



City of Richmond

Report to Committee

To: Finance Committee
From: John Irving, P.Eng., MPA
General Manager, Engineering and Public Works
Jerry Chong, CPA, CA
General Manager, Finance and Corporate Services
Date: October 18, 2022
File: 03-0970-01/2022-Vol 01
Re: **2023 Utility Budgets and Rates**

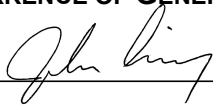

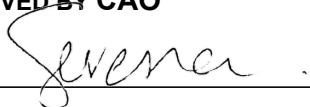
Staff Recommendation

1. That the 2023 utility budgets, as presented in Option 3 for Water (page 9), Option 3 for Sewer (page 16), Option 3 for Drainage and Diking (page 28), and Option 2 for Solid Waste and Recycling (page 30), as outlined in the staff report titled, “2023 Utility Budgets and Rates”, dated October 18, 2022, from the General Manager, Engineering and Public Works and the General Manager, Finance and Corporate Services, be approved as the basis for establishing the 2023 utility rates and included in the Consolidated 5 Year Financial Plan (2023-2027) Bylaw; and
2. That the Drainage and Diking Utility be renamed the Flood Protection Utility, and that the necessary bylaws be brought forward to effect this renaming.

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Engineering and Public Works
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Att. 2

REPORT CONCURRENCE	
CONCURRENCE OF GENERAL MANAGER 	
SENIOR MANAGEMENT TEAM	INITIALS: 
APPROVED BY CAO 	

Staff Report

Executive Summary

Utilities provide dedicated funding for the delivery of Water, Sewer, Drainage and Diking, and Solid Waste and Recycling services within Richmond, including Council-endorsed programs and initiatives, and funding for the operation, maintenance and upgrade of the associated infrastructures and assets. Richmond's utilities include:

- **Water:** The Water Utility provides distribution of water to Richmond's residents and businesses. Bulk drinking water supply is purchased from Metro Vancouver and distributed through the City's pressure reducing valve stations and watermain network. This utility also supports programs to encourage water conservation within the City.
- **Sewer:** The Sewer Utility provides sewer service for properties within the regional sewerage boundaries. Sewage is collected through the City's sanitary infrastructure and conveyed to Metro Vancouver's trunk sewer system and wastewater treatment plants for treatment and discharge. Richmond pays Metro Vancouver for treatment and conveyance services each year.
- **Drainage and Diking:** The Drainage and Diking Utility provides flood protection services for Richmond, which includes a diking network to protect the City from flooding, and drainage infrastructure to convey and discharge rain water out of the City. This utility supports infrastructure upgrades to protect the City against climate change and sea level rise.
- **Solid Waste and Recycling:** The Solid Waste and Recycling Utility includes garbage and recycling collection services and programs designed to advance broader waste reduction and recycling objectives. The City's programs and initiatives has allowed the City to remain a leader in providing robust recycling programs, currently diverting 79% of single-family residential waste.

Key Cost Drivers for the 2023 Utility Budgets and Rates

Metro Vancouver Cost Increases

Metro Vancouver's 2023 rate increases, as presented in their proposed 2023-2027 Financial Plan, are the primary drivers for the City's 2023 utility rates for the majority of these services. Metro Vancouver's proposed rate increases for 2023 are as follows:

- **Water:** Metro Vancouver's proposed 2023 water rate increase is 2.8%. Metro Vancouver water purchase cost represents 56% of the City's Water Utility user fee budget (Figure 1).
- **Sewer:** Metro Vancouver's proposed 2023 sewer levy increase is 8.6%. The operations and maintenance component of Metro Vancouver's sewer levy is funded through the Sewer Utility and represents 66% of the City's Sewer Utility user fee budget (Figure 2).
- **Solid Waste:** The Metro Vancouver solid waste tipping fees are increasing by \$6 to \$127 per tonne, plus an unchanged transaction fee of \$5 per load. A tiered structure based on load size/weight will continue to be used for small vehicles and commercial customers.

Figure 1: Proposed 2023 Water Utility User Fee Breakdown



Figure 2: Proposed 2023 Sewer Utility User Fee Breakdown



Accelerated Flood Protection Program (Drainage and Diking Utility)

Climate change scientists predict up to 1 m of sea level rise and 0.2 m of ground settlement by 2100. At the April 12, 2021 Regular Council Meeting, Council adopted a 50-year implementation period for an accelerated flood protection program with the objective of upgrading the City’s dikes within 50 years, well in advance of current anticipated climate change impacts. The program requires \$30M in annual capital funding within the Drainage and Diking Utility by 2031, with implementation of the new rates to start in 2023. The Drainage and Diking budgets presented in this report reflect the start of the program acceleration.

Ageing Infrastructure Replacement

Another component of the City’s utility budget relates to the replacement of ageing municipal infrastructure. Annual funding levels required to maintain and replace the City’s utility infrastructure are assessed in the report titled “Ageing Utility and Road Infrastructure Planning – 2022 Update”, dated June 8, 2022 and received for information during the July 25, 2022 Regular Council Meeting. This report identifies additional annual funding requirements of \$2.9M for water infrastructure and \$6.4M for sanitary infrastructure. While this funding gap does not impact short term service levels, bridging the funding gap over the next decades will be required to replace infrastructure at the end of their service life. 2023’s utility budget includes recommendations to reduce the funding gap for the sewer utility.

Solid Waste and Recycling Service Agreements and Pilot Initiatives

Key cost drivers for the Solid Waste and Recycling utility include additional costs and resources necessary to meet the City’s contractual obligations, including updated contract pricing for new service agreements as obtained through the competitive tendering process and continuation of the

work of various pilot initiatives such as the commercial scoping review, grease collection pilot and installation of a trash skimming device.

Utility Budgets and Rates Options

Recognizing the challenges of cost increases outside of the City's control and those associated with maintaining City infrastructure, staff have presented various budget and rate options for 2023. This includes three different options for each of the City's utilities.

In accordance with Council's Budget & 5-Year Financial Plan Preparation Policy (Policy 3016), Option 1 for each utility presents a same level of service budget with the non-discretionary increases necessary to meet demands placed on the City by factors outside of the City's direct control (e.g. regional or other government agency increases etc.) and contractual obligations. Options 2 and 3 present various actions the City can take to modify the rates or levels of service depending on the varying circumstances and needs within each budget area. The various options are presented for each of the City utilities in this report.

Staff recommend Option 3 for Water (page 9), Option 3 for Sewer (page 16), Option 3 for Drainage and Diking (page 28), and Option 2 for Solid Waste and Recycling (page 30). The proposed 2023 rates are summarized in Table 17 and Table 18.

Collection of Metro Vancouver Debt Levy

The Metro Vancouver Sewer Levy includes two distinct components. The first is operations and maintenance (O&M), and the second is debt, which covers capital costs such as the construction of the Gilbert Trunk Sewer. Historically, the O&M component has been included in the City's utility rates, while the debt component was collected as an independent levy on the property tax bill.

This has caused some members of the public to believe that they have been double-billed for sanitary sewer services, and a number of complaints have been received by staff over the years. To eliminate this confusion, an administrative shift has been made to collect this Debt Levy through the Sewer Utility instead of through Property Tax. This provides better transparency and clarity for property owners, improves equity by charging property owners for sewer services according to their sewer usage, and improves administration by capturing all revenues and expenditures associated with sewer servicing through the Sewer Utility.

Metro Vancouver's Debt Levy for Richmond in 2023 is \$4.8M. Table 1 illustrates the impact of this administrative shift. For metered properties with average water consumption and average land assessment values, this shift would result in nominal changes to net fees collected for the Debt Levy. While apartments and townhouses on a flat rate may see a net fee increase as a result of this shift, through the City's implementation of the universal multi-family water metering program, these properties have the option to be metered and realize savings on their water and sewer bills.

Table 1 – Household Impact of Collecting Sewer Debt Levy through Sewer Rates Rather than Property Tax

Customer Class	Property Tax Savings	Sewer Rate Impact	
		Metered Customers	Flat Rate Customers
Single-Family Dwelling (based on 325 m3 average consumption and \$1.5M land assessment value)	-\$76.59	\$55.05	\$69.45
Townhouse (based on 218 m3 average consumption and \$1M land assessment value)	-\$40.58	\$36.92	\$63.55
Apartment (based on 157 m3 average consumption and \$0.6M land assessment value)	-\$20.42	\$26.60	\$52.93
Metered Rate (\$/m ³)	-	\$0.1694	-

This report first presents Sewer rate options prior to this administrative shift to show the comparison with the 2022 budget and rates. Final rates incorporating this administrative shift are presented subsequently.

Re-naming of the Drainage and Diking Utility

Staff recommend renaming the Drainage and Diking Utility to the Flood Protection Utility to better reflect the utility's scope and for consistency with the City's Flood Protection Management Strategy and naming of the Flood Protection Reserves proposed as part of the report titled Establishment of New Utility Reserve Funds dated September 29, 2022 from the Acting Director, Finance. This report will continue to make reference to the Drainage and Diking Utility until the proposed name change is endorsed by Council.

Comparison of Proposed 2023 Utility Rates with Comparator Municipalities

The City's utility budgets are carefully managed to provide high levels of service at good value to Richmond's residents, despite external increases that are outside of the City's control.

Figure 3 compares the proposed 2023 utility rates with 2022 utility rates for comparator municipalities. 2022 rates are presented for comparator municipalities as 2023 rates have not been established yet. With the increases proposed for 2023, Richmond's utility rates remain below the average of 2022 rates for comparator municipalities.

Unlike comparator municipalities, Richmond's flat topography, high water table and proximity to the water places unique challenges on the City's utility infrastructure, resulting in larger and deeper pipes, the need for over 200 drainage and sanitary pump stations and the need for an extensive flood protection system that includes 49 kilometers of perimeter dikes. This significantly increases demand for capital and operating costs. Despite these challenges and the additional infrastructure needs, the City of Richmond continues to offer a high level of service while still maintaining a competitive combined fee for utility services.

Figure 3 Comparison of Average Single Family Dwelling Utility Rates for Richmond (Proposed 2023 Rates) with Comparator Municipalities (2022 Rates)



Detailed budget and rate information for each utility area, with options for Council’s consideration, are presented in this report.

Origin

This report presents the recommended 2023 utility budgets and rates for Water, Sewer, Drainage and Diking, and Solid Waste and Recycling.

If the utility budgets and rates presented in this report are endorsed by the Finance Committee, a subsequent report will be presented to Council to introduce amendment bylaws reflecting the approved utility rates. The report will be presented at subsequent Regular Council Meetings to give the amendment bylaws first, second, and third readings prior to adoption. The utility rates need to be established by December 31, 2022 in order to take effect January 1, 2023.

This report supports the following strategies within Council's Strategic Plan 2018-2022:

Strategy #1 A Safe and Resilient City:

Enhance and protect the safety and well-being of Richmond.

1.2 Future-proof and maintain city infrastructure to keep the community safe.

1.3 Ensure Richmond is prepared for emergencies, both human-made and natural disasters.

Strategy #2 A Sustainable and Environmentally Conscious City:

Environmentally conscious decision-making that demonstrates leadership in implementing innovative, sustainable practices and supports the City's unique biodiversity and island ecology.

2.1 Continued leadership in addressing climate change and promoting circular economic principles.

2.2 Policies and practices support Richmond's sustainability goals.

Strategy #5 Sound Financial Management:

Accountable, transparent, and responsible financial management that supports the needs of the community into the future.

5.1 Maintain a strong and robust financial position.

5.2 Clear accountability through transparent budgeting practices and effective public communication.

5.3 Decision-making focuses on sustainability and considers circular economic principles.

5.4 Work cooperatively and respectfully with all levels of government and stakeholders while advocating for the best interests of Richmond.

