
- *Customer 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. 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
<u>Debt Service</u>	<u>\$316,000</u>	<u>10%</u>	<u>10%</u>	<u>25%</u>	<u>55%</u>	<u>100%</u>	Staff Estimate
Total Water Operating Expenses	\$3,615,000	\$280,000	\$280,000	\$903,800	\$2,151,300	\$3,615,100	
<b>Total Allocation %</b>		<b>7.8%</b>	<b>7.8%</b>	<b>25.0%</b>	<b>59.5%</b>	<b>100.0%</b>	

## 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
<b>Residential</b>									
<i>Annual Increase %</i>		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
<u>Less 1 ccf Allotment</u>	<u>9,655</u>	<u>9,655</u>	<u>9,655</u>	<u>9,752</u>	<u>9,849</u>	<u>9,948</u>	<u>10,047</u>	<u>10,148</u>	<u>10,249</u>
Total Consumption for Consumption Charges	99,410	99,410	99,410	100,404	101,408	102,422	103,446	104,481	105,526
<b>Commercial</b>									
<i>Annual Increase %</i>		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
<u>Less 1 ccf Allotment</u>	<u>1,400</u>	<u>1,400</u>	<u>1,400</u>	<u>1,442</u>	<u>1,485</u>	<u>1,530</u>	<u>1,576</u>	<u>1,623</u>	<u>1,672</u>
Total Consumption for Consumption Charges	94,300	94,300	94,300	97,129	100,043	103,044	106,135	109,320	112,599
<b>Irrigation</b>									
<i>Annual Increase %</i>		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
<u>Less 1 ccf Allotment</u>	<u>400</u>	<u>400</u>	<u>400</u>	<u>408</u>	<u>416</u>	<u>424</u>	<u>433</u>	<u>442</u>	<u>450</u>
Total Consumption for Consumption Charges	79,000	79,000	79,000	80,580	82,192	83,835	85,512	87,222	88,967
<b>Total Consumption</b>									
Total Consumption	284,165	284,165	284,165	289,715	295,393	301,204	307,150	313,235	319,463
<u>Less 1 ccf Allotment</u>	<u>11,455</u>	<u>11,455</u>	<u>11,455</u>	<u>11,602</u>	<u>11,750</u>	<u>11,902</u>	<u>12,056</u>	<u>12,212</u>	<u>12,371</u>
<b>TOTAL CONSUMPTION (CCF) FOR CONSUMPTION CHARGES</b>	<b>272,710</b>	<b>272,710</b>	<b>272,710</b>	<b>278,113</b>	<b>283,643</b>	<b>289,302</b>	<b>295,094</b>	<b>301,023</b>	<b>307,092</b>

1 - The May 25, 2021 memo prepared by Jerry Flanagan shows projected SFPUC water purchases in 2025 to be 435,800 ccf/year, representing 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 2019/20	PROJECTED			PROJECTED - RATE STUDY PERIOD				
		2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28
<b>NUMBER OF METERS</b>									
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
<b>WATER CONSUMPTION</b>									
<b>Residential</b>									
<u>Annual Increase % Consumption</u>		0.0%	0.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
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	<u>12,776</u>	<u>12,776</u>	<u>12,776</u>	<u>12,903</u>	<u>13,032</u>	<u>13,163</u>	<u>13,294</u>	<u>13,427</u>	<u>13,562</u>
Subtotal Residential	99,410	99,410	99,410	100,404	101,408	102,422	103,446	104,481	105,526
<b>Commercial</b>									
<u>Annual Increase % Consumption (1)</u>		0.0%	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
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	<u>67,352</u>	<u>67,352</u>	<u>67,352</u>	<u>69,372</u>	<u>71,453</u>	<u>73,597</u>	<u>75,805</u>	<u>78,079</u>	<u>80,421</u>
Subtotal Commercial	94,300	94,300	94,300	97,129	100,043	103,044	106,135	109,320	112,599
<b>Irrigation</b>									
<u>Annual Increase % Consumption</u>		0.0%	0.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
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	<u>66,656</u>	<u>66,656</u>	<u>66,656</u>	<u>67,989</u>	<u>69,349</u>	<u>70,736</u>	<u>72,150</u>	<u>73,593</u>	<u>75,065</u>
Subtotal Irrigation	79,000	79,000	79,000	80,580	82,192	83,835	85,512	87,222	88,967
<b>Total Consumption</b>									
<u>Annual Increase % Consumption</u>		0.0%	0.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
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	<u>146,783</u>	<u>146,783</u>	<u>146,783</u>	<u>150,264</u>	<u>153,834</u>	<u>157,495</u>	<u>161,249</u>	<u>165,099</u>	<u>169,048</u>
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 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
<b>Total Revenues City vs. GVMID</b>			
City	\$283,555	\$1,351,795	\$1,635,350
<u>GVMID</u>	<u>\$198,935</u>	<u>\$1,410,981</u>	<u>\$1,609,916</u>
Total Water Sales Revenues	\$482,490	\$2,762,776	\$3,245,267
<i>% of Total</i>	14.9%	85.1%	100.0%
<b>Total Revenues by Customer Class</b>			
Residential	\$261,029	\$735,794	\$996,824
Commercial	\$179,813	\$1,010,745	\$1,190,557
<u>Irrigation</u>	<u>\$41,648</u>	<u>\$1,016,237</u>	<u>\$1,057,886</u>
Total Water Sales Revenues	\$482,490	\$2,762,776	\$3,245,267
<i>% of Total</i>	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
<b>Total Revenue Requirement (1)</b>		\$3,270,000	\$3,564,000	\$3,885,000	\$4,235,000	\$4,616,000
<b>FIXED CHARGES</b>						
Meters & Services	7.8%	\$253,425	\$276,210	\$301,088	\$328,213	\$357,740
<u>Customer Service Charge</u>	<u>7.8%</u>	<u>\$253,425</u>	<u>\$276,210</u>	<u>\$301,088</u>	<u>\$328,213</u>	<u>\$357,740</u>
Total Fixed Charges	15.5%	\$506,850	\$552,420	\$602,175	\$656,425	\$715,480
<b>CONSUMPTION CHARGES</b>						
Base	25.0%	\$817,500	\$891,000	\$971,250	\$1,058,750	\$1,154,000
<u>Extra</u>	<u>59.5%</u>	<u>\$1,945,977</u>	<u>\$2,120,936</u>	<u>\$2,311,964</u>	<u>\$2,520,249</u>	<u>\$2,746,982</u>
Total Consumption Charges	84.5%	\$2,763,477	\$3,011,936	\$3,283,214	\$3,578,999	\$3,900,982
<b>TOTAL</b>	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 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	
<b>REVENUE REQUIREMENT</b>							
Meters & Services		\$253,425	\$276,210	\$301,088	\$328,213	\$357,740	
<u>Customer Service Charge</u>		<u>\$253,425</u>	<u>\$276,210</u>	<u>\$301,088</u>	<u>\$328,213</u>	<u>\$357,740</u>	
Total Fixed Charge Revenue Requirement		\$506,850	\$552,420	\$602,175	\$656,425	\$715,480	
<b>METER EQUIVALENT CHARGE</b>							
Total Meter Equivalent Charge Revenue Requirement		\$253,425	\$276,210	\$301,088	\$328,213	\$357,740	
<u>Total Number of Meter Equivalents</u>		<u>3,292</u>	<u>3,308</u>	<u>3,325</u>	<u>3,341</u>	<u>3,358</u>	
Total Meter Equivalent Charge		\$12.83	\$13.92	\$15.09	\$16.37	\$17.76	
Meter Equivalent Charge by Meter Size							
	<u>Meter Size</u>	<u>Meter Ratio</u>					
	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
<b>CUSTOMER SERVICE CHARGE</b>							
Total Customer Service Charge Revenue Requirement		\$253,425	\$276,210	\$301,088	\$328,213	\$357,740	
<u>Total Number of Meters</u>		<u>2,058</u>	<u>2,069</u>	<u>2,079</u>	<u>2,089</u>	<u>2,090</u>	
Total Customer Service Charge per Account		\$20.52	\$22.25	\$24.14	\$26.18	\$28.52	
<b>TOTAL BIMONTHLY FIXED CHARGE (1)</b>							
	<u>Meter Size</u>						
	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
<b>REVENUE REQUIREMENT</b>					
Base Charge Revenue Requirement	\$817,500	\$891,000	\$971,250	\$1,058,750	\$1,154,000
<u>Extra Charge Revenue Requirement</u>	<u>\$1,945,977</u>	<u>\$2,120,936</u>	<u>\$2,311,964</u>	<u>\$2,520,249</u>	<u>\$2,746,982</u>
Total Consumption Charge Revenue Requirement	\$2,763,477	\$3,011,936	\$3,283,214	\$3,578,999	\$3,900,982
<b>CONSUMPTION CHARGE DERIVATION</b>					
<b>All Customers</b>					
Tier 1 Revenue Requirement	\$817,500	\$891,000	\$971,250	\$1,058,750	\$1,154,000
<u>Tier 1: 1-20 ccf Consumption (ccf)</u>	<u>129,808</u>	<u>131,807</u>	<u>133,845</u>	<u>135,923</u>	<u>138,044</u>
Tier 1 Rate per ccf	<b>\$6.30</b>	<b>\$6.76</b>	<b>\$7.26</b>	<b>\$7.79</b>	<b>\$8.36</b>
Tier 2 Revenue Requirement	\$1,945,977	\$2,120,936	\$2,311,964	\$2,520,249	\$2,746,982
<u>Tier 2: Over 20 ccf Consumption (ccf)</u>	<u>153,834</u>	<u>157,495</u>	<u>161,249</u>	<u>165,099</u>	<u>169,048</u>
Tier 2 Rate per ccf	<b>\$12.65</b>	<b>\$13.47</b>	<b>\$14.34</b>	<b>\$15.27</b>	<b>\$16.25</b>

