



## REPORT

Report Date: November 17, 2020  
Contact: Andrea Becker  
Contact No.: 604.871.6059  
RTS No.: 14048  
VanRIMS No.: 08-2000-20  
Meeting Date: December 1, 2020  
[Submit comments to Council](#)

TO: Vancouver City Council  
FROM: General Manager of Engineering Services  
SUBJECT: 2021 Annual Review of Water Rates and Water Works By-law Amendments

### **RECOMMENDATION**

- A. THAT Council approve the 2021 rates and fees under the Water Works By-law, with the following recommended increases: 1% increase in the per unit flat fee for Single Dwelling (from \$785 per unit in 2020 to \$793 per unit in 2021); 1% increase in per unit Metered Rate in off season (from \$3.427 in 2020 to \$3.462 in 2021) and peak season (from \$4.296 in 2020 to \$4.339 in 2021); 2.1% increase for Water Flat Rate Connection Fees for Single and Two Family dwellings; 2.1% for all other Water Flat Rate Connection Fees (as listed in Appendix A, Schedule A); and varied increases for all other Water Utility User Rates (as listed in Appendix A, Schedules B, C, E, F, G and H), as well as other miscellaneous amendments.
- B. THAT Council instruct the Director of Legal Services to bring forward for enactment the necessary amendments to the Water Works By-law, generally as set out in Appendix B.

### **REPORT SUMMARY**

Each year, staff review all costs related to the Water Utility and recommend rates for the year to come. This is also an opportunity for staff to provide an update to Council and the public on the objectives of the Utility and what progress has been made towards those objectives.

In this report are updates on 2020 overall performance and some specific initiatives already underway such as seismic improvements, conservation efforts, and the pay-as-you-go strategy for capital funding. Also, included in this report is a look ahead to work planned in 2021.

This report seeks Council approval of the recommended 2021 rates and fees for water service, which incorporates a 1% increase for single family flat rates and consumption driven metered rates; 2.1% increase for Water Flat Rate Connection Fees; 2% increase for meter service charges; and 2.1% increase for other user rates. These increases achieve full cost recovery for water services as well as investing in a program that will reduce future financing costs. This report also seeks Council approval of various miscellaneous amendments to update language and to clarify certain provisions.

### ***COUNCIL AUTHORITY/PREVIOUS DECISIONS***

Water rates for both metered and non-metered customers are specified in the Schedules of Rates and Charges included in the Water Works By-law. These schedules are updated annually by Council.

In 2001, Council endorsed the Greater Vancouver Regional District Board (Metro Vancouver) decision to construct the Capilano Seymour filtration plant.

On December 13, 2011, Council adopted the 2011-2014 Greenest City Clean Water Work Plan including By-law revisions requiring residential water metering for all new single family and duplex properties.

On December 13, 2011, Council approved transition from a uniform volumetric rate for commercial and residential metered customers to a seasonal rate consisting of two different rates for low and high seasons.

On November 27, 2012, Council approved the establishment of a peak and off-peak seasonal rate structure for all remaining metered properties.

On November 27, 2012, Council approved By-law revisions that changed billing frequency to 3 reads and 3 bills per year to better align with seasonal rates.

On November 4, 2015, Council adopted the 2016-2020 Greenest City Clean Water Work Plan to expand water conservation programs.

On November 1, 2017, Council adopted the recommendation to broaden the water conservation program to include non-potable water resources (rain water, ground water, and waste water) to address long term water demands.

On December 10, 2019, Council adopted the recommendation to change the dates that set the peak season and off peak season water rates, to match the water restriction periods set out in the Drinking Water Conservation By-law

### ***CITY MANAGER'S/GENERAL MANAGER'S COMMENTS***

The City Manager and General Manager of Engineering Services recommends approval of recommendations A, and B above.

## **REPORT**

### ***Background/Context***

The City's drinking water system is comprised of approximately 1,476 km of water mains that distribute water to more than 101,000 service connections and 6,600 fire hydrants. All water supplied to the City is purchased from Metro Vancouver, which is responsible for supply reservoirs, treatment, and delivery of water to the City system.