Analysis

Water Utility

Table 2. 2023 Water Utility Budget

Key Budget Areas	2022 Base Level Budget (Restated for Comparison ¹)	Option 1 Non-discretionary increases, including a 1% increase for the multi-family water metering program and three no additional cost Work Control Technician PCCs	Option 2 Option 1 + \$350,000 reduction in rate stabilization	Option 3 (Recommended) Option 2 + removal of rate stabilization	% of Total Expenditure Increase for the Recommended Option²
<u>Expenditures</u>					
Salary	\$6,720,700	\$245,000	\$245,000	\$245,000	41.5%
Operating Expenditures	\$3,824,900	\$5,000	\$5,000	\$5,000	0.8%
Water Meter Reading and Maintenance	\$182,400	\$0	\$0	\$0	
Toilet Rebate Program	\$100,000	\$0	\$0	\$0	
Metro Vancouver Water Purchases	\$28,900,900	\$334,500	\$334,500	\$334,500	56.7%
Capital Infrastructure Replacement Program	\$7,500,000	\$0	\$0	\$0	
Residential Water Metering Program	\$3,085,900	\$0	\$0	\$0	
Firm Price/Receivable	\$2,817,200	\$72,500	\$72,500	\$72,500	
Overhead Allocation	\$1,154,800	\$5,800	\$5,800	\$5,800	1.0%
Total Base Level Expenditure Budget	\$54,286,800	\$54,949,600	\$54,949,600	\$54,949,600	
<u>Revenues</u>					
Provision (Rate Stabilization)	-\$700,000	\$0	\$350,000	\$700,000	
Investment Income	-\$196,000	-\$24,000	-\$24,000	-\$24,000	
Firm Price/Receivable	-\$2,817,200	-\$72,500	-\$72,500	-\$72,500	
Meter Rental	-\$1,969,800	-\$12,600	-\$12,600	-\$12,600	
YVR Maintenance	-\$30,000	\$0	\$0	\$0	
Provision (Toilet Rebate/Flushing)	-\$289,000	-\$6,300	-\$6,300	-\$6,300	
Meter Re-Reads and Other Services	-\$233,300	\$0	\$0	\$0	
Reserve (Residential Water Metering Program)	-\$1,350,000	\$450,000	\$450,000	\$450,000	
Total Base Level Revenue Budget	-\$7,585,300	-\$7,250,700	-\$6,900,700	-\$6,550,700	
Net Budget	\$46,701,500	\$47,698,900	\$48,048,900	\$48,398,900	
Net Difference Over 2022 Base Level Budget		\$997,400	\$1,347,400	\$1,697,400	

¹ The 2022 Base Level budget has been restated to include approved budget reallocations.

² Excludes increase in the Firm Price/Receivable expenditure because there is a matching revenue increase.

Table 2 presents three budget options for the Water Utility. Italicized values represent the difference between the 2022 rates and the 2023 rate options. The 2023 base budget for each option is equal to the sum of the 2022 base budget plus the changes in italics. Rows in green denote the key budget areas with options, which are further discussed in subsequent sub-sections.

The following is an explanation of the budget reductions and increases outlined in Table 2.

Metro Vancouver Water Purchases

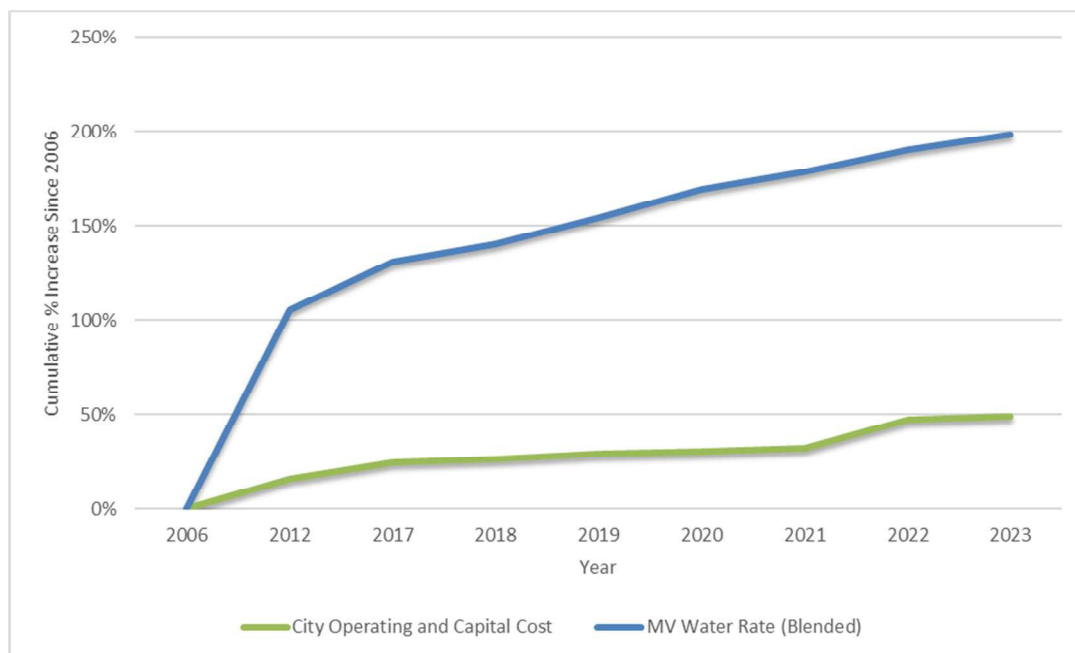
Bulk water is purchased from Metro Vancouver on a volumetric basis. Metro Vancouver’s water rate will increase by 2.8% in 2023, with a corresponding increase in water purchase cost from Metro Vancouver of \$0.3M. This accounts for a significant component of Richmond’s non-discretionary expenditure increase. The City’s 2023 water rates are based on Metro Vancouver’s proposed 2023-2027 Financial Plan (Table 3).

Table 3. Metro Vancouver Water Rate Projection – Proposed 2023-2027 Financial Plan

	2023	2024	2025	2026	2027
Blended Rate (\$/m³)	\$0.8676	\$0.9457	\$1.0762	\$1.2140	\$1.3815
% Change	2.8%	9.0%	13.8%	12.8%	13.8%

Metro Vancouver’s water rate increases are forecasted to be significant in 2024 and beyond due to major upcoming infrastructure projects required to improve system capacity, resilience, and reliability. Since 2006, the Metro Vancouver water rate has increased by 198%, or an average annual increase of 6.6%. These increases are notably higher than the City’s water utility rates, which increased by 49% over the same period. Figure 4 provides the City’s annual operating and capital cost increases compared to Metro Vancouver’s annual water rate increases.

Figure 4. City Operating and Capital Cost Increases vs. Metro Vancouver Water Rate Increase



As a result of these increases, Metro Vancouver costs have increased from accounting for 44% of Richmond’s water utility rate in 2006 (Figure 5) to 56% in 2023 (Figure 6). The increases in Metro Vancouver costs are a primary budget driver for the water utility.

Figure 5. 2006 Water Utility User Fee Breakdown

Figure 6. 2023 Water Utility User Fee Breakdown



Water Metering (Avoided Water Purchase Costs)

Water metering plays a significant role in the City’s water demand management program, which improves equity to ratepayers by providing volume-based user fees and reduces bulk water purchases costs by promoting water conservation and reducing private-side leakage. Since the inception of the program in 2003, the City’s total water use has decreased by 12% despite an increase in population of 26%. The reduction in per capita water usage is estimated to result in annual savings of \$12M in avoided water purchase cost.

The City has made significant advances in water metering since the program was first introduced. Approximately 83% of the City’s water use is currently metered. All single-family and Industrial, Commercial and Institutional (ICI) properties are metered and 56% of multi-family units are metered.

At the November 8, 2021 Regular Council Meeting, through the 2022 Utility Budgets and Rates report, Council endorsed increasing the annual funding level for the water metering program to \$3M to implement a universal multi-family water metering program. The increased funding was to be achieved through a phased annual 1% increase to the water rate over the next four years, along with utilization of the Watermain Replacement Reserve to make up the difference over that period. All options include this 1% annual rate increase.

Three Work Control Technicians

Work Control Technicians are responsible for managing work orders by entering and assigning work orders, performing BC1Calls, applying for permitting when required, and coordinating schedules with City crews, private utility companies, and other contractors as necessary. These roles also ensure that receivables and capital projects are billed in a timely manner.

All options include new Position Complement Controls (PCCs) for three Regular Full-Time Work Control Technicians. This work is currently being completed by staff on a temporary assignment basis, with funding available in the existing operating budget. Given the importance of this position in ensuring City crews are used effectively and work is completed in a timely manner, staff recommend that these positions be converted to Regular Full Time positions with PCCs. Formalizing these roles with dedicated staffing will provide efficiencies and allow the City to deliver better service at no additional cost.

Operating Expenditures

The City's total operating expenditures (excluding Metro Vancouver costs and the increased funding to implement universal multi-family water metering) is below the Consumer Price Index (CPI). The main cost drivers for the operating expenditure increase include:

- Salary and fringe benefit impacts per union agreements and senior government increases; and
- Equipment cost increases.

The City's operating expenditures are carefully managed and considerable measures have been taken to minimize cost increases where possible. The average increase to the City's non-discretionary operating expenditures since 2018 has been 1.7%, which is below the CPI over the same period.

Construction Period Revenues

The City receives construction period revenues from development customers for water use during construction. This revenue is not budgeted due to its long-term variability. Any actual revenue will be transferred to the Water Levy Stabilization Provision for future rate stabilization funding.

Capital Infrastructure Replacement Program Contribution

The Capital Infrastructure Replacement Program facilitates proactive management of the City's water assets, allowing the City to maintain a high level of service by minimizing watermain breaks and service disruptions. Through proactive management of ageing infrastructure and implementation of the City's water pressure management program, the City has also successfully reduced water losses due to pipe leakage in the water distribution system. This has resulted in additional cost savings from avoided Metro Vancouver water purchase costs.

The annual capital contribution for water-related infrastructure replacement is currently \$7.5M, excluding the amount currently dedicated to the water metering program. The "Ageing Utility and Road Infrastructure Planning – 2022 Update" report identified a long-term annual funding requirement of \$10.4M, with a target funding range of \$8.4M to \$12.3M. All options include maintaining the current contribution to the Capital Infrastructure Replacement Program at this

time, as it is relatively close to the target funding range. Current funding levels are adequate for short- to medium-term water infrastructure replacement needs. However, the funding gap defers the financial obligation to future years and bridging the funding gap will be an important consideration in future utility budgets.

Water Supply Reserve Fund

Historically, funding for the capital infrastructure replacement program and the water metering program are transferred into the Watermain Replacement Reserve. A report titled Establishment of New Utility Reserve Fund dated September 22, 2022 from the Acting Director, Finance is being brought forward for Council's consideration separately from this report, recommending the creation of a new Water Supply Reserve Fund through the Water Supply Reserve Fund Establishment Bylaw No. 10402. Should this bylaw be adopted, funding for the capital infrastructure replacement program and the water metering program identified in the Water Utility Budget will be transferred to the Water Supply Reserve Fund.

Water Levy Stabilization Provision Contribution (Water Rate Options)

The Water Levy Stabilization Provision was established by Council as a funding source for water rate stabilization. The Provision has a balance of \$14.9M as of September 30, 2022, and is intended to offset significant increases in regional water purchase costs.

The Water Utility currently has a \$700,000 drawdown to partially offset rate increases. Option 1 maintains this drawdown from the Provision; Option 2 reduces the drawdown by \$350,000 to \$350,000; Option 3 reduces the drawdown to \$0. Staff recommend Option 3 as Metro Vancouver's rate increase for 2023 is significantly lower than what has been projected for future years in Metro Vancouver's 2023-2027 Financial Plan. This will preserve the Provision balance so it can be utilized in future years to help stabilize significant rate fluctuations.

Impact on 2023 Water Rates

The impact of the three budget options on water rates is shown in Table 4 and Table 5. Table 4 shows the various options for metered customers; Table 5 shows the options for flat rate customers. The rates presented include fixed costs for metering, such as meter reading, billing, and maintenance. Italicized numbers represent the difference between 2022 rates and the various rate options for 2023.