## 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 estimated SFPUC Rate and Bond Surcharge is also shown for reference. 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
<b>FIXED CHARGES</b>					
<u>Meter Size</u>					
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
<b>CONSUMPTION CHARGES (per ccf) (1)</b>					
<u>All Customers (Usage over 1 ccf)</u>					
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 Use (ccf)	Current Bill	Proposed				
			July 1, 2023	July 1, 2024	July 1, 2025	July 1, 2026	July 1, 2027
<b>Residential: 5/8" meter, 1 ccf</b>							
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%
<b>Residential: 5/8" meter, 4 ccf</b>							
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 Use (ccf)	Current Bill	Proposed				
			July 1, 2023	July 1, 2024	July 1, 2025	July 1, 2026	July 1, 2027
<b>Residential: 5/8" meter, 10 ccf</b>							
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%
<b>Residential: 5/8" meter, 20 ccf</b>							
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%
<b>Residential: 5/8" meter, 40 ccf</b>							
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
<b>Residential: 3/4" meter, 1 ccf</b>							
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%
<b>Residential: 3/4" meter, 4 ccf</b>							
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%
<b>Residential: 3/4" meter, 10 ccf</b>							
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
<b>Residential: 3/4" meter, 20 ccf</b>							
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	<u>4</u>	<u>\$44.20</u>	<u>\$25.19</u>	<u>\$27.04</u>	<u>\$29.03</u>	<u>\$31.16</u>	<u>\$33.44</u>
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%
<b>Residential: 3/4" meter, 40 ccf</b>							
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	<u>24</u>	<u>\$265.20</u>	<u>\$278.19</u>	<u>\$296.37</u>	<u>\$315.78</u>	<u>\$336.46</u>	<u>\$358.43</u>
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
<b>Commercial: 5/8" meter, 10 ccf</b>							
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	<u>0</u>	<u>\$0.00</u>	<u>\$0.00</u>	<u>\$0.00</u>	<u>\$0.00</u>	<u>\$0.00</u>	<u>\$0.00</u>
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%
<b>Commercial: 1-1/2" meter, 40 ccf</b>							
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	<u>24</u>	<u>\$265.20</u>	<u>\$278.19</u>	<u>\$296.37</u>	<u>\$315.78</u>	<u>\$336.46</u>	<u>\$358.43</u>
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%

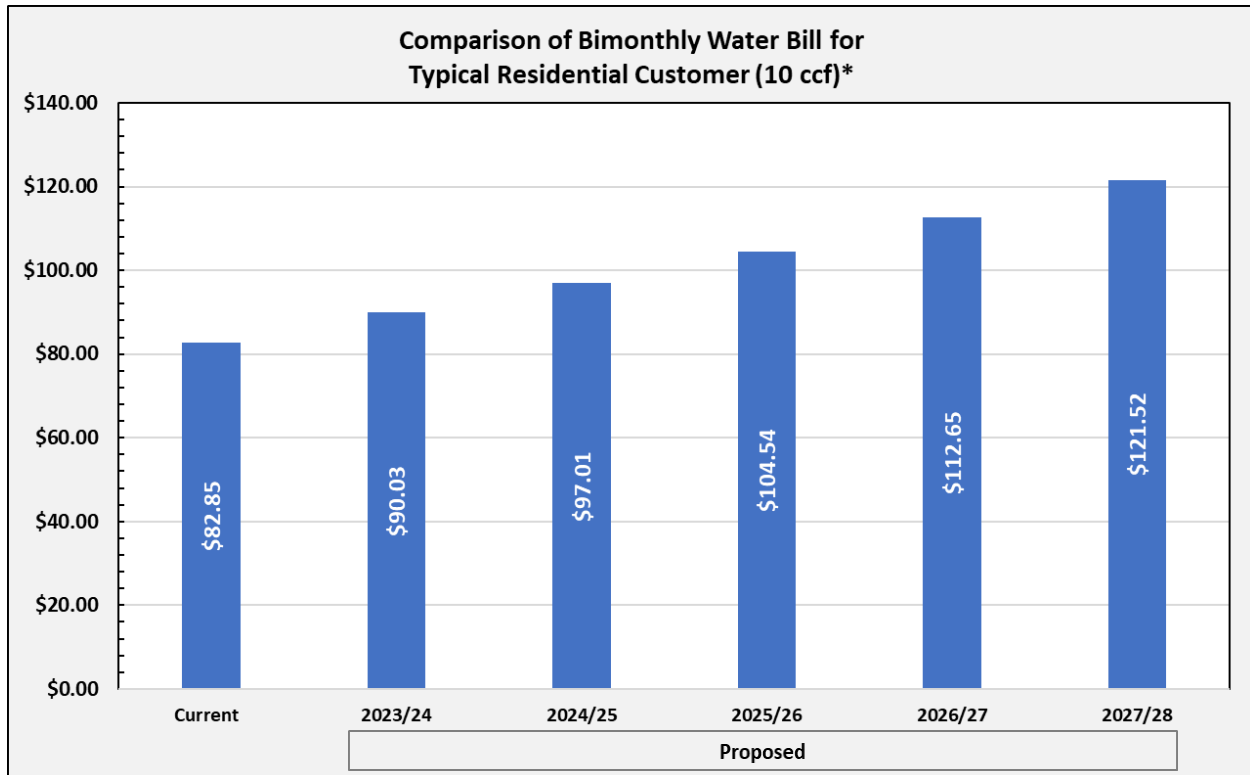
**IRRIGATION BILL IMPACTS**

	Bimonthly Use (ccf)	Current Bill	Proposed				
			July 1, 2023	July 1, 2024	July 1, 2025	July 1, 2026	July 1, 2027
<b>Irrigation: 1-1/2" meter, 50 ccf</b>							
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
<u>Tier 3: Over 16 ccf</u>	<u>34</u>	<u>\$448.46</u>	<u>\$455.29</u>	<u>\$484.91</u>	<u>\$516.51</u>	<u>\$550.17</u>	<u>\$585.93</u>
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%
<b>Irrigation: 2" meter, 100 ccf</b>							
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
<u>Tier 3: Over 16 ccf</u>	<u>84</u>	<u>\$1,107.96</u>	<u>\$1,087.78</u>	<u>\$1,158.24</u>	<u>\$1,233.40</u>	<u>\$1,313.42</u>	<u>\$1,398.42</u>
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**