The capital cost for timely replacement of these assets and expansion to accommodate growth, the operating costs of maintaining the system and the cost to purchase water from Metro Vancouver make up the total costs of the water system. The City's water rates and fees are set based on a principle of full cost recovery, which requires that no costs related to the delivery of water are included in the general tax levy. In the City of Vancouver, all sectors are fully metered except for single and dual family homes.

In 2012, Council implemented the policy to achieve a fully metered water system over time by requiring meters for all new single-family and duplex properties undergoing redevelopment or major renovations. As of 2020, approximately 11% or 9,400 of single-family and duplex properties are metered.

### ***Strategic Analysis***

The Water Utility has a mandate to provide the best drinking water of any major city in the world, to use potable water efficiently to extend the life of our current water supplies, to ensure continued availability for consumption and fire suppression, and to ensure we are prepared for emergencies.

As part of the strategic asset management approach, the City evaluates asset condition based on system performance and industry benchmarks. Currently, 32% of the Waterworks assets have a poor overall condition rating, while the remaining 68% are in fair-to-good condition. Additional investments will reduce the rate of deterioration; however, in the next 10 years, their condition will deteriorate to 43% poor. This worsening condition is expected to be further exacerbated by climate change. As the assets increasingly deteriorate, it is expected there will be higher rates of water main breaks and leaks. To counter this increase in failures, the average renewal rate of aging assets is being increased from 0.5% annually to 0.7% during the 2019-2022 Capital Plan, which will result in additional lengths of pipe being replaced year over year.

The water distribution network, valued at \$3.1 billion, is made of 1,476 km of buried pipelines, 101,000 service connections, approximately 6,600 fire hydrants, 30,000 valves, and 22,000 water meters. The system is carefully managed using an asset management process.

The Water Utility also operates a dedicated fire protection system for the Downtown, Kitsilano and Fairview areas valued at \$80 million consisting of 12 km of dedicated high pressure pipes and 2 pumping stations. In an emergency, salt water from Burrard Inlet and False Creek can be used to provide fire protection, if the potable water supply is interrupted.

**Key services delivered**

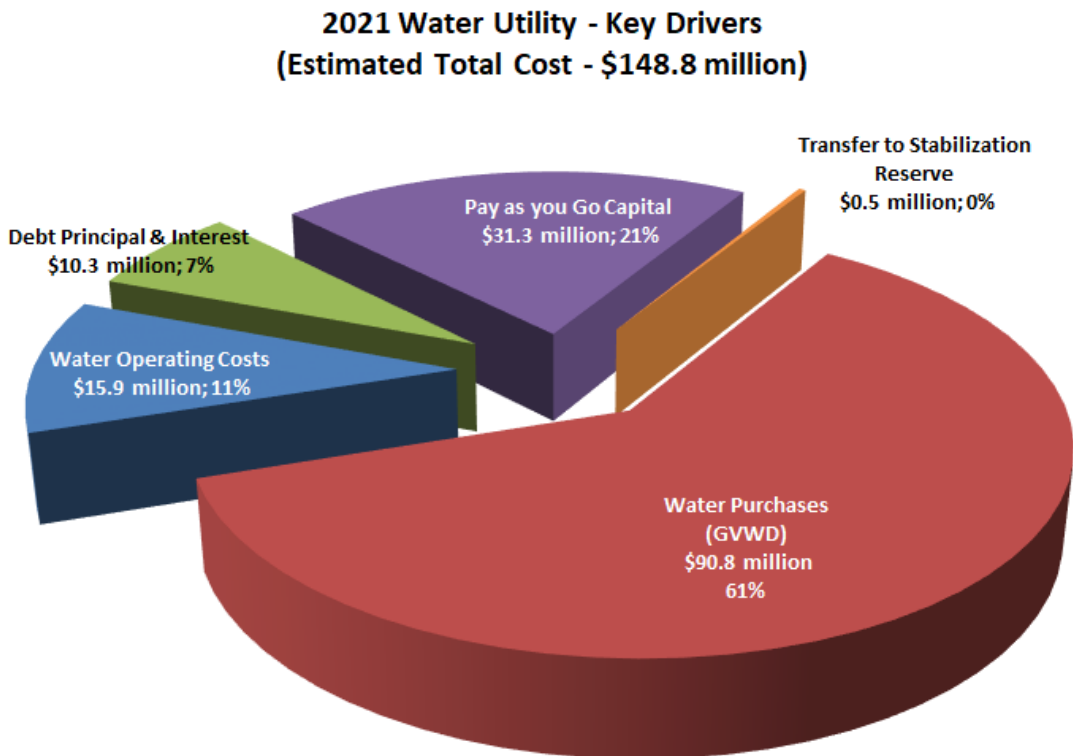
- **Water distribution service** - Providing clean water to businesses, residents and communities and serving growth. Ensuring that water system assets are in good condition and well managed by replacing aging and deteriorating infrastructure.
- **Emergency preparedness** – Supporting emergency preparedness through response planning and increasing resiliency by strategically strengthening infrastructure.
- **Water conservation and resource management** – Enabling the efficient use of water corporately and in the community.