Option 1 represents non-discretionary increases necessary to meet demands placed on the City by factors outside of the City's direct control; Option 2 includes a reduction in rate stabilization from the Provision of \$350,000; Option 3 results in the highest rates as it eliminates the drawdown from Provision.

Table 4. 2023 Metered Rate Water Options (net of discount)

Customer Class	2022 Rates	Option 1	Option 2	Option 3 (Recommended)
Single-Family Dwelling (based on 325 m ³ average consumption)	\$484.36	\$501.45 \$17.09	\$504.96 \$20.60	\$508.47 \$24.11
Townhouse (based on 218 m ³ average consumption)	\$331.91	\$343.38 \$11.47	\$345.73 \$13.82	\$348.09 \$16.18
Apartment (based on 157 m ³ average consumption)	\$222.11	\$230.37 \$8.26	\$232.07 \$9.96	\$233.76 \$11.65
Metered Rate (\$/m ³)	\$1.3574	\$1.4100 \$0.0526	\$1.4208 \$0.0634	\$1.4316 \$0.0742
<i>% Change (Metered Rate)</i>		3.9%	4.7%	5.5%

Table 5. 2023 Flat Rate Water Options (net of discount)

Customer Class	2022 Rates	Option 1	Option 2	Option 3 (Recommended)
Single-Family Dwelling	\$720.83	\$748.78 \$27.95	\$754.52 \$33.69	\$760.26 \$39.43
Townhouse	\$590.05	\$612.93 \$22.88	\$617.63 \$27.58	\$622.32 \$32.27
Apartment	\$380.23	\$394.97 \$14.74	\$398.00 \$17.77	\$401.03 \$20.80
<i>% Change</i>		3.9%	4.7%	5.5%

The Waterworks and Water Rates Bylaw provides a 10% discount for utility bills paid prior to the due date. The rates shown in the bylaw will be before the 10% discount is applied, in order to achieve full cost recovery. The rates outlined in Table 4 and Table 5 are net discounted rates.

Options Summary

Option 1

- Represents the minimum increase necessary to maintain the current level of service;
- Includes an additional 1% rate increase as part of the multi-year phased increase to fund the multi-family water metering program, in accordance to the Council-endorsed staff report titled “2022 Utility Budgets and Rates”, dated October 22, 2021 and endorsed during the November 8, 2021 Regular Council Meeting;
- Includes conversion of three Work Control Technician positions to Regular Full Time positions with PCCs at no additional cost; and
- Maintains a drawdown of \$700,000 from the Water Levy Stabilization Provision.

Option 2

- Includes everything in Option 1; and
- Reduces the drawdown from the Water Levy Stabilization Provision to \$350,000.

Option 3 (Recommended)

- Includes everything in Option 2; and
- Reduces the drawdown from the Water Levy Stabilization Provision to \$0.

Recommended Option

Staff recommend the budgets and rates identified in Option 3 for the Water Utility. This option will support the City's progress in the multi-family water metering program and includes conversion of three Work Control Technician positions to Regular Full Time positions with PCCs at no additional cost. The existing \$700,000 drawdown from the Water Levy Stabilization Provision will be eliminated, preserving the Provision for future years when Metro Vancouver imposes more significant rate increases.

Sewer Utility

Table 6. 2023 Sewer Utility Budget

Key Budget Areas	2022 Base Level Budget <small>(Restated for Comparison¹)</small>	Option 1 Non Discretionary Increases	Option 2 Option 1 + zero net cost Sewer Coordinator ² + \$0.25M increase in the annual contribution to sewer reserve for ageing infrastructure	Option 3 (Recommended) Option 1 + zero net cost Sewer Coordinator ² + \$0.5M increase in the annual contribution to sewer reserve for ageing infrastructure	% of Total Expenditure Increase for the Recommended Option³
<u>Expenditures</u>					
Salary	\$3,644,900	\$130,900	\$130,900	\$130,900	6.0%
Operating Expenditures	\$2,561,500	\$17,600	\$17,600	\$17,600	0.8%
Metro Vancouver Sewer Levy O&M Component	\$24,886,500	\$1,539,300	\$1,539,300	\$1,539,300	70.2%
Metro Vancouver Sewer Levy Debt Component	\$3,817,700	\$934,400	\$934,400	\$934,400	
Capital Infrastructure Replacement Program	\$5,806,400	\$0	\$250,000	\$500,000	22.8%
Firm Price/Receivable	\$674,100	\$16,200	\$16,200	\$16,200	
Overhead Allocation	\$764,100	\$5,600	\$5,600	\$5,600	0.3%
Total Base Level Expenditure Budget	\$42,155,200	\$44,799,200	\$45,049,200	\$45,299,200	
<u>Revenues</u>					
Provision (Rate Stabilization)	\$0	\$0	\$0	\$0	
Investment Income	-\$76,000	-\$9,000	-\$9,000	-\$9,000	
Firm Price/Receivable	-\$674,100	-\$16,200	-\$16,200	-\$16,200	
Property Tax for Metro Vancouver Sewer Debt	-\$3,817,700	-\$934,400	-\$934,400	-\$934,400	
Total Base Level Revenue Budget	-\$4,567,800	-\$5,527,400	-\$5,527,400	-\$5,527,400	
Net Budget	\$37,587,400	\$39,271,800	\$39,521,800	\$39,771,800	
Net Difference Over 2022 Base Level Budget		\$1,684,400	\$1,934,400	\$2,184,400	

¹ The 2022 Base Level budget has been restated to include approved budget reallocations.

² Funded from the capital program, refer to "Sewer Coordinator (Sewer Rate Options)" discussion on page 19

³ Excludes increase in the Firm Price/Receivable expenditure and Metro Vancouver Sewer Levy Debt component because there is a matching revenue increase.

Table 6 presents three budget options for the Sewer Utility. Italicized values represent the difference between the 2022 rates and the 2023 rate options. The 2023 base budget for each option is equal to the sum of the 2022 base budget plus the changes in italics. Rows in green denote the key budget areas with options, which are further discussed in subsequent sub-sections.

The following is an explanation of the budget reductions and increases in Table 6.

Metro Vancouver Sewer Levy (Operations and Maintenance Component)

Richmond pays Metro Vancouver a Sewer Levy for bulk transmission and treatment of liquid waste on a flat rate basis. The Metro Vancouver Sewer Levy comprises of an operations and maintenance (O&M) component as well as a debt component. The debt component has historically been levied through the Property Tax bill, as is discussed in a separate section of this report. The O&M component, funded through utility rates, is increasing by \$1.5M (6%) to \$26.4M in 2023. This increase accounts for 70% of the non-discretionary expenditure increases proposed for the 2023 sewer rates.

Richmond’s 2023 sewer rates are based on Metro Vancouver’s proposed 2023-2027 Financial Plan (Table 7).

Table 7. Metro Vancouver 5-Year Overall Sewer Levy Cost¹ – Projected Rate Increases from the Proposed 2023-2027 Financial Plan (Lulu Island Sewerage Area)

	2023	2024	2025	2026	2027
% Change	9.1%	14.9%	25.6%	13.4%	10.6%

¹ Includes both Operations and Maintenance and Debt Component of the Metro Vancouver Sewer Levy

Metro Vancouver rate increases for the Lulu Island Sewerage Area are significant, and are anticipated to continue rising in future years due to major sewer infrastructure projects such as the Gilbert Trunk Sewer construction and wastewater treatment plant upgrades. Metro Vancouver’s O&M sewer levy has increased by 189% since 2006, which is an average annual increase of 6.4%. This is notably higher than the City’s sewer utility rate increases, which have increased by 68% over the same period. Figure 7 provides a comparison of the City’s annual operating and capital cost increases compared to Metro Vancouver operations and maintenance sewer levy.

Figure 7. City Operating and Capital Cost Increases vs. Metro Vancouver Operations and Maintenance Sewer Levy Increase

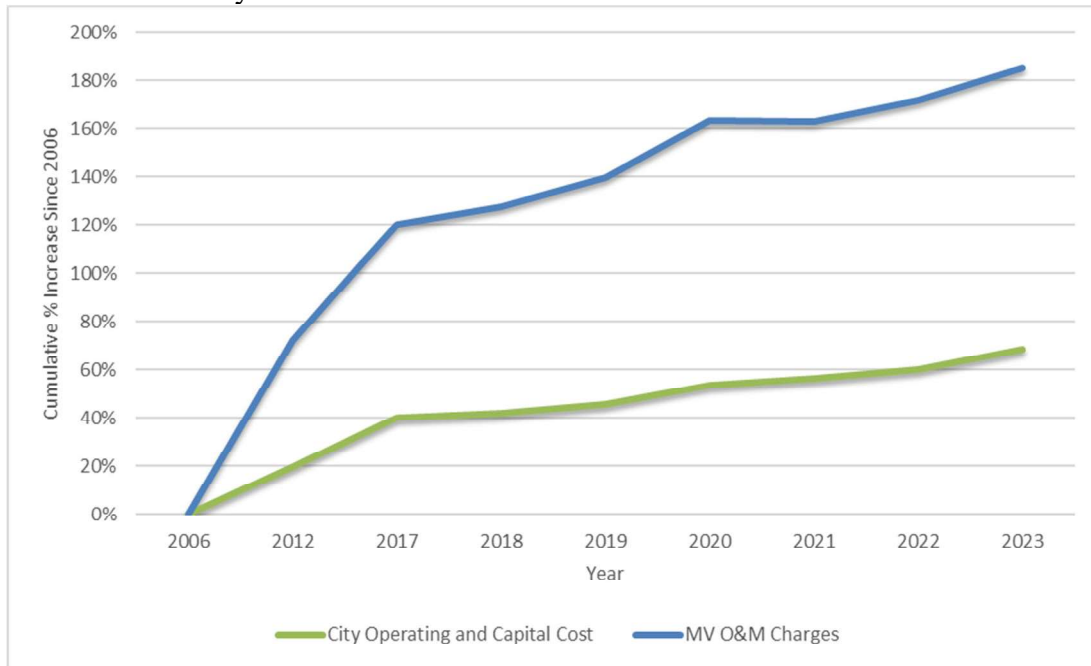


Figure 8. 2006 Sewer Utility User Fee Breakdown

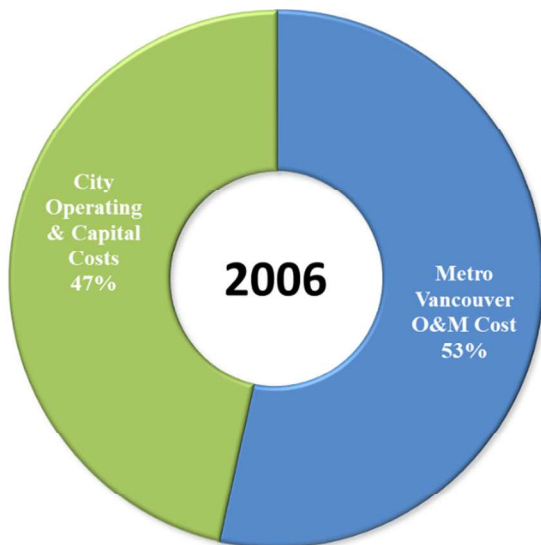


Figure 9. 2023 Sewer Utility User Fee Breakdown



The figures above exclude the debt component of the Metro Vancouver Sewer Levy, which is discussed in a separate section of this report. As a result of these increases, Metro Vancouver sewer levy costs have increased from accounting for 53% of Richmond’s sewer utility rate in 2006 to 66% in 2023. The increases in Metro Vancouver costs are a primary budget driver for the sewer utility.

Operating Expenditures

The City's operating budget expenditures have increased due to factors beyond the City's control and contractual obligations, including:

- Salary and fringe benefit impacts per union agreements and senior government increases;
- Electricity increases; and
- Equipment cost increases.