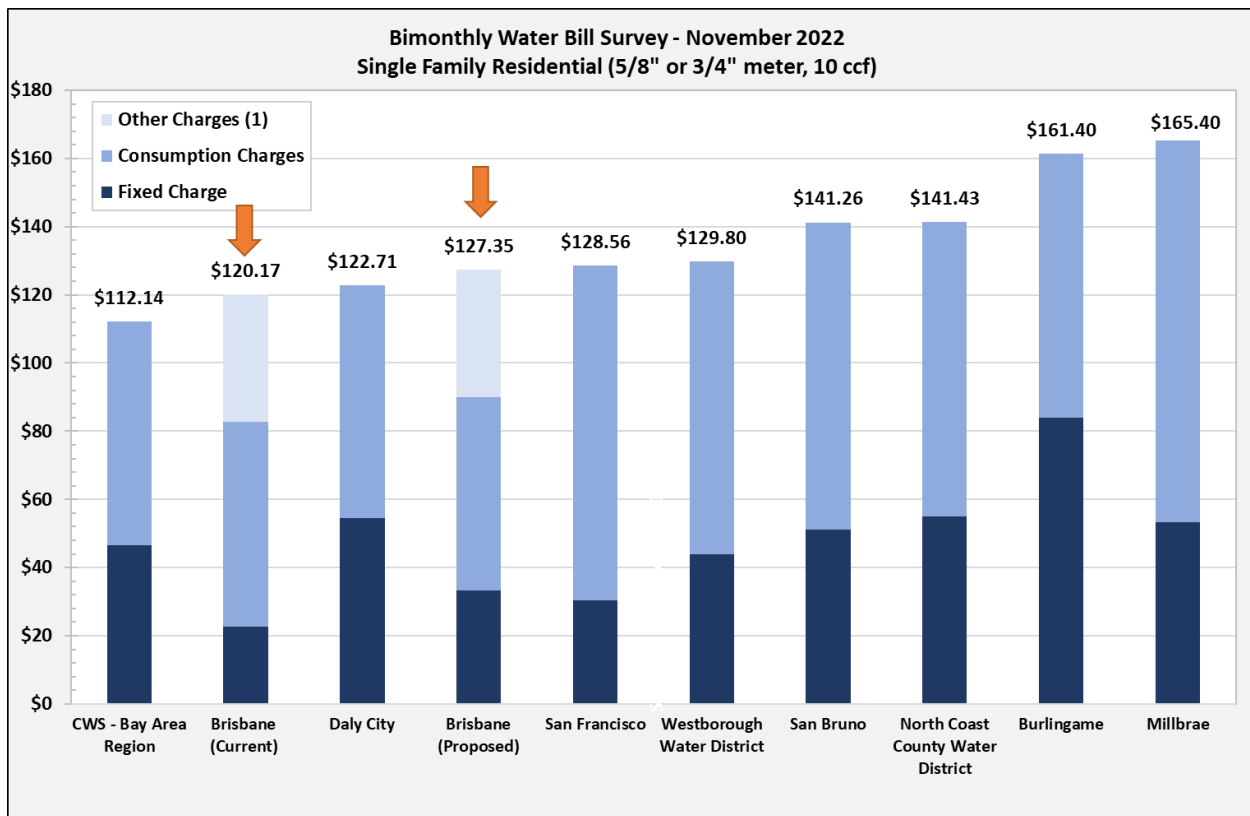


\* Does not include Drought Surcharge or Capital Charge

## 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.

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**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
<i>% of Discount</i>	17.3%

## **SECTION 3: SEWER RATE STUDY**

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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**

<b>RESIDENTIAL</b>	<b>Bimonthly Charge</b>
Flat Charge	\$68.87
Variable Charge [1]	
Tier 1: 0 - 8 ccf	\$2.81
Tier 2: Over 8 ccf	\$7.66
<b>COMMERCIAL [2]</b>	<b>Bimonthly Charge</b>
<b>Standard</b>	
Flat Charge	\$68.87
Variable Charge	
Tier 1: 0 - 8 ccf	\$3.84
Tier 2: Over 8 ccf	\$7.66
<b>Medium</b>	
Flat Charge	\$68.87
Variable Charge	
Tier 1: 0 - 8 ccf	\$5.68
Tier 2: Over 8 ccf	\$9.74
<b>Heavy</b>	
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
<b>NO. OF ACCOUNTS (1)</b>		
Residential	1,669	87.0%
Standard Commercial	215	11.2%
Medium Commercial	8	0.4%
<u>Heavy Commercial</u>	<u>26</u>	<u>1.4%</u>
Total	1,918	100.0%
<b>SEWER FLOW</b>		
Residential	89,719	51.9%
Standard Commercial	37,290	21.6%
Medium Commercial	4,261	2.5%
<u>Heavy Commercial</u>	<u>41,651</u>	<u>24.1%</u>
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: Proprietary 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	2020/21	2021/22
<b>WATER ONLY (1)</b>				
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
<u>Drought Reserve Charge</u>	<u>\$95,481</u>	<u>\$120,000</u>	<u>\$100,000</u>	<u>\$100,000</u>
<b>Total Water Only</b>	<b>\$3,340,862</b>	<b>\$3,212,500</b>	<b>\$2,992,500</b>	<b>\$3,242,500</b>
<b>SEWER ONLY (2)</b>				
40820 Sewer Service Charges	\$2,188,866	\$2,200,000	\$2,000,000	\$2,000,000
40821 <u>Sewer Connection Fees</u>	<u>\$123,706</u>	<u>\$3,000</u>	<u>\$3,000</u>	<u>\$3,000</u>
<b>Total Sewer Only</b>	<b>\$2,312,572</b>	<b>\$2,203,000</b>	<b>\$2,003,000</b>	<b>\$2,003,000</b>
<b>GVMID ONLY (3)</b>				
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 <u>ERAF</u>	<u>\$134</u>	<u>\$100</u>	<u>\$100</u>	<u>\$100</u>
<b>Total GVMID</b>	<b>\$32,918</b>	<b>\$30,700</b>	<b>\$30,700</b>	<b>\$30,700</b>
<b>ALL OTHER REVENUES (4)</b>				
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 <u>Transfers from Other Funds</u>	<u>\$43,000</u>	<u>\$50,000</u>	<u>\$75,000</u>	<u>\$75,000</u>
<b>Total All Other Revenues</b>	<b>\$629,172</b>	<b>\$428,100</b>	<b>\$428,100</b>	<b>\$428,100</b>
<b>TOTAL REVENUES</b>	<b>\$6,315,524</b>	<b>\$5,874,300</b>	<b>\$5,454,300</b>	<b>\$5,704,300</b>