**Financial Implications**

**Key Cost Drivers**

The Water Utility expenditures consist of four (4) key cost drivers: water purchased from Metro Vancouver which makes up 61% of the budget, City of Vancouver’s operating costs which make up about 11% of the total budget, costs associated with capital expenditures which make up about 28% of the budget, and transfers to or from the stabilization reserve which make up the remaining, as shown graphically in Figure 1 below. A description of each component and its related activities follows.

**Figure 1 – Water Utility Costs**



Water Purchases

As discussed, the City of Vancouver and other Lower Mainland municipalities purchase water from Metro Vancouver based on consumption. The cost to purchase water is the largest cost driver in the Water Utility. The cost of water to the City of Vancouver is driven by the price per

cubic metre that Metro charges all member municipalities, as well as the consumption within the City itself.

Significant increases to the regional cost of water since 2004 were the result of regional capital water quality initiatives - primarily the Seymour-Capilano Filtration Plant and the associated twin tunnel project between Capilano and Seymour Lakes. These initiatives have resulted in greatly improved water quality in the region. We are now seeing stabilized rate increases from Metro as all of the costs for the treatment plant have now been built into their wholesale rates.

The success of water conservation and efficiency in the city has led to a trend of declining water consumption over time. Since most of the costs associated with the delivery of water are fixed costs, over time there will be an upward trend in the price per unit of water as consumption continues to decline, but this will be offset to some extent by the avoided cost of deferrals in capacity expansion in the Metro system.

### Capital Program

For the 2019-2022 Capital Plan, the water capital program will be fully funded on a pay-as-you-go basis. The current debt charges represent past borrowing, so the reduction of debt charges from moving to pay-as-you-go will be realized gradually.

### Operating and Maintenance

These are the costs associated with cleaning, repairing, inspecting and managing the infrastructure, as well as, emergency response for main breaks, service connection leaks and other trouble calls. This also includes customer billing and general administration.

### **2020 Budget Performance**

Table 2 summarizes the operating budget and current forecast for the Water Utility in 2020.

**Table 2 – 2020 Budget Performance**

Water Utility (\$ millions)	2020 Forecast	2020 Budget	\$ Variance	% Variance
<b>Water Consumption Volume (m<sup>3</sup>)</b>	<b>109,024,832</b>	<b>113,000,000</b>		
<b>Revenues</b>				
Metered Rate Revenues	\$ 76.0	\$ 80.2	\$ (4.3)	-5.3%
Flat Rate Revenues	59.3	60.0	(0.7)	-1.2%
Meter Service Charges	5.0	4.6	0.4	8.4%
Flat Rate Fire Line Charges	3.3	3.4	(0.1)	-3.8%
Other Revenues	0.8	0.7	0.1	14.6%
<b>Total Revenues</b>	<b>\$ 144.3</b>	<b>\$ 148.9</b>	<b>\$ (4.6)</b>	<b>-3.1%</b>
<b>Expenses &amp; Transfers</b>				
Water Purchases (GVWD)	\$ 84.5	\$ 88.2	\$ 3.7	4.2%
Waterworks Operations	14.3	15.7	1.4	9.0%
Debt Service Charges	13.3	13.3	-	0.0%
Pay As you Go Capital	30.5	30.5	-	0.0%
Transfer to/(from) Stabilization Reserve	1.7	1.2	(0.5)	-39.2%
<b>Total Expenses &amp; Transfers</b>	<b>\$ 144.3</b>	<b>\$ 148.9</b>	<b>\$ (4.6)</b>	<b>-3.1%</b>
<b>Surplus/(Deficit)</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>0.0%</b>

\*Tables may not sum due to rounding. The purpose of this table is to explain budget performance. Additional revenue is reported as positive and additional expenditures as negative.