The City's operating expenditures are carefully managed and considerable measures have been taken to minimize cost increases where possible. The average increase to the City's operating expenditures (excluding Metro Vancouver costs and increases to the funding levels for the capital infrastructure program) since 2018 has been 1.9%, which is significantly below CPI over the same period.

Construction Period Revenues

The City receives construction period revenues from development customers for sewer use during construction. This revenue is not budgeted due to its long-term variability. Any actual revenue will be transferred to the Sewer Levy Stabilization Provision for future rate stabilization funding.

Sewer Coordinator (Sewer Rate Options)

Options 2 and 3 include a request for a Regular Full-Time Sewer Coordinator position with PCC funded from the capital program to oversee the City's ongoing CCTV inspection program. The program assesses the condition of sanitary sewers to inform the capital program, fulfills Metro Vancouver's requirement of inspecting all sanitary sewers on a 20-year cycle, and mitigates the risk of failure and unplanned service interruptions by identifying rehabilitation and replacement requirements. This work is currently carried out in an ad-hoc manner by existing staff with other duties. Without a dedicated resource, there is an increased risk of delayed identification of issues which can lead to service disruptions, errors in data entries resulting in increased costs for duplicate inspections, and impacts to service levels for the staff members' regular duties.

As CCTV inspections are ongoing to meet capital planning needs and fulfill Metro Vancouver requirements, a regular full-time position is recommended to provide cost efficiencies by ensuring data is consistently managed and accessible. CCTV inspections to inform capital upgrade needs are completed annually as part of the sanitary capital program. This position supports this work and will be funded from the capital program with no additional budget or rate impact.

Capital Infrastructure Replacement Program (Sewer Rate Options)

The annual capital contribution for sewer-related infrastructure replacement is currently \$5.8M. The report titled "Ageing Utility and Road Infrastructure Planning – 2022 Update" identified a long-term annual funding requirement of \$12.2M, with a target funding range of \$9.2M to \$15.2M.

Options 2 includes a \$0.25M increase in the annual contribution to the Sanitary Sewer Reserve for replacement of ageing infrastructure to begin to bridge the gap between the current and target funding level; Option 3 includes a \$0.5M increase in the annual contribution to Sanitary Sewer Reserve. The proposed funding levels are adequate for short- to medium-term sanitary

infrastructure replacement needs. However, the continued funding gap defers the financial obligation to future years and bridging the funding gap will be an important consideration in future utility budgets.

Sanitary Sewer Reserve Fund

Historically, funding for the capital infrastructure replacement program is transferred into the Sanitary Sewer Reserve. A report titled Establishment of New Utility Reserve Fund dated September 22, 2022 from the Acting Director, Finance is being brought forward for Council's consideration separately from this report, recommending the creation of a new Sanitary Sewer Reserve Fund through the Sanitary Sewer Reserve Fund Establishment Bylaw No. 10401. Should this bylaw be adopted, funding for the capital infrastructure replacement program identified in Sewer Utility Budget will be transferred to the new Sanitary Sewer Reserve Fund.

Sewer Levy Stabilization Provision

The Sewer Levy Stabilization Provision was established by Council as a funding source for sewer rate stabilization. The Provision has a balance of \$8.7M as of September 30, 2022 and is intended to offset increases in regional sewer collection and treatment costs.

The drawdown from the Sewer Levy Stabilization Provision was eliminated in the 2022 utility budget to preserve the Provision for the future, when larger Metro Vancouver sewer levy increases are anticipated. All options maintain a \$0 drawdown from the Sewer Levy Provision.

Impact on 2023 Sewer Rates

The impact of the three budget options on sewer rates is shown in Table 8 and Table 9. Table 8 shows the various options for metered customers. Table 9 shows the options for flat rate customers. Italicized numbers represent the difference between 2022 and the various rate options for 2023.

Option 1 includes the non-discretionary increases necessary to meet demands placed on the City by factors outside of the City's direct control. Options 2 and 3 includes a new PCC for a Sewer Coordinator at zero net cost to coordinate the City's ongoing CCTV program. Option 2 includes a \$0.25M increase in the annual contribution to the sewer reserve for replacement of ageing infrastructure; and Option 3 includes a \$0.5M increase in the annual contribution to the sewer reserve for replacement of ageing infrastructure.

Table 8. 2023 Metered Rate Sewer Options (net of discount)

Customer Class	2022 Rates	Option 1	Option 2	Option 3 (Recommended)
Single-Family Dwelling (based on 325 m ³ average consumption)	\$422.05	\$446.42 \$24.37	\$449.31 \$27.26	\$452.21 \$30.16
Townhouse (based on 218 m ³ average consumption)	\$283.09	\$299.44 \$16.35	\$301.39 \$18.30	\$303.33 \$20.24
Apartment (based on 157 m ³ average consumption)	\$203.88	\$215.66 \$11.78	\$217.05 \$13.17	\$218.45 \$14.57
Metered Rate (\$/m ³)	\$1.2986	\$1.3736 \$0.0750	\$1.3825 \$0.0839	\$1.3914 \$0.0928
<i>% Change</i>		5.8%	6.5%	7.1%

Table 9. 2023 Flat Rate Sewer Options (net of discount)

Customer Class	2022 Rates	Option 1	Option 2	Option 3 (Recommended)
Single-Family Dwelling	\$532.43	\$563.16 \$30.73	\$566.81 \$34.38	\$570.47 \$38.04
Townhouse	\$487.16	\$515.27 \$28.11	\$518.61 \$31.45	\$521.95 \$34.79
Apartment	\$405.73	\$429.14 \$23.41	\$431.93 \$26.20	\$434.71 \$28.98
<i>% Change</i>	-	5.8%	6.5%	7.1%

The Drainage, Dike and Sanitary Sewer System Bylaw provides a 10% discount for utility bills paid prior to the due date. The rates shown in the bylaw will be before the 10% discount is applied, in order to achieve full cost recovery. The rates outlined in Tables 7 and 8 are net discounted rates.

Options Summary

Option 1

- Represents the minimum increase necessary to maintain the current level of service.

Option 2

- Includes everything in Option 1;
- Includes a new PCC for a regular full-time Sewer Coordinator position funded from the capital budget, with no additional rate impact; and
- Includes a \$0.25M increase to the annual contribution to the Capital Infrastructure Replacement Program, which provides funding for the Sanitary Capital program budget, bringing the annual funding level to \$6.1M and reducing the funding gap.

Option 3 (Recommended)

- Includes everything in Option 1;
- Includes a new PCC for a regular full-time Sewer Coordinator position funded from the capital budget, with no additional rate impact; and
- Includes a \$0.5M increase to the annual contribution to the Capital Infrastructure Replacement Program, which provides funding for the Sanitary Capital program budget, bringing the annual funding level to \$6.3M and reducing the funding gap.

Recommended Option

Staff recommend the budgets and rates identified in Option 3 for the Sewer Utility. This option includes a new PCC for a Sewer Coordinator funded from the capital budget at no additional cost to the utility. A \$0.5M increase to the annual contribution to the sewer reserve is also included to begin to bridge the \$6.4M funding gap for replacement of ageing infrastructure. There will continue to be no drawdown from Sewer Levy Stabilization Provision, in order to preserve the Provision for utilization in the future when larger Metro Vancouver sewer levy increases are anticipated.

Metro Vancouver Sewer Levy (Debt Component)

Metro Vancouver Sewer Levy comprises of an O&M component as well as a debt component. The O&M component of Metro Vancouver's Levy is funded through the sewer utility and is collected through Sewer rates. The portion of Metro Vancouver's levy that relates to their debt servicing costs (Debt Levy) has historically been collected as an independent levy on the property tax bill.

This has caused some members of the public to believe that they have been double-billed for sanitary sewer services, and a number of complaints have been received by staff over the years. Property owners on septic systems have also expressed concerns over being charged for sewer through property taxes although they do not receive sewer service. An administrative shift has been made to collect this Debt Levy through the Sewer Utility instead of through property taxes. This provides better transparency and clarity for property owners, improves equity by charging property owners for sewer services according to their sewer usage, and improves administration by capturing all revenues and expenditures associated with sewer servicing through the Sewer Utility.

Metro Vancouver's Debt Levy for Richmond in 2023 is \$4.8M. Through this administrative shift, property owners would see an increase in Sewer Rates and a reduction in property taxes for 2023. Table 10 and Table 11 illustrates the impact of this administrative shift on metered and flat rate households with average water consumption and land assessment values. For metered properties, which account for a majority of Richmond's residential properties, this shift would result in nominal changes to net fees collected for the Debt Levy. While apartments and townhouses on a flat rate may see a net fee increase as a result of this shift, through the City's implementation of the universal multi-family water metering program, these properties have the option to be metered and realize savings on their water and sewer bills.

Table 10 - Impact of Collecting Sewer Debt Levy through Sewer Rates Rather than Property Tax on Metered Properties (net of discount)

Customer Class	2023 Recommended Sewer Rate (Option 3)	2023 Recommended Sewer Rate (Option 3) + Shift of Debt Levy to the Sewer Utility	Average Savings on Property Tax through Shift of Debt Levy to Sewer Utility
Single-Family Dwelling (based on 325 m3 average consumption and \$1.5M property assessment value)	\$452.21	\$507.26 \$55.05	<i>-\$76.59</i>
Townhouse (based on 218 m3 average consumption and \$0.8M property assessment value)	\$303.33	\$340.25 \$36.92	<i>-\$40.58</i>
Apartment (based on 157 m3 average consumption and \$0.4M property assessment value)	\$218.45	\$245.05 \$26.60	<i>-\$20.42</i>
Metered Rate (\$/m ³)	\$1.3914	\$1.5608 \$0.1694	

Table 11 - Impact of Collecting Sewer Debt Levy through Sewer Rates Rather than Property Tax on Flat Rate Properties (net of discount)

Customer Class	2023 Recommended Sewer Rate (Option 3)	2023 Recommended Sewer Rate (Option 3) + Shift of Debt Levy to the Sewer Utility	Average Savings on Property Tax through Shift of Debt Levy to Sewer Utility
Single-Family Dwelling (based on \$1.5M property assessment value)	\$570.47	\$639.92 \$69.45	<i>-\$76.59</i>
Townhouse (based on \$0.8M property assessment value)	\$521.95	\$585.50 \$63.55	<i>-\$40.58</i>
Apartment (based on \$0.4M property assessment value)	\$434.71	\$487.64 \$52.93	<i>-\$20.42</i>

Drainage and Diking Utility

The Drainage and Diking Utility was created to fund the operation, maintenance, and upgrade of Richmond's flood protection infrastructure. Since 2003, Council has approved increasing annual funding levels for the utility from \$0.6M to its current level of \$14.6M, which has facilitated significant improvements to the City's flood protection system.

The City's Flood Protection Management Strategy 2019 outlines Richmond's strategy for implementing flood protection works, which has grown to encompass more than only drainage and diking works. To be consistent with the City's Flood Protection Management Strategy and better reflect the scope of the program, staff propose to rename the Drainage and Diking Utility to the Flood Protection Utility. Should this recommendation be supported, staff will introduce bylaw amendments to change references to the Drainage and Diking Utility to the Flood Protection Utility in applicable City bylaws. Future City documents will also reference the Flood Protection Utility.

Accelerated Flood Protection Program

Climate change scientists predict up to 1 m of sea level rise and 0.2 m of ground settlement by 2100. The City's Flood Protection Management Strategy identifies a need to raise the City's dikes by approximately 1.2 m to protect the City against flooding. At the April 12, 2021 Regular Council Meeting, Council adopted a 50-year implementation period for an accelerated flood protection program with the objective of upgrading the City's dikes within 50 years, well in advance of anticipated climate change impacts. The program requires an annual capital budget of \$30M by 2031, with implementation of the new rates to start in 2023. All options presented in the report include increasing the annual capital budget from \$10.9M to \$13.0M to support acceleration of this program.

As a result of the City's proactive flood protection planning efforts, the City has been successful in obtaining approximately \$40 million in senior government grants since 2010 to support the advancement of this work. A strong capital program allows the City to continue leveraging opportunities to secure grant funding, so that every dollar collected from Richmond's residents is multiplied and results in greater value invested into Richmond's flood protection infrastructure.