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 2018/19	Budget		
		2019/20	2020/21	2021/22
<b>SEWER REVENUES</b>				
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)	<u>\$314,586</u>	<u>\$214,050</u>	<u>\$214,050</u>	<u>\$214,050</u>
Total	\$2,627,158	\$2,417,050	\$2,217,050	\$2,217,050
<i>Percent Change</i>		-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			Avg Annual Increase
		2019/20	2020/21	2021/22	
Salaries	\$267,242	\$233,759	\$322,891	\$335,165	
<i>Percent Change</i>	1.9%	-12.5%	38.1%	3.8%	5.0%
Payroll Taxes	\$4,062	\$3,357	\$4,421	\$4,599	
<i>Percent Change</i>	3.6%	-17.4%	31.7%	4.0%	3.2%
Benefits	\$122,495	\$143,745	\$158,152	\$184,923	
<i>Percent Change</i>	1.9%	17.3%	10.0%	16.9%	9.0%
Insurance	\$24,716	\$24,664	\$37,974	\$38,113	
<i>Percent Change</i>	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	
<i>Percent Change</i>	32.0%	0.3%	9.0%	21.0%	11.8%
Admin Charges and Credits	\$258,621	\$289,277	\$331,504	\$337,027	
<i>Percent Change</i>	3.2%	11.9%	14.6%	1.7%	6.1%
<b>TOTAL CITY SEWER OPERATING EXPENSES</b>	<b>\$1,887,323</b>	<b>\$1,927,367</b>	<b>\$2,170,105</b>	<b>\$2,472,772</b>	
<i>Percent Change</i>	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			Avg Annual Increase	2021/22 Budget per Utility (2)
		2019/20	2020/21	2021/22		
Salaries	\$180,809	\$179,236	\$333,150	\$345,879		\$115,293
<i>Percent Change</i>	-5.3%	-0.9%	85.9%	3.8%	17.6%	
Payroll Taxes	\$3,987	\$2,306	\$4,584	\$4,769		\$1,590
<i>Percent Change</i>	39.2%	-42.2%	98.8%	4.0%	4.6%	
Benefits	\$98,172	\$95,450	\$153,452	\$181,974		\$60,658
<i>Percent Change</i>	0.8%	-2.8%	60.8%	18.6%	16.7%	
Insurance	\$15,567	\$16,406	\$39,376	\$39,521		\$13,174
<i>Percent Change</i>	-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
<i>Percent Change</i>	41.8%	5.5%	-0.1%	10.8%	4.0%	
Admin Charges and Credits	\$303,900	\$335,321	\$341,554	\$380,262		\$126,754
<i>Percent Change</i>	-2.0%	10.3%	1.9%	11.3%	5.8%	
<b>TOTAL GVMID UTILITY OPERATING EXPENSES</b>	<b>\$1,708,239</b>	<b>\$1,795,263</b>	<b>\$2,037,171</b>	<b>\$2,243,645</b>		<b>\$747,882</b>
<i>Percent Change</i>	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 utilities (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	2020/21	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	<u>\$359,921</u>	<u>\$401,051</u>	<u>\$445,356</u>	<u>\$463,781</u>
<b>TOTAL SEWER OPERATING EXPENSES</b>	<b>\$2,372,253</b>	<b>\$2,421,788</b>	<b>\$2,764,162</b>	<b>\$3,135,654</b>
<i>Percent Change</i>	<i>20.1%</i>	<i>2.1%</i>	<i>14.1%</i>	<i>13.4%</i>

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
<b>TOTAL SEWER OPERATING EXPENSES</b>	<b>\$3,135,654</b>		<b>\$3,382,000</b>	<b>\$3,645,000</b>	<b>\$3,931,000</b>	<b>\$4,242,000</b>	<b>\$4,581,000</b>	<b>\$4,951,000</b>
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

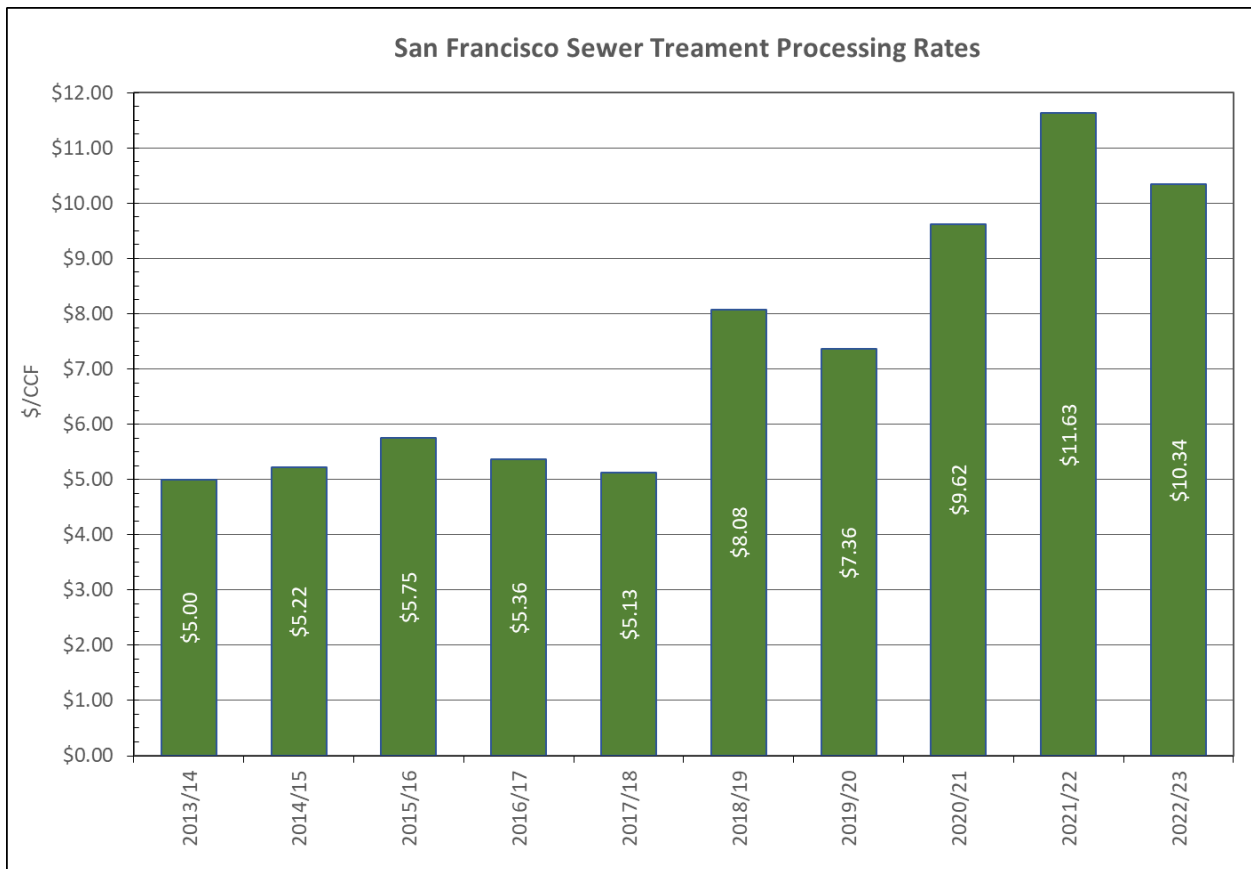
As shown on Table 39, sewer treatment costs are the largest expense for the Sewer Utility, accounting for 54.1% of total operating expenses in 2022/23.