## 2020 Revenues

The current forecast for metered revenues is about \$4.3 Million lower than budgeted. Metered revenues are estimated as a percentage of total water consumption, which is lower than budgeted this year due to slowdown in commercial and institutional activities as a result of the COVID-19 pandemic. Flat rate revenues are also lower than the budget due to credit adjustments given to the customers along with the actual number of customers billed was lower than budgeted.

While the 2020 forecasted water consumption has been lower than the budgeted amount mainly due to the slowdown in commercial and institutional use as a result of COVID-19 pandemic, there has also been decreased water use by flat rate customers and non-revenue water. This reduction can be attributed in part to a more wet and mild summer season and the effectiveness of water conservation efforts supporting increased efficiency and mitigating water wastage, including updated outdoor watering regulations passed by Council and the continued adoption of eliminating non-recirculating systems that use drinking water, such as in once through cooling systems and leakage management on civic infrastructure.

Meter service charges, which apply only to multi-family and commercial accounts, are slightly higher than anticipated due to an increase in the number of these accounts in recent years.

Other revenues include administrative fees for cross connection control, permit fees for high water use air conditioning units and various other cost recovery fees as set out in the Water Works By-law. These were slightly higher than budgeted in 2020.

## 2020 Expenditures & Transfers

As previously stated, the largest driver of expenses in the Water Utility is the purchase of treated, bulk drinking water from Metro Vancouver. This expense is also based on water consumption within the City, which is forecasted to be 4.2% lower than estimated in the 2020 budget due to slowdown in commercial and institutional activity resulting from the impacts of the COVID-19 pandemic. Additionally, as a result of COVID-19 restrictions and delays in hiring of staff, the forecasted spend on the operation of the water system is significantly lower than the budgeted amount.

The Water Utility uses the Water Rates Stabilization Reserve to mitigate year-over-year increases in water rates and balance year-end differences between budgeted and actual revenues.

In 2020, there was a budgeted transfer of \$1.2 million to the reserve; however, this year, \$1.7 million or an additional \$0.5 million is expected to be contributed to the reserve. This variance is due to lower than budgeted expenditures, partially offset by decrease in revenues.

## **2021 Proposed Budget and Rates**

Water utility rates will increase by 1% or \$8 per year for a single-family residence. The utility rates have been kept low in 2021 in order to provide financial relief to the consumers in the wake of COVID-19 pandemic. However, the 1% increase is necessary due to:

- An increase of 3.5% in Metro Vancouver water rates that fund infrastructure improvements throughout the region, including improvements to reservoirs and filtration to provide a high-quality water supply as Vancouver grows.

- Funding for water capital projects within the approved 2019-2022 Capital Plan.

Actual water consumption is lower than budgeted in 2020 and the longer term trend demonstrates an overall reduction in per capita use. However, it is expected that water consumption volume for 2021 would be lower than 2020 Budget. The water consumption volume budget for 2021 has been set at 112,000,000 m<sup>3</sup> and actual usage will be influenced by many factors including changes in weather and the impacts of population growth and the economic recovery from the 2020 impacts of the COVID-19 pandemic. The enhanced strategic water conservation activities, and additional investment in water conservation programs planned over the next few years, are expected to further contribute to the downward per capita consumption trend.

The Draft 2021 budget is summarized in Table 3 with the 2020 budget and comparison.

**Table 3 – Draft 2021 Budget**

Water Utility (\$ millions)	2020 Budget	2021 Proposed	\$ Change from 2020 Budget	% Change
<b>Water Consumption Volume (m<sup>3</sup>)</b>	<b>113,000,000</b>	<b>112,000,000</b>		
<b>Revenues</b>				
Metered Rate