Resources for Implementation of the Accelerated Flood Protection Program

As outlined in the report titled "Accelerated Flood Protection Program Concept and Flood Protection Rate Structure Review" dated February 26, 2021 and endorsed during the April 12, 2021 Regular Council Meeting, implementation of the accelerated flood protection program requires additional regular full-time staff to manage the design, environmental permitting, compensation, and monitoring, regulatory permitting, property and legal negotiations, and project management for this program. These positions directly support capital infrastructure upgrades for the accelerated flood protection program. Funding for these positions will be through the capital budget, and are captured within the annual capital budget increase proposed.

The five positions listed below with PCC's are proposed for 2023 and included in all Drainage and Diking options:

- **Senior Project Manager** – This position will oversee the strategic planning and implementation of the accelerated flood protection program and is required at the onset of the program to establish the program's roadmap over the next 50 years.
- **Project Coordinator (x2)** – These positions will assist with the delivery of dike upgrade projects, including administration of grant funding and managing regulatory approvals and permitting requirements. Requirements from regulatory bodies such as the Ministry of Forests and the Department of Fisheries and Oceans have increased in recent years. Long lead times associated with these permit applications have significantly delayed the implementation of flood protection upgrade projects. These positions will help ensure that permits are initiated early in the process and allow implementation of the program to proceed according to the approved schedule.
- **Environmental Coordinator 2** – This position will manage environmental compensation requirements associated with flood protection upgrade capital projects. Environmental compensation is key towards acquiring necessary approvals for flood protection upgrades. Early engagement of an environmental coordinator will help define habitat compensation work required for the flood protection program, allow the City to better leverage existing opportunities, and expedite permit approvals to ensure timely delivery of the program.
- **Real Estate Negotiator** – This position will be responsible for identifying property impacts and requirements related to the flood protection program and negotiating property needs to facilitate the delivery of capital flood protection upgrade works.

Additional positions required to support this program may be requested as part of future budget processes.

Flood Protection Reserve Fund

Historically, funding for the capital infrastructure replacement program is transferred into the Drainage Improvement Reserve Fund. A report titled Establishment of New Utility Reserve Fund dated September 22, 2022 from the Acting Director, Finance is being brought forward for Council's consideration separately from this report, recommending the creation of a new Flood Protection Reserve Fund through the Flood Protection Reserve Fund Establishment Bylaw No. 10403. Should this bylaw be adopted, Capital Infrastructure Replacement Program identified in Drainage and Diking Utility Budget will be transferred to the new Flood Protection Reserve Fund.

Rate Classes

Since 2016, new rate classes have been progressively introduced to provide greater equity between ratepayers and reflect the different levels of demand that properties place on the City's drainage and diking systems. At the April 12, 2021 Regular Council Meeting, Council endorsed that new rate classes be introduced for the Drainage and Diking Utility as presented in Table 2 of the report titled "Accelerated Flood Protection Program Concept and Flood Protection Rate Structure Review" dated February 26, 2021 and endorsed during the April 12, 2021 Regular Council Meeting. The proposed 2023 rates include new rate classes as outlined in the

aforementioned report. The increases for each rate class are proportional to the total increase required for each rate class to achieve the target 2031 rates.

Project Manager (Flood Protection Rate Options)

As part of the report titled “2018 Utility Budgets and Rates” dated October 31, 2017 and endorsed during the November 14, 2017 Regular Council Meeting, Council approved a Dike Repair Program, funded through the Drainage and Diking Utility as part of the drainage and diking operating budget, to address erosion, vegetation growth and human activity that damages the dike. The scope of work involves completing annual inspections of the City’s dikes and completing maintenance work to address defects in a timely manner. While the City’s capital construction work associated with the accelerated flood protection program works to raise the City’s dikes in anticipation of sea level rise, this program ensures that the City’s dikes continue to be well-maintained and well-protected against issues such as erosion and seepage.

Requirements from regulatory bodies such as the Ministry of Forests and the Department of Fisheries and Oceans have increased significantly in recent years, impacting the completion of dike maintenance work. Additional resources are required to address these changes and ensure that the appropriate permits and approvals are in place to facilitate timely completion of maintenance work, so the City’s dikes continue to be well-maintained.

Options 2 and 3 include a request for a PCC for a Regular Full-Time Project Manager position as part of the Dike Repair Program to support this change in regulatory requirements and ensure that dike maintenance work can continue to be completed in a timely and proactive manner. These options also include annual operating costs and monthly repayment costs for the acquisition of a vehicle to support this Project Manager position.

Drainage Operations and Maintenance Costs

Non-Discretionary Increases

The City’s operating budget expenditures have increased due to factors beyond the City’s control and contractual obligations, including:

- Salary and fringe benefit impacts per union agreements and senior government increases;
- Material cost increases; and
- Electricity increases.

Transfer of Operations and Maintenance Costs to the Drainage and Diking Utility (Flood Protection Rate Options)

The City’s operating expenditures are carefully managed and considerable measures have been taken to minimize cost increases where possible. The drainage operations and maintenance cost has been included in the City’s operating budget since its inception in 2001. It is appropriate for the Drainage and Diking Utility to fund both capital and operating expenditures, consistent with the Water Utility and Sewer Utility. Since 2021, drainage operations and maintenance costs have been gradually re-allocated from the operating budget to the Drainage Diking Utility as part of a multi-year phased approach. To date, \$3.8M has been re-allocated to the Drainage and Diking Utility. The total drainage operating cost for 2023 is approximately \$6.7M.

Option 3 includes an additional \$1M transfer of drainage operations and maintenance from the operating budget to the Drainage and Diking Utility.

Impact on Flood Protection Rates

Table 12 provides a summary of the proposed flood protection rates for each rate class and the impact on the net utility budget. Numbers in italics represent the difference between 2022 and the various rate options for 2023. Rows in green denote the key budget areas with options.

The Drainage, Dike and Sanitary Sewer System Bylaw provides a 10% discount for utility bills paid prior to the due date. The rates shown in the bylaw will be before the 10% discount is applied, in order to achieve full cost recovery. The rates outlined in Table 12 are net discounted rates.

Table 12. 2023 Flood Protection Rate Options (net of discount)

Rate Class	2022 Rates	Option 1 Non-discretionary increases + Capital budget increases per the Accelerated Flood Protection Report ¹ , including five new positions	Option 2 Option 1 + Project Manager (Dike Repair Program)	Option 3 (Recommended) Option 2 + additional \$1M transfer of drainage O&M to Drainage and Diking Utility
Single-family Residential	\$172.51	\$204.49 \$31.98	\$207.76 \$35.25	\$224.08 \$51.57
Agricultural	\$172.51	\$204.49 \$31.98	\$207.76 \$35.25	\$224.08 \$51.57
Multi-family Residential	\$153.71	\$167.94 \$14.23	\$169.39 \$15.68	\$176.66 \$22.95
Small or Stratified ICI (less than 800m ²)	\$172.51	\$204.49 \$31.98	\$207.76 \$35.25	\$224.08 \$51.57
Non-Stratified ICI (between 800m ² and 2,000m ²) ²	\$498.04	\$513.49 \$15.45	\$515.07 \$17.03	\$522.96 \$24.92
Medium Non-Stratified ICI (between 2,000m ² and 10,000m ²) ²	\$498.04	\$599.11 \$101.07	\$609.43 \$111.39	\$661.03 \$162.99
Large Non-Stratified ICI (between 10,000m ² and 20,000m ²) ²	\$1,090.71	\$1,292.93 \$202.22	\$1,313.57 \$222.86	\$1,416.79 \$326.08
Large Non-Stratified ICI (between 20,000m ² and 50,000m ²) ²	\$1,090.71	\$1,348.99 \$258.28	\$1,375.36 \$284.65	\$1,507.19 \$416.48
Large Non-Stratified ICI (between 50,000m ² and 100,000m ²) ²	\$1,090.71	\$1,442.80 \$352.09	\$1,478.75 \$388.04	\$1,658.48 \$567.77
Large Non-Stratified ICI (between 100,000m ² and 500,000m ²) ²	\$1,090.71	\$1,489.90 \$399.19	\$1,530.65 \$439.94	\$1,734.42 \$643.71
Largest Non-Stratified ICI (above 500,000m ²) ²	\$1,090.71	\$1,537.08 \$446.37	\$1,582.66 \$491.95	\$1,810.51 \$719.80
Net Budget	\$14,628,600	\$16,800,000	\$17,000,000	\$18,000,000
Capital Infrastructure Replacement Program	\$10,862,600	\$13,000,000	\$13,000,000	\$13,000,000
Drainage Operations and Maintenance	\$3,766,000	\$3,800,000	\$4,000,000	\$5,000,000
Net Difference Over 2022 Base Level Budget		\$2,171,400	\$2,371,400	\$3,371,400
<i>Overall % Change Over 2022 Base Level Budget</i>		<i>14.8%</i>	<i>16.2%</i>	<i>23.0%</i>

¹ Refer to report titled “Accelerated Flood Protection Program Concept and Flood Protection Rate Structure Review”, dated February 26, 2021 and endorsed during the April 12, 2021 Regular Council Meeting and “Accelerated Flood Protection Program” on page 24.

² Denotes new rate classes added to provide greater definition and equity among rate payers. Refer to “Rate Classes” on page 25.

Options Summary

Option 1

- Includes a \$2.1M increase to the annual contribution to the Capital Infrastructure Replacement Program, which provides funding for the Drainage Capital program budget;
- Includes the addition of new PCCs for five regular full-time positions required to support acceleration of the flood protection program. These positions will be funded from the capital budget and will have no additional rate or budget impact;
- Introduces new rate classes for ICI properties based on parcel size to improve equity among rate payers; and
- Maintains \$3.8M of funding for drainage operations and maintenance, with the balance to continue to be funded from the City's operating budget.

Option 2

- Includes everything in Option 1; and
- Includes a new PCC for a Project Manager position to be funded from the drainage operations and maintenance budget, bringing the total drainage operations and maintenance budget funded from the utility to \$4.0M. The remaining drainage operations and maintenance costs will continue to be funded from the City's operating budget.

Option 3 (Recommended)

- Includes everything in Option 2; and
- Includes an additional \$1.0M transfer of operations and maintenance to the utility, bringing the total drainage operations and maintenance funded from the utility to \$5.0M. The remaining drainage operations and maintenance costs will continue to be funded from the City's operating budget.

Recommended Option

Staff recommend the budgets and rates identified in Option 3 for the Drainage and Diking Utility. This option includes increases to the capital budget and the addition of new positions to support acceleration of the flood protection program. Additional capital budget increases and new positions will be added in future years to support this program. Option 2 also includes a PCC for a new Project Manager position to address changes in regulatory requirements and ensure dike maintenance work can continue to be completed in a timely and proactive manner. The cost of this new position will be funded from the drainage operations and maintenance budget, bringing the total drainage operations and maintenance budget funded from the utility to \$4.0M. The balance of the drainage operations and maintenance budget will continue to be funded from the City's operating budget, with relocation of the drainage operations and maintenance budget from the operating budget to the Drainage and Diking Utility to take place in future years.