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

	Budget				Projected 2022/23
	2018/19	2019/20	2020/21	2021/22	
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 2018/19	Budget		
		2019/20	2020/21	2021/22
<b>SEWER REVENUES</b>				
Sewer Service Revenues	\$2,188,866	\$2,200,000	\$2,000,000	\$2,000,000
<u>Other Revenues</u>	<u>\$438,292</u>	<u>\$217,050</u>	<u>\$217,050</u>	<u>\$217,000</u>
Total	\$2,627,158	\$2,417,050	\$2,217,050	\$2,217,000
<b>SEWER EXPENSES</b>				
Operating	\$2,372,253	\$2,421,788	\$2,764,162	\$3,135,654
<u>Debt Service</u>	<u>\$312,156</u>	<u>\$313,906</u>	<u>\$315,156</u>	<u>\$318,344</u>
Subtotal	\$2,684,409	\$2,735,695	\$3,079,318	\$3,453,998
<b>TOTAL NET REVENUES</b>	<b>(\$57,251)</b>	<b>(\$318,645)</b>	<b>(\$862,268)</b>	<b>(\$1,236,998)</b>

### 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 2021/22	Projected 2022/23	Years 1 - 5: Proposition 218					Years 6 - 10: Extended Projection					
			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%	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	
4 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)	
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	2,000,000	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	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	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	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	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	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	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)	(37,500)
16 Projected Grant Revenue	0	0	0	1,250,000	0	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	2,547,500	2,828,500
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	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	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	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	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	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	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	7,368,000
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)	(4,539,500)
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	158,906
33 New Bonds (2)	0	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	312,406	464,588	463,678	462,356	467,813	308,906	308,906
36 Capital Projects	0	267,500	352,500	352,500	352,500	352,500	0	0	0	0	0	0	0
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	7,676,906
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)	(4,848,406)
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)	(29,780,981)
44 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	1,842,000
47 Target Met?	yes	yes	no	no	no	no	no	no	no	no	no	no	no
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)	(14.70)
50 Target Met?	no	no	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)

### 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 2021/22	Projected 2022/23	Years 1 -5: Proposition 218					Years 6 - 10: Extended Projection				
			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
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)
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
19 EXPENSES												
20 <u>Operating &amp; Maintenance</u>												
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
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)
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 Capital Projects	0	267,500	352,500	352,500	352,500	352,500	0	0	0	0	0	0
37 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 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)
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)
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
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

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 2021/22	Projected 2022/23	Years 1 -5: Proposition 218					Years 6 - 10: Extended Projection				
			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
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 Reserve Funds												
45 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
46 Target Met?	yes	yes	no	no	no	no	no	no	yes	yes	yes	yes
47												
48 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
49 Target Met?	no	no	no	no	no	yes	yes	yes	yes	yes	yes	yes
50												
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 2022/23	Proposed				
		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 <i>Target Met?</i>	(3.41) no	(4.01) no	(4.89) no	(5.94) no	(6.95) no	(7.71) no
Scenario 2: 8% Annual Rate Increases <i>Target Met?</i>	(3.41) no	(3.50) no	(3.83) no	(4.27) no	(4.66) no	(3.17) no
Scenario 3: 25% Annual Rate Increases <i>Target Met?</i>	(3.41) no	(2.41) no	(1.32) no	0.18 no	2.21 yes	3.67 yes

#### GOAL 2: MEET SEWER RESERVE FUND TARGET

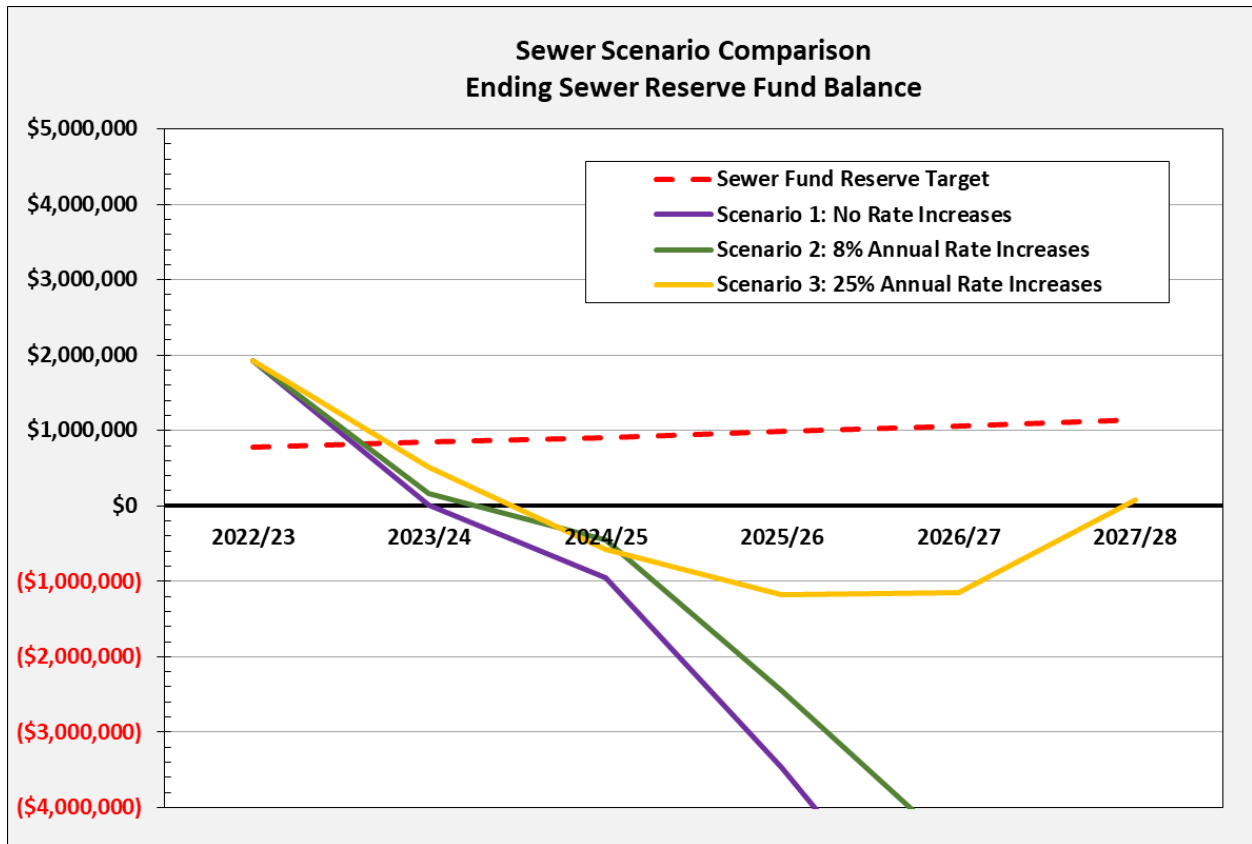
	Projected 2022/23	Proposed				
		2023/24	2024/25	2025/26	2026/27	2027/28
Sewer Fund Reserve Target	\$783,900	\$845,500	\$911,300	\$982,800	\$1,060,500	\$1,145,300
Scenario 1: No Rate Increases <i>Target Met?</i>	\$1,929,416 no	\$8,072 no	(\$950,084) no	(\$3,464,553) no	(\$6,320,234) no	(\$9,040,140)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

#### GOAL 3: POSITIVE TOTAL NET REVENUES

	Projected 2022/23	Proposed				
		2023/24	2024/25	2025/26	2026/27	2027/28
Scenario 1: No Rate Increases <i>Target Met?</i>	(\$1,662,031) no	(\$1,921,344) no	(\$958,156) no	(\$2,514,469) no	(\$2,855,681) no	(\$2,719,906) no
Scenario 2: 8% Annual Rate Increases <i>Target Met?</i>	(\$1,662,031) no	(\$1,761,344) no	(\$625,156) no	(\$1,994,469) no	(\$2,133,681) no	(\$1,929,906) no
Scenario 3: 25% Annual Rate Increases <i>Target Met?</i>	(\$1,662,031) no	(\$1,421,344) no	(\$1,083,156) no	(\$608,469) no	\$27,319 yes	\$1,234,094 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
<b>Total Revenues City vs. GVMID</b>				
City	\$506,195	\$706,101	\$1,212,295	59.8%
<u>GVMID</u>	<u>\$286,361</u>	<u>\$526,929</u>	<u>\$813,290</u>	<u>40.2%</u>
Total Sewer Service Charge Revenues	\$792,556	\$1,233,030	\$2,025,585	100.0%
<i>% of Total</i>	<i>39.1%</i>	<i>60.9%</i>	<i>100.0%</i>	
<b>Total Revenues by Customer Class</b>				
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%
<u>Heavy</u>	<u>\$10,744</u>	<u>\$495,801</u>	<u>\$506,545</u>	<u>25.0%</u>
Subtotal Commercial	\$102,892	\$825,151	\$928,043	45.8%
Total Sewer Service Charge Revenues	\$792,556	\$1,233,030	\$2,025,585	100%
<i>% of Total</i>	<i>39.1%</i>	<i>60.9%</i>	<i>100.0%</i>	

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. 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**

Expenses	FY2022/23 Budget	Cost Allocation - %					Cost Allocation - \$				
		Base	Flow	BOD	TSS	Total	Base	Flow	BOD	TSS	Total
<i>Operating Expenses</i>											
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
<i>Admin Charges and Credit</i>	<i>\$482,000</i>	30%	23%	23%	23%	100%	<i>\$144,600</i>	<i>\$112,467</i>	<i>\$112,467</i>	<i>\$112,467</i>	<i>\$482,000</i>
Subtotal Operating Expenses	\$3,382,000						\$1,014,600	\$789,133	\$789,133	\$789,133	\$3,382,000
<i>Debt Service</i>											
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
<b>Total Allocation</b>	<b>\$3,698,031</b>	<b>30.0%</b>	<b>23.3%</b>	<b>23.3%</b>	<b>23.3%</b>	<b>100.0%</b>	<b>\$1,109,409</b>	<b>\$862,874</b>	<b>\$862,874</b>	<b>\$862,874</b>	<b>\$3,698,031</b>

### 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**

Customer Class	BASE	FLOW		BOD		TSS	
	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	<u>28</u>	<u>41,651</u>	<u>31.2</u>	400	<u>103,933</u>	400	<u>103,933</u>
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 2019/20	PROJECTED			PROJECTED - RATE STUDY PERIOD				
		2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28
<b>NUMBER OF ACCOUNTS</b>									
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
<u>Heavy Commercial</u>	<u>26</u>	<u>26</u>	<u>26</u>	<u>26</u>	<u>27</u>	<u>27</u>	<u>27</u>	<u>27</u>	<u>27</u>
Total Sewer Accounts	1,918	1,928	1,937	1,947	1,957	1,966	1,976	1,986	1,996
<b>SEWER FLOW (ccf)</b>									
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
<u>Heavy Commercial</u>	<u>41,651</u>	<u>42,000</u>	<u>42,000</u>	<u>43,000</u>	<u>44,000</u>	<u>45,000</u>	<u>46,000</u>	<u>47,000</u>	<u>48,000</u>
Total Estimated Flow (ccf)	172,921	173,000	173,000	177,000	181,000	185,000	189,000	193,000	197,000
<b>SEWER LOADINGS (mg/l)</b>									
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
<u>Heavy Commercial</u>	<u>103,933</u>	<u>104,000</u>	<u>104,000</u>	<u>106,000</u>	<u>108,000</u>	<u>110,000</u>	<u>112,000</u>	<u>114,000</u>	<u>116,000</u>
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
<b>TOTAL REVENUE REQUIREMENT (1)</b>		\$2,500,000	\$3,125,000	\$3,906,000	\$4,883,000	\$6,104,000
<b>Fixed/Variable Allocation</b>						
Fixed Charge		30.0%	30.0%	30.0%	30.0%	30.0%
Variable Charge		70.0%	70.0%	70.0%	70.0%	70.0%
<b>FIXED SERVICE CHARGE CALCULATION</b>						
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
<b>Bimonthly Flat Charge per Account</b>	<b>\$68.87</b>	<b>\$64.20</b>	<b>\$79.86</b>	<b>\$99.32</b>	<b>\$123.54</b>	<b>\$153.66</b>
<i>% Change</i>		-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**

<b>Allocation to Variable Charges</b>			
FY2023/24 Revenue Requirement (1)		\$2,500,000	
Variable Charge Recovery %		70%	
Variable Charge Recovery \$		\$1,750,000	
<b>Allocation to Flow, BOD, SS</b>	<u>Flow</u>	<u>BOD</u>	<u>SS</u>
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**

Customer Class	Wastewater Strength (mg/l)		Unit Rates (\$ per ccf or lb) (1)			Total Variable Rate per ccf
	BOD	SS	Flow	BOD	SS	
			\$4.83	\$1.68	\$1.68	
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 include different charges for Residential and Commercial customers.

**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
<b>RESIDENTIAL (1)</b>					
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
<b>COMMERCIAL</b>					
<b>Standard</b>					
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
<b>Medium</b>					
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
<b>Heavy</b>					
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
<b>Residential - 4 ccf</b>							
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%
<b>Residential - 10 ccf</b>							
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%
<b>Residential - 20 ccf</b>							
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
<b>Standard Commercial - 10 ccf</b>							
Fixed Charge		\$68.87	\$64.20	\$79.86	\$99.32	\$123.54	\$153.66
Variable Charge							
Tier 1: 0 - 8 ccf	8	\$30.72					
Tier 2: Over 8 ccf	<u>2</u>	<u>\$15.32</u>	\$90.22	\$110.45	\$135.31	\$165.85	\$203.27
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%
<b>Standard Commercial - 20 ccf</b>							
Fixed Charge		\$68.87	\$64.20	\$79.86	\$99.32	\$123.54	\$153.66
Variable Charge							
Tier 1: 0 - 8 ccf	8	\$30.72					
Tier 2: Over 8 ccf	<u>12</u>	<u>\$91.92</u>	\$180.44	\$220.90	\$270.62	\$331.70	\$406.53
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**