Solid Waste and Recycling

Table 13. 2023 Solid Waste and Recycling Budget

Key Budget Areas ¹	2022 Base Level Budget ²	Option 1 Base Level Services	Option 2 (Recommended) Option 1 + Waste Reduction and Recycling Coordinator PCC for the Green Ambassador program	Option 3 Option 2 + Ongoing Single-Use Management/ Circular Waste Initiatives, including two PCCs
Expenditures				
Salaries	\$4,686,500	\$186,700	\$285,300	\$380,000
Contracts	\$10,681,100	\$116,100	\$116,100	\$32,300
Equipment/Materials	\$1,195,700	\$133,700	\$133,700	\$133,700
Disposal Costs	\$1,506,600	\$79,300	\$79,300	\$79,300
Recycling Materials Processing	\$4,445,600	\$242,500	\$242,500	\$242,500
Container Rental/Collection	\$475,700	-\$71,800	-\$71,800	-\$71,800
Operating Expenditures	\$361,200	\$17,300	\$17,900	\$17,900
Agreements	\$125,000	\$0	\$0	\$0
Rate Stabilization	\$668,400	\$0	\$0	\$0
Base Level Expenditure Budget	\$24,145,800	\$24,849,600	\$24,948,800	\$24,959,700
Revenues				
General Application Fees	-\$112,600	\$0	\$0	\$0
Recycling Materials	-\$330,100	-\$211,200	-\$211,200	-\$211,200
Garbage Tags	-\$20,000	\$0	\$0	\$0
Unrealized Discounts	-\$108,000	\$0	\$0	\$0
Revenue Sharing Grant/Other	-\$109,100	-\$17,500	-\$17,500	-\$17,500
Recycling Commission	-\$281,900	\$0	\$0	\$0
Recycle BC Incentive	-\$2,396,000	-\$226,800	-\$226,800	-\$226,800
Provision (OBI Adjustment)	-\$1,094,200	\$253,600	\$253,600	\$562,100
Base Level Revenue Budget	-\$4,451,900	-\$4,653,800	-\$4,653,800	-\$4,345,300
Net Budget	\$19,738,900	\$20,195,800	\$20,295,000	\$20,614,400
Net Difference Over 2022 Base Level Budget		\$456,900	\$556,100	\$875,500

¹ Rows in green denote key budget areas with options.

² The 2022 Base Level budget has been restated to include approved budget reallocations.

Table 13 presents three budget options for the Solid Waste and Recycling Utility. Italicized values represent the difference between the 2022 rates and the 2023 rate options. The 2023 base budget for each option is equal to the sum of the 2022 base budget plus the changes in italics. Rows in green denote the key budget areas with options, which are further discussed in subsequent subsections.

The following is an explanation of the budget reductions and increases outlined in Table 13.

Salaries

Salary and fringe benefit impacts per union agreements and senior government increases, and job evaluation reclassifications are the primary driver for non-discretionary utility budget increases.

Costs under Options 2 and 3 include a request for a PCC for a Regular Full-Time Waste Reduction and Recycling Coordinator to manage the Green Ambassador program. This youth engagement initiative started as a short term project to involve youth in waste and recycling management during the 2010 Olympics. The concept was well embraced and very successful, principally because it allowed youth to apply what they were learning in practical applications such as coordinating waste management at events and other related activities. It also satisfies student graduation requirements for volunteer hours. To date, the duties to manage and coordinate the program have been added to various staff workloads. The demands created by the City's growing solid waste and recycling programs is taxing staff's ability to continue to support the administrative and coordination efforts required for the program. A dedicated position would ensure no deterioration to the program, allow for ongoing focus and increased partnership opportunities with the school district and other agencies, and provide the ability to grow not only the Green Ambassador program, but also youth outreach initiatives more broadly.

Salary costs under Option 3 include the request for two new PCCs for a Regular Full-Time Waste Reduction and Recycling Coordinator and a Regular Full-Time Sanitation and Recycling Assistant, to support the implementation and management of the City's *Single-Use Plastic and Other Items Bylaw No. 10000* (Bylaw 10000). These positions were envisioned as part of Bylaw 10000's implementation plans originally presented to Council on May 19, 2019 and July 22, 2019. One position has been in place on a temporary basis since 2021, and the work of the second position is provided through consulting services. The associated costs are currently offset by provision funding.

Bylaw 10000 transitioned to the enforcement phase on September 27, 2022 and is expected to require ongoing management and administration in the future. Additionally, there will be new actions at the federal and provincial levels to further reduce plastic waste, beyond just single-use plastic, particularly since the federal government has classified plastic manufactured items as a toxic substance. At the federal level under the new *Single Use Plastics Prohibition Regulation*, six categories of single-use plastics will be banned in a staged manner as indicated in Table 14.

Table 14: Summary of banned single-use categories and implementation dates

Ban Implementation Timeline			
Category	Manufacture & Import	Sale	Export
Checkout bags	December 20, 2022	December 20, 2023	December 20, 2025
Cutlery	December 20, 2022	December 20, 2023	December 20, 2025
Foodservice ware ¹	December 20, 2022	December 20, 2023	December 20, 2025
Stir sticks	December 20, 2022	December 20, 2023	December 20, 2025
Straws	December 20, 2022	December 20, 2023	December 20, 2025
Ring carriers	June 20, 2023	June 20, 2024	December 20, 2025
Flexible straws packaged together with a beverage container ²	N/A	June 20, 2024	December 20, 2025

¹ Includes expanded or extruded polystyrene, PVC, oxodegradable plastic, and black plastic made with carbon black

² Single-use plastic flexible straws that are not packaged with beverage containers are excluded and will remain available for sale in stores, under certain conditions, for people who need them

Understanding the evolving regulatory landscape, and evaluating and developing further programs and initiatives to keep Richmond compliant and at the leading edge of plastic waste reduction will be an ongoing requirement. Option 3 would formalize this work into two positions by shifting the current funding for one of the positions from consulting to salaries and formalizing the role of the second temporary position to create two regular full time roles. Also under Option 3, funding would shift from provision funding to being embedded as part of the solid waste and recycling utility rates to formalize this program moving forward. Formalizing these roles would also allow the opportunity to explore other emerging waste management concepts, such as advancing waste circularity.

Given the lack of clarity at this time on the role of local governments as federal and provincial directions on plastic waste emerge, staff suggest that consideration for these permanent roles could be delayed until 2024 by which time more information should be available. The mix of temporary and contracted support to maintain the program will be continued in 2023 with the costs offset by provision funding under Options 1 and 2.

Contracts

Contract costs are increased in accordance with overall growth in the number of units serviced and escalation clauses as stipulated in the City’s various solid waste and recycling services contracts. These increases are partly offset by a reduction in contract costs associated with the implementation of Bylaw 10000, which included those implementation engagement costs of a one-time nature. As Bylaw 10000 costs were provision funded, there is a corresponding reduction in the use of provision funding for those one-time costs for no net impact to rates.

Reduction in contract costs under Option 3 are associated with the shift of costs associated with the ongoing management of Bylaw 10000 to salaries from consulting, as previously noted.

Equipment and Material Costs

Equipment and material cost increases are associated with demand replacement of recycling receptacles for residents. There has also been a notable increase in the cost of equipment, materials and supplies in general, principally associated with inflationary cost factors. The various items and equipment needs to support litter collection and recycling depot operations has also increased to maintain service levels and meet demand growth.

Disposal Costs

The Metro Vancouver regional tipping fee projections for local governments indicate a \$6 per tonne increase, or from \$121/tonne in 2022 to \$127/tonne in 2023. The \$5 per load transaction fee remains in effect and is unchanged. Cost increases are partly offset by a reduction in bin removal fees associated with revised pricing obtained through the award of a new service contract.

Recycling Materials Processing

Recycling materials processing costs increases are primarily associated with yard trimmings disposal fee costs for materials received at the Recycling Depot under revised pricing obtained from a new service contract. Processing costs are increased marginally to manage increasing volumes of yard trimmings materials dropped off at EcoWaste by residents.

Container Collection Costs

Container collection costs are reduced due to revised pricing obtained through a new service contract for bin servicing at the Recycling Depot and Works Yard.

Operating Expenditures

The marginal increases in operating expenditures under Option 1 represents utility and postage cost increases and cleaning costs for safety attire for litter and recycling depot operations staff. Options 2 and 3 include a small operating cost addition associated with supplies for the proposed new Green Ambassador position.

Agreements

There is no change to costs associated with agreements, which principally support the rodent and mosquito control programs administered by City staff.

General Solid Waste & Recycling Rate Stabilization provision (Rate Options)

The General Solid Waste and Recycling Provision was established by Council as a funding source for rate stabilization. The provision has a balance of \$5.2M as of September 30, 2022.

Single-Use Plastic and Other Items

Single-Use Plastic and Other Items Bylaw No. 10000 is fully implemented and has transitioned to the enforcement phase effective September 27, 2022. The original implementation cost was identified at approximately \$560,000. Under Options 1 and 2, budget and provision offset funding amounts are reduced by \$253,600 to reflect one-time implementation costs which are not anticipated to be required moving forward. The remaining funding of approximately \$306,400 will be required to continue management of the bylaw and to respond to future plastics reduction based initiatives and anticipated regulatory changes. This cost impacts rates under Option 3, which would formalize this program and recover the associated costs through the rates charged to residents and no longer fund these costs from provision.

Commercial Recycling Services Review

This initiative involves a detailed review and scoping exercise to establish opportunities for enhanced recycling for the commercial sector and was previously approved by Council. Metro Vancouver's waste composition audits estimate recycling rates in the commercial sector to be among the lowest at 43%. The need for improved commercial recycling was also identified by residents as part of community engagement for the ban on single-use plastic and through the Rethink Waste Think Tank.

The first phase of the Commercial Recycling Services Review is complete. This initial phase included door-to-door visits to a cross-section of commercial businesses including restaurants, retail stores, entertainment businesses, grocery stores, medical offices, the hospitality sector and education facilities. The door-to-door visits included a survey, which was also available online. There will also be a review of how commercial recycling is managed in other jurisdictions, and an analysis of the legislation and regulations currently in place at federal, provincial, regional and local levels.

The data and research compiled to date are now being used to develop the discussion points for a series of workshops planned for this fall. Local businesses and organizations that represent the various commercial sectors will be invited to participate in workshops for more in-depth discussions based on the initial research. As well, recycling service providers will be invited to participate in one-on-one meetings. The goal for these workshops and meetings is to develop recommendations for how the City can help address barriers and support increased commercial recycling in Richmond.

The costs and temporary resources needed to undertake this project are included under all options at a cost of approximately \$370,000. This project was delayed due to the COVID 19 pandemic, but is now underway and will continue into 2023. As the suggested review involves a scoping study to identify potential options for the commercial sector, the associated costs are offset by a contribution from provision in order that there is no impact to rates. Only after the results of the study are completed and reported back to Council would a recommended approach for City supported solutions be identified.

Multi-Family Grease Collection Pilot

Council previously approved this pilot initiative, which is designed to collect waste grease from a small number of multi-family locations. The goal is to measure the feasibility of resident willingness to participate in such a program, which could prove beneficial in reducing

maintenance and repair costs associated with grease accumulations. If successful, this program could help to reduce blockages, backups and expensive repair costs to homeowner's internal and City sewer systems alike.

Implementation of this project was delayed due to the COVID 19 pandemic, but was recently launched. There are six multi-family complexes comprising 934 units in the pilot. Each participating unit has been provided with City approved containers with lids for residents to collect used cooking oil and grease. Residents are provided with a small supply of collection containers, and extra containers are available through their strata or at the Recycling Depot. Once the container is full, residents are asked to deposit them into a centralized collection cart provided by the City for regular pickup. Staff have established methods to evaluate the effectiveness of the collection program on the City's system by measuring grease build up in sewer pipes adjacent to these complexes.

The collected grease will be recycled at processing facilities, and converted into renewable natural gas or animal food products. Staff will report findings and recommendations from this pilot initiative to Council.

As the nature of this initiative is an exploratory pilot, the associated costs are offset from provision funding, resulting in no increase in the rates charged to residents.

Water-Based Trash Skimmer Pilot Project

Council previously approved this pilot initiative, which is designed to reduce plastic litter floating in the waters within Steveston Harbour and further increase overall awareness of the issue of marine plastic pollution. The trash skimmer is a floating debris interception device that is designed to be installed in any water body with a calm environment. A floating structure with electrical service is required, which works by gently pumping water through a catch bag. All floating materials are collected through the process, leaving litter and debris trapped for collection and disposal. City staff will collect the trapped debris.