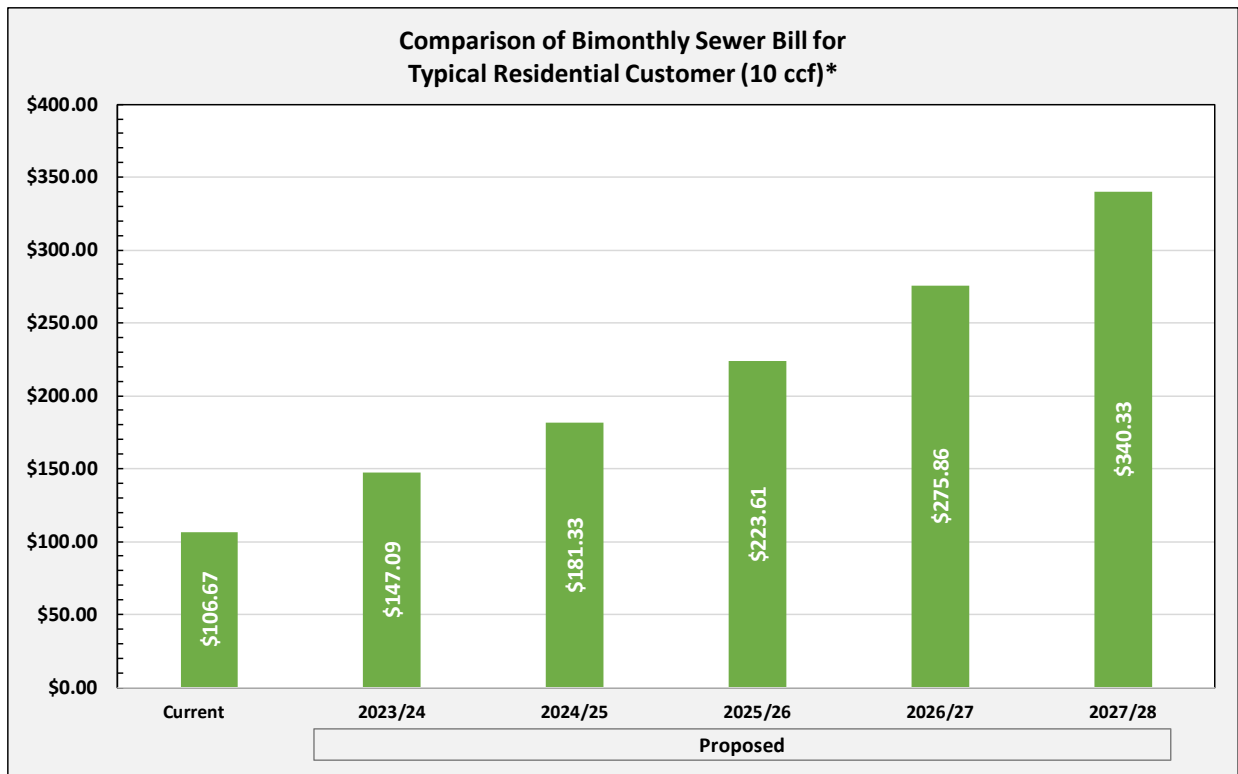
	Bimonthly Use (ccf)	Current Bill	Proposed				
			Jan 1, 2023	July 1, 2023	July 1, 2024	July 1, 2025	July 1, 2026
<b>Medium Commercial - 30 ccf</b>							
Fixed Charge		\$68.87	\$64.20	\$79.86	\$99.32	\$123.54	\$153.66
Variable Charge							
Tier 1: 0 - 8 ccf	8	\$45.44					
Tier 2: Over 8 ccf	<u>22</u>	<u>\$214.28</u>	\$333.47	\$408.32	\$500.40	\$613.50	\$752.06
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%
<b>Medium Commercial - 50 ccf</b>							
Fixed Charge		\$68.87	\$64.20	\$79.86	\$99.32	\$123.54	\$153.66
Variable Charge							
Tier 1: 0 - 8 ccf	8	\$45.44					
Tier 2: Over 8 ccf	42	<u>\$409.08</u>	\$555.78	\$680.53	\$834.00	\$1,022.50	\$1,253.43
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
<b>Heavy Commercial - 80 ccf</b>							
Variable Charge		\$68.87	\$64.20	\$79.86	\$99.32	\$123.54	\$153.66
Tier 1: 0 - 8 ccf	8	\$60.72					
Tier 2: Over 8 ccf	72	<u>\$848.51</u>	\$1,056.75	\$1,294.10	\$1,586.33	\$1,945.21	\$2,384.85
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%
<b>Heavy Commercial - 100 ccf</b>							
Fixed Charge		\$68.87	\$64.20	\$79.86	\$99.32	\$123.54	\$153.66
Variable Charge							
Tier 1: 0 - 8 ccf	8	\$60.72					
Tier 2: Over 8 ccf	92	<u>\$1,084.91</u>	\$1,320.94	\$1,617.63	\$1,982.91	\$2,431.51	\$2,981.07
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**

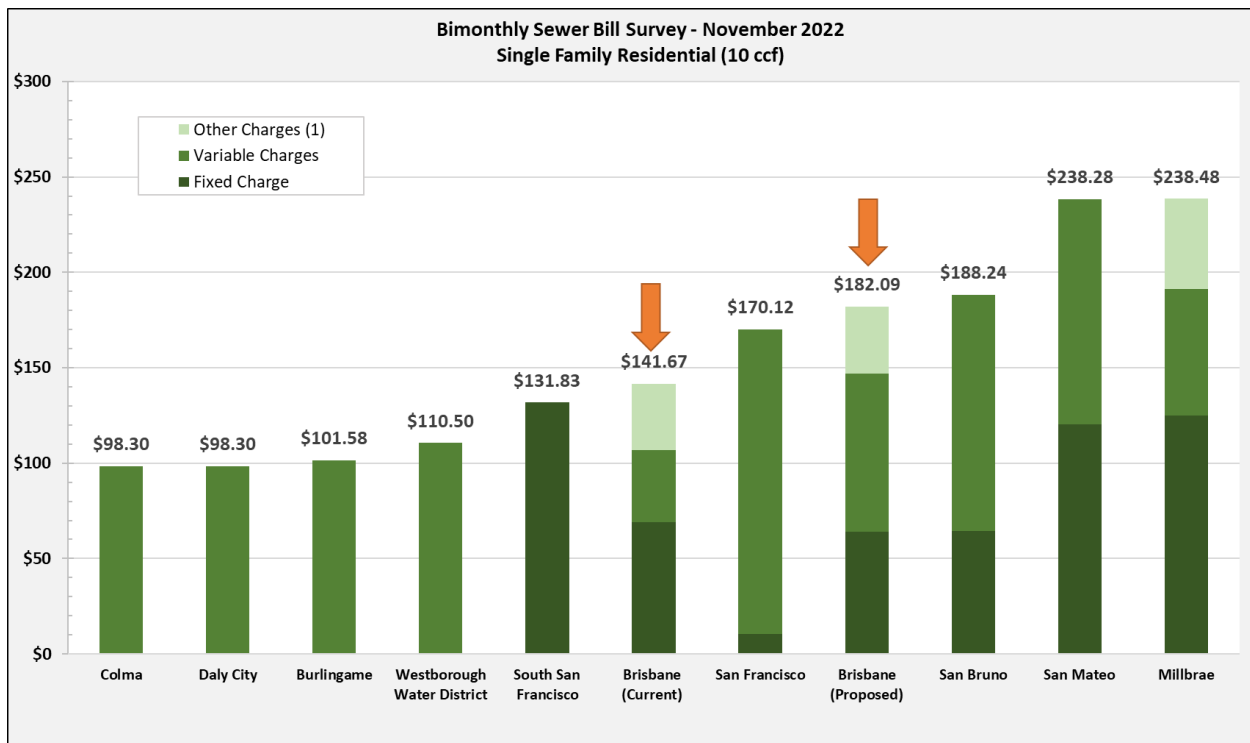


\* Does not include Capital Charge

### 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.

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**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
<i>% of Discount</i>	<i>10.6%</i>

## **SECTION 4: UTILITY FUND 540 – COMBINED CASH FLOW**

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### **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 2021/22	Projected 2022/23	Years 1-5: Proposition 218					Years 6-10: Extended Projection				
			2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33
1 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
2												
3 REVENUES												
4 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
5 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
6 Drought Reserve Charge	100,000	100,000	100,000	100,000	100,000	100,000	0	0	0	0	0	0
7 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
8 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
9 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
10 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
11 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
12 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
13 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
14 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
15 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)
16 <u>Grant Revenue</u>	0	0	0	0	0	0	0	0	0	0	0	0
17 <b>Total Revenues</b>	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
18												
19 EXPENSES												
20 <u>Operating &amp; Maintenance</u>												
21 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
22 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
23 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
24 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
25 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
26 <u>Admin Charges and Credit</u>	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
27 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
28												
29 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
30												
31 Debt Service												
32 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	617,906
33 <u>New Bonds (1)</u>	0	0	0	0	0	0	300,000	300,000	300,000	300,000	300,000	300,000
34 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
35												
36 Capital Projects	0	535,000	705,000	705,000	705,000	705,000	0	0	0	0	0	0
37												
38 <b>Total Expenses</b>	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
39												
40 <b>Total Net Revenues</b>	(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
41												
42 <b>ENDING FUND BALANCE</b>	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
43												
44												
45 <u>Reserve Funds</u>												
46 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
47 <u>Drought Reserve (\$700,000)</u>	447,499	547,499	647,499	747,499	847,499	947,499	947,499	947,499	947,499	947,499	947,499	947,499
48 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
49 Target Met?	yes	yes	yes	no	no	no	no	yes	yes	yes	yes	yes
50												
51 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
52 Target Met?	no	no	no	no	no	yes	yes	yes	yes	yes	yes	yes
53												

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.