The original concept was to use the 'Seabin', which is a branded product. However, this company transitioned to a service based model, with minimum commitment costs of over \$1 million US to initiate. The market for these types of products is very limited. Staff were able to source an alternative product, the 'Collec'Thor'. Additionally, an agreement with the Steveston Harbour Authority was required for permission to mount the skimmer on a floating dock at the Fisherman's Wharf. These issues and supply chain challenges have delayed the project, with implementation expected in the fourth quarter of 2022.

Staff will work with a registered charity organization, Swim Drink Fish, to collect data and waste characterization information on the debris collected. This data will inform and help to develop plastics data in the Lower Mainland generally and be further evaluated for future actions, as appropriate. Staff will present information to Council with findings and recommendations once further information from the pilot is available.

Construction Period Revenues

The City receives construction period revenues from development customers for solid waste and recycling during construction. This revenue is not budgeted due to the long term variability in

these revenues. Any actual revenues will be transferred to the General Solid Waste and Recycling provision for future rate stabilization funding.

Revenues – General Solid Waste and Recycling Provision

Recycling Materials

Recycling material revenue increases associated with higher recycling commodity amounts from revised pricing obtained under a new service contract for bin servicing at the Recycling Depot. These revenues are applied to program costs to help offset the rates charged to residents.

Other Revenues

The marginal increase in other revenues is associated with approved rate increases for yard trimmings dropped off at the recycling depot.

Recycle BC Incentive

The net Recycle BC revenue incentive is increased due to changes to the financial incentive paid to collectors. Additionally, the revenue is adjusted to offset inflationary cost increases in order to maintain no net impact in the Blue Box/Multi-Family Recycling Rate. Overall, the Recycle BC program is expected to generate net revenues of approximately \$460,000 for 2023 and can be deposited into the General Solid Waste and Recycling provision account subject to Council approval. This is in alignment with previous Council direction (November 25, 2013) when the decision to join Recycle BC was made.

Provision

All options include a reduction in use of rate stabilization funding associated with the one-time costs for the implementation of Bylaw 10000. Option 3 removes the balance of provision funding for the remaining ongoing costs necessary for the ongoing management of Bylaw 10000, and instead draws the necessary funding from the rates charged to residents.

Impact on 2023 Solid Waste and Recycling Rates

The impact of the budget options to ratepayers is provided in Table 15 and Table 16. The principal reason for the increase in 2023 relates to negotiated wage settlements, inflationary contract costs stipulated in existing contracts, disposal cost increases, and revised contract pricing under a new service contract for the recycling depot. Numbers in italics represent the difference between 2022 rates and the various rate options for 2023.

Table 15 provides total costs based on standard garbage cart sizes for single-family (240L) and townhouse (120L). Table 16 provides a more detailed breakdown of Option 2 rates based on the four different garbage cart size options that are available to residents in single-family and townhouse units. The percentage of container sizes subscribed by each customer class is also presented for reference. Residents are able to reduce or increase the amount they pay based on the cart size they select for garbage collection services.

Table 15. 2023 Solid Waste and Recycling Rate Options (net of discount)

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Customer Class	2022 Rates	Option 1	Option 2 (Recommended)	Option 3
Single-Family Dwelling (Standard 240L Cart)	\$401.00	\$409.20 \$8.20	\$410.35 \$9.35	\$414.15 \$13.15
Townhouse (Standard 120L Cart)	\$279.50	\$285.80 \$6.30	\$286.95 \$7.45	\$290.75 \$11.25
Apartment	\$133.15	\$133.90 \$0.75	\$135.05 \$1.90	\$138.85 \$5.70
Business Rate	\$41.61	\$42.28 \$0.67	\$42.51 \$0.90	\$43.27 \$1.66
% Change		0.6% to 2.3%	1.4% to 2.7%	3.3% to 4.3%

Table 16. 2023 Single-Family and Townhouse Net Rates by Garbage Cart Size (Per Recommended Option 2)

Cart Size	Single Family		Townhomes	
	Full Service Rate (Including Recycling, Organics, Other Services)	Approximate Percent - Subscribed Size	Full Service Rate (Including Recycling, Organics, Other Services)	Approximate Percent - Subscribed Size
80L	\$356.85	4%	\$260.45	14%
120L	\$383.35	11%	\$286.95	77%
240L	\$410.35	78%	\$313.95	8%
360L	\$522.60	7%	\$426.20	1%

The rates outlined in Table 15 and Table 16 are net rates. The Solid Waste & Recycling Regulation bylaw provides a 10% discount for utility bills paid prior to the due date. The rates shown in the bylaw will be before the 10% discount is applied, in order to achieve full cost recovery.

Regional Issues

In addition to standard operating programs, Metro Vancouver is continuing to undertake consultation as part of preparing an update to the region’s solid waste management plan. The United Boulevard and Central Surrey Recycling and Waste Centres were opened in 2022 and the region remained focused on supporting various campaigns including textiles, single-use items, food waste, illegal dumping, the annual Zero Waste Conference, and related initiatives. Metro Vancouver will also continue to support the National Zero Waste Council to advance waste prevention and circularity within Metro Vancouver and across Canada.

Options Summary

Option 1

- Represents full recovery via rates of all program costs, including costs associated with managing increasing costs for recycling equipment and recycling material processing fees;

- Meets the City's contractual obligations related to inflationary aspects of agreements and contracts, including updated contract pricing for new service agreements as obtained through the competitive tendering process;
- Includes funding to manage the enforcement and ongoing measures necessary to support the City's *Single-Use Plastic and Other Items Bylaw No. 10000*, offset by provision funding; and
- Continues the work of various pilot initiatives such as the commercial scoping review, grease collection pilot and installation of a trash skimming device at Fisherman's Wharf, offset by provision funding.

Option 2 (Recommended)

- Includes everything in Option 1; and
- Includes a new PCC request for a full time Waste Reduction and Recycling Coordinator position to coordinate and administer the Green Ambassador Program and other youth outreach initiatives.

Option 3

- Includes everything in Option 2; and
- Includes funding to support the City's *Single-Use Plastic and Other Items Bylaw No. 10000* by monitoring new advancements in plastic waste reduction associated with regulatory changes. This option includes a request for two new PCC's for this work to be undertaken by City staff, with the costs recovered through the rates charged to residents.

Recommended Option

Staff recommend the budget and rates identified in Option 2 for Solid Waste and Recycling. This option provides full funding for all existing programs and ensures appropriate resources are in place to support these programs. Additionally, this option continues the work of current pilot initiatives related to a review of commercial recycling practices, the multi-family grease collection pilot program, and the trash skimmer pilot initiative in Steveston at Fisherman's Wharf.

Total Recommended 2023 Utility Rate Option

In light of the significant challenges associated with the impacts of regional costs and new programs in the City, staff recommend the budget and rate options as follows:

- Option 3 is recommended for Water
- Option 3 is recommended for Sewer
- Option 3 is recommended for Drainage and Diking
- Option 2 is recommended for Solid Waste and Recycling

In addition, an administrative shift has been made to collect the Metro Vancouver Sewer Debt Levy through the Sewer Utility instead of through property tax.

Table 17 summarizes the estimated total metered rate utility charge, based on average water and sewer consumption. Table 18 summarizes the total flat rate utility charge. Numbers in italics represent the difference between 2022 rates and 2023 proposed rates.

Table 17. 2023 Estimated Total Net Rates to Metered Customers

Customer Class	2022 Estimated Net Metered Rates	2023 Estimated Net Metered Rates (excluding Metro Vancouver Sewer Debt Levy)	% Change	2023 Estimated Net Metered Rates (including Metro Vancouver Sewer Debt Levy shifted from Property Taxes)	% Change
Single-Family Dwelling	\$1,479.92	\$1,595.11 \$115.19	7.8%	\$1,650.16	11.5%
Townhouse (on City garbage service)	\$1,048.21	\$1,115.03 \$66.82	6.4%	\$1,151.95	9.9%
Townhouse (not on City garbage service)	\$947.66	\$1,049.96 \$102.30	10.8%	\$1,086.88	14.7%
Apartment	\$712.85	\$763.92 \$51.07	7.2%	\$790.52	10.9%
Commercial/Industrial					
Metered Water (\$/m ³)	\$1.3574	\$1.4316 \$0.0742	5.5%	\$1.4316	5.5%
Metered Sewer (\$/m ³)	\$1.2986	\$1.3914 \$0.0928	7.1%	\$1.5608	20.2%
Business: Garbage	\$41.61	\$42.51 \$0.90	2.2%	\$42.51	2.2%
Business: Drainage & Diking (less than 800 m ²)	\$172.51	\$224.08 \$51.57	29.9%	\$224.08	29.9%
Business: Drainage & Diking (800 m ² to 2,000 m ²)	\$498.04	\$522.96 \$24.92	5.0%	\$522.96	5.0%
Business: Drainage & Diking (2,000 m ² to 10,000 m ²)	\$498.04	\$661.03 \$162.99	32.7%	\$661.03	32.7%
Business: Drainage & Diking (10,000 m ² to 20,000 m ²)	\$1,090.71	\$1,416.79 \$326.08	29.9%	\$1,416.79	29.9%
Business: Drainage & Diking (20,000 m ² to 50,000 m ²)	\$1,090.71	\$1,507.19 \$416.48	38.2%	\$1,507.19	38.2%
Business: Drainage & Diking (50,000 m ² to 100,000 m ²)	\$1,090.71	\$1,658.48 \$567.77	52.1%	\$1,658.48	52.1%
Business: Drainage & Diking (100,000 m ² to 500,000 m ²)	\$1,090.71	\$1,734.42 \$643.71	59.0%	\$1,734.42	59.0%
Business: Drainage & Diking (above 500,000 m ²)	\$1,090.71	\$1,810.51 \$719.80	66.0%	\$1,810.51	66.0%

Table 18. 2023 Total Net Rates to Flat Rate Customers

Customer Class	2022 Net Flat Rates	2023 Net Flat Rates (excluding Metro Vancouver Sewer Debt Levy)	% Change	2023 Net Flat Rates (including Metro Vancouver Sewer Debt Levy shifted from Property Taxes)	% Change
Single-Family Dwelling	\$1,826.77	\$1,965.16 \$138.39	7.6%	\$2,034.61	11.4%
Townhouse (on City garbage service)	\$1,510.42	\$1,607.88 \$97.46	6.5%	\$1,671.43	10.7%
Townhouse (not on City garbage service)	\$1,409.88	\$1,569.44 \$159.56	11.3%	\$1,632.99	15.8%
Apartment	\$1,072.82	\$1,147.45 \$74.63	7.0%	\$1,200.38	11.9%

The rates outlined in Table 17 and Table 18 are net rates. The bylaws provide a 10% discount for utility bills paid prior to the due date. The rates shown in the bylaw will be before the 10% discount is applied, in order to achieve full cost recovery; the resulting gross rates charged to residents are outlined in Attachment 1. These rates would be reflected in the amending bylaws for each utility area, should they be approved by Council.

Flat Rate and Metered Customers

All single-family and ICI properties in the City are metered. The single-family residential flat rate will continue to apply to duplex units that share one water service. These units require significant internal plumbing separation work to facilitate metering and were not included in the universal metering program. 44% of townhouses and apartments are still on flat rate utility services. However, the number of units with meters will continue to increase with on-going implementation of the universal multi-family water metering program. The number of units by customer class is presented in Table 19.

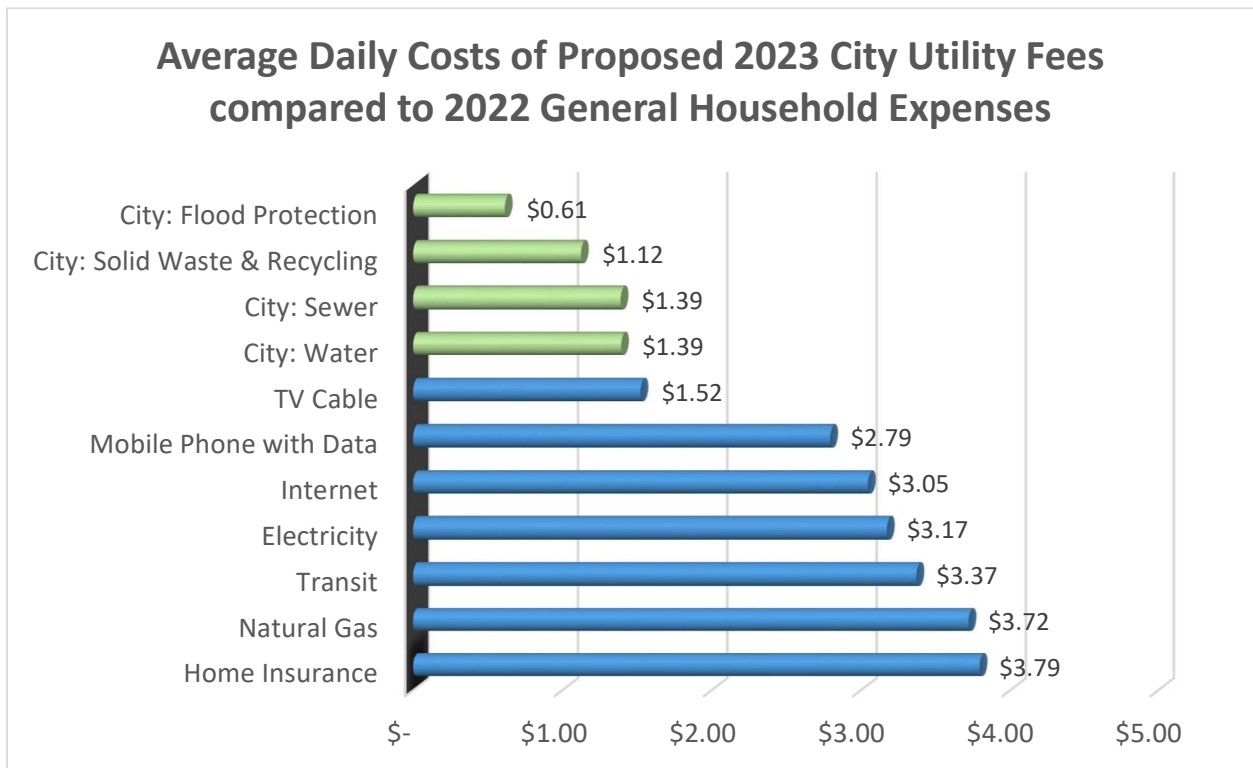
Table 19. Flat Rate and Metered Property Unit Counts

	2022 percentages (Mid-Year)	2022 Counts (Mid-Year)	2023 Counts (Mid-Year Estimated)	Difference
Single-Family Residential	Flat Rate (3%)	765	765	0
	Metered (97%)	27,841	27,885	44
Townhouse	Flat Rate (61%)	11,144	10,606	-538
	Metered (39%)	7,015	7,610	595
Apartment	Flat Rate (40%)	14,647	14,303	-344
	Metered (60%)	22,217	23,692	1,475
Total Residential Units		83,629	84,861	1,232
Commercial Units	Metered	3,540	3,540	0
Farms	Metered	51	51	0

Comparison of 2023 City Utility Rates to Other Major Household Expenses

The proposed 2023 City utility fees represent approximately 17% of total average daily household expenses (2022 values) and are of good value when compared with common household expenses. Water, sewer, solid waste and recycling, and flood protection services are fundamental to the quality of life for residents and necessary infrastructure to support the local economy. Figure 10 illustrates the value of these services based on the proposed 2023 rates when compared to 2022 costs for other common daily household expenses.

Figure 10. Cost Comparison of Main Household Expenses for a Single-Family Dwelling



Sources: BC Hydro, Fortis BC, Rogers, Shaw, TD Insurance, and Translink

Comparison of Proposed 2023 City Utility Rates with 2022 Comparator Municipality Utility Fees

The City’s utility budgets are carefully managed to provide high levels of service at good value to Richmond’s residents, despite external increases that are outside of the City’s control. Figure 11 provides a comparison between the City's proposed 2023 average single-family dwelling utility fees with 2022 fees for comparator municipalities. 2022 rates are presented for comparator municipalities as 2023 rates have not been established yet. With the increases proposed for 2023, Richmond’s utility rates remain below the average of 2022 rates for comparator municipalities.

All utility fees presented below are net of applicable discounts. Richmond and Surrey water and sewer rates include applicable metering costs and are based on an average annual consumption of 325m³ and 345m³ respectively, as single-family dwellings in these cities are 100% and 70% metered respectively. All other comparator municipalities are predominately charging a flat rate for water and sewer services. Blue box, general recycling and waste management fees have been excluded in the garbage and organics fee presented for comparison purposes, as not all municipalities offer the same services.

Unlike comparator municipalities, Richmond’s flat topography, high water table and proximity to the water places unique challenges on the City’s utility infrastructure, resulting in larger and deeper pipes, the need for over 200 drainage and sanitary pump stations and the need for an extensive flood protection system that includes 49 kilometers of perimeter dikes. This significantly increases demand for capital and operating costs. Despite these challenges and the additional infrastructure needs, the City of Richmond continues to offer a high level of service while still maintaining a competitive combined fee for utility services.

Figure 11. Comparison of Proposed 2023 Richmond Utility Fees with 2022 Comparator Municipalities for an Average Single Family Dwelling



Sources:

City of Surrey - Based on metered rate

*Waterworks Regulation and Charges By-law 2007, No. 16337; Amendment Bylaw No. 20498
Sanitary Sewer Regulation and Charges By-law 2008, No. 16611; Amendment Bylaw No. 20496
Waste Management Regulations and Charges Bylaw 2015, No. 18412; Amendment Bylaw No. 20686
Drainage Parcel Tax By-law 2001, No. 14593; Amendment Bylaw No. 20495*

City of Coquitlam - Based on flat rate

*Water Distribution Bylaw No. 4428; Amendment Bylaw No. 5178
Sewer and Drainage Bylaw No. 4429; Amendment Bylaw No. 5198
Solid Waste Management Bylaw No. 4679; Amendment Bylaw No. 5180*

City of Burnaby - Based on metered rate

*Waterworks Regulation Bylaw No 1953; Amendment Bylaw No. 14414
Sewer Charge Bylaw No. 1961; Amendment Bylaw No. 14416
Solid Waste & Recycling Bylaw No. 2010; Amendment Bylaw No. 14397
Sewer Parcel Tax Bylaw No. 1994; Amendment Bylaw No. 14415*

City of Vancouver - Based on flat rate

*Water Works By-law No. 4848; Amendment Bylaw No. 13187
Sewer & Watercourse By-law No. 8093; Amendment Bylaw No. 13186
Solid Waste By-law No. 8417; Amendment Bylaw No. 13185*

Financial Impact

The budget and rate impacts associated with each option are outlined in detail in this report. In all options, the budgets and rates represent full cost recovery for each City service.

Staff recommend the following budgets by utility:

- Option 3 is recommended for Water, for a net budget of \$48.4M;
- Option 3 is recommended for Sewer, for a net budget of \$44.6M;
- Option 3 is recommended for Drainage and Diking, for a net budget of \$18.0M;
- Option 2 is recommended for Solid Waste and Recycling, for a net budget of \$20.3M; and
- An overall net utility budget of \$131.3M.

This includes an administrative shift of the 2023 Metro Vancouver Sewer Debt Levy of \$4.8M into the Sewer Utility.

Considerable effort has been made to minimize City costs and other costs within our ability, in order to minimize the impact to property owners.

Conclusion

This report presents the 2023 proposed utility budgets and rates for City services relating to the provision of water, sewer, drainage and diking, as well as solid waste and recycling. Considerable measures have been taken to reduce costs where possible in order to minimize rate increases. A significant portion of the City’s costs relate to impacts from influences outside of the City’s direct control, such as regional and contract cost impacts. Regional costs are expected to continue increasing to meet demands for high quality drinking water and sewer treatment. Staff recommend that the budgets and rates, as outlined in this report, be approved and that the appropriate amending bylaws be brought forward to Council to bring these rates into effect.



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Att. 1: 2023 Annual Utility Charges – Recommended Gross Rates per Bylaw

Att. 2: 2023 Recommended Utility-Funded Additional Level Positions

**2023 Annual Utility Charges – Recommended Gross Rates per Bylaw
(Estimated Metered and Actual Flat Rates, including Administrative Shift of Sewer Debt
Levy from Property Tax to the Sewer Utility)**

	Water	Sewer	Drainage/ Diking	Garbage/ Recycling	Total
Metered (Based on Average Consumption)					
Single-Family Dwelling	\$564.97	\$563.62	\$248.98	\$455.94	\$1,833.51
Townhouse (with City garbage)	\$386.77	\$378.06	\$196.29	\$318.83	\$1,279.95
Townhouse (no City garbage)	\$386.77	\$378.06	\$196.29	\$205.50	\$1,166.62
Apartment	\$259.73	\$272.28	\$196.29	\$150.06	\$878.36
Flat Rate (Actual)					
Single-Family Dwelling	\$844.73	\$711.03	\$248.98	\$455.94	\$2,260.68
Townhouse (with City garbage)	\$691.47	\$650.56	\$196.29	\$318.83	\$1,857.15
Townhouse (no City garbage)	\$691.47	\$650.56	\$196.29	\$205.50	\$1,743.82
Apartment	\$445.59	\$541.82	\$196.29	\$150.06	\$1,333.76
General – Other/Business					
Metered Water (\$/m ³)	\$1.5907				
Metered Sewer (\$/m ³)		\$1.7342			
Business: Garbage				\$47.23	
Small or Stratified ICI (less than 800m ²)			\$248.98		
Non-Stratified ICI (between 800m ² and 2,000m ²)*			\$581.07		
Medium Non-Stratified ICI (between 2,000m ² and 10,000m ²)*			\$734.48		
Large Non-Stratified ICI (between 10,000m ² and 20,000m ²)*			\$1,574.21		
Large Non-Stratified ICI (between 20,000m ² and 50,000m ²)*			\$1,674.66		
Large Non-Stratified ICI (between 50,000m ² and 100,000m ²)*			\$1,842.76		
Large Non-Stratified ICI (between 100,000m ² and 500,000m ²)*			\$1,927.13		
Largest Non-Stratified ICI (above 500,000m ²)*			\$2,011.68		
ICI: Drainage and Diking (Others)			\$248.98		

2023 Recommended Utility-Funded Additional Level Positions

Position	Classification	Funding Source	Description
Work Control Technician (x3)	CUPE 394	Water Utility (existing budget)	Conversion of existing positions from temporary to regular full-time for planning, coordination and documentation of work for Public Works operations.
Sewer Coordinator (CCTV)	CUPE 394	Capital (Sewer)	Position to coordinate and expand the City's CCTV inspection program to inform capital upgrade needs and meet Metro Vancouver's inspection requirements.
Senior Project Manager	Exempt	Capital (Drainage and Diking)	Position to support the advanced planning and implementation of the Council-endorsed accelerated flood protection program.
Project Coordinator (x2)	CUPE 718	Capital (Drainage and Diking)	Positions to support the delivery of capital flood protection upgrade projects as part of the Council-endorsed accelerated flood protection program.
Environmental Coordinator 2	CUPE 718	Capital (Drainage and Diking)	Position to support habitat enhancement and permitting for the delivery of capital flood protection upgrade projects as part of the Council-endorsed accelerated flood protection program.
Real Estate Negotiator	Exempt	Capital (Drainage and Diking)	Position to support land acquisition and negotiations to facilitate capital flood protection upgrade projects as part of the Council-endorsed accelerated flood protection program.
Project Manager	Exempt	Drainage and Diking Utility (rate impact)	Position to address regulatory changes and permitting requirements and support dike maintenance and operating activities.
Waste Reduction & Recycling Coordinator	CUPE 718	Solid Waste and Recycling Utility (rate impact)	Position to oversee and expand the Green Ambassador program as well as look for opportunities to increase community engagement.