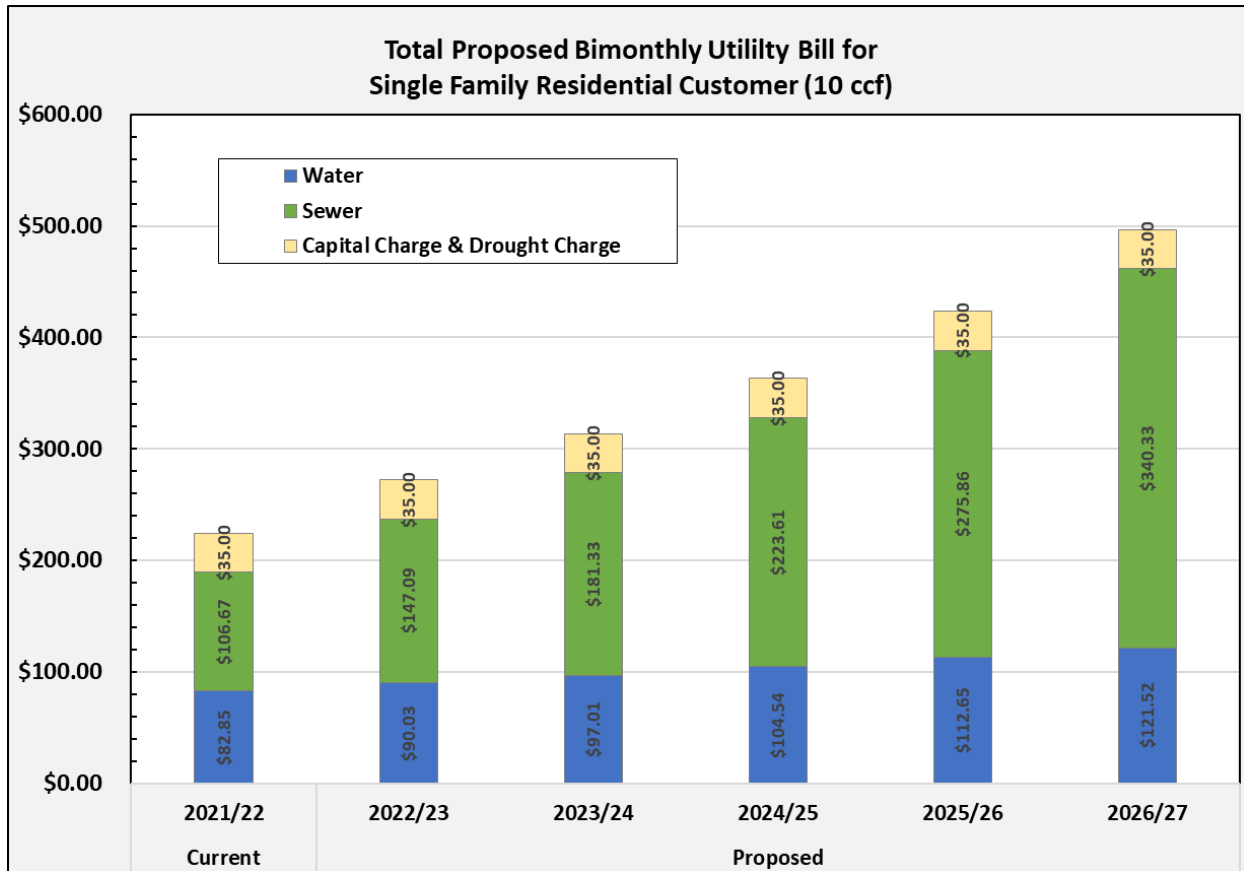
**Table 57: Sample Residential Combined Bill Impacts**  
**City of Brisbane**  
**Water and Sewer Utility Rate Study 2022**

	Bimonthly Use (ccf)	Current Bill	Proposed				
			2023/24	2024/25	2025/26	2026/27	2027/28
<b>Residential: 5/8" meter, 4 ccf</b>							
Water Bill	4	\$37.47	\$52.24	\$56.45	\$61.00	\$65.92	\$71.36
Sewer Bill	4	<u>\$80.11</u>	<u>\$97.36</u>	<u>\$120.45</u>	<u>\$149.04</u>	<u>\$184.47</u>	<u>\$228.33</u>
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%
<b>Residential: 5/8" meter, 10 ccf</b>							
Water Bill	10	\$82.85	\$90.03	\$97.01	\$104.54	\$112.65	\$121.52
Sewer Bill	10	<u>\$106.67</u>	<u>\$147.09</u>	<u>\$181.33</u>	<u>\$223.61</u>	<u>\$275.86</u>	<u>\$340.33</u>
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%
<b>Residential: 5/8" meter, 20 ccf</b>							
Water Bill	20	\$193.35	\$216.53	\$231.68	\$247.92	\$265.30	\$284.01
Sewer Bill	20	<u>\$183.27</u>	<u>\$229.98</u>	<u>\$282.80</u>	<u>\$347.90</u>	<u>\$428.18</u>	<u>\$527.00</u>
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

<b>Allocation to Variable Charges</b>			
FY2023/24 Revenue Requirement (1)		\$2,500,000	
Variable Charge Recovery %		70%	
Variable Charge Recovery \$		\$1,750,000	
<b>Allocation to Flow, BOD, SS</b>			
	<u>Flow</u>	<u>BOD</u>	<u>SS</u>
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

<b>Allocation to Variable Charges</b>			
FY2024/25 Revenue Requirement (1)		\$3,125,000	
Variable Charge Recovery %		70%	
Variable Charge Recovery \$		\$2,187,500	
<b>Allocation to Flow, BOD, SS</b>			
	<u>Flow</u>	<u>BOD</u>	<u>SS</u>
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**

<b>Allocation to Variable Charges</b>			
FY2025/26 Revenue Requirement (1)		\$3,906,000	
Variable Charge Recovery %		70%	
Variable Charge Recovery \$		\$2,734,200	
<b>Allocation to Flow, BOD, SS</b>			
	<u>Flow</u>	<u>BOD</u>	<u>SS</u>
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**

<b>Allocation to Variable Charges</b>			
FY2026/27 Revenue Requirement (1)		\$4,883,000	
Variable Charge Recovery %		70%	
Variable Charge Recovery \$		\$3,418,100	
<b>Allocation to Flow, BOD, SS</b>			
	<u>Flow</u>	<u>BOD</u>	<u>SS</u>
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**

<b>Allocation to Variable Charges</b>			
FY2027/28 Revenue Requirement (1)		\$6,104,000	
Variable Charge Recovery %		70%	
Variable Charge Recovery \$		\$4,272,800	
<b>Allocation to Flow, BOD, SS</b>	<u>Flow</u>	<u>BOD</u>	<u>SS</u>
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)		Unit Rates (\$ per ccf or lb) (1)			Total Variable Rate per ccf
	BOD	SS	Flow	BOD	SS	
			\$4.83	\$1.68	\$1.68	
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)		Unit Rates (\$ per ccf or lb)			Total Variable Rate per ccf
	BOD	SS	Flow	BOD	SS	
			\$5.91	\$2.06	\$2.06	
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)		Unit Rates (\$ per ccf or lb)			Total Variable Rate per ccf
	BOD	SS	Flow	BOD	SS	
			\$7.23	\$2.52	\$2.52	
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)		Unit Rates (\$ per ccf or lb)			Total Variable Rate per ccf
	BOD	SS	Flow	BOD	SS	
			\$8.85	\$3.10	\$3.10	
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)		Unit Rates (\$ per ccf or lb)			Total Variable Rate per ccf
	BOD	SS	Flow	BOD	SS	
			\$10.84	\$3.80	\$3.80	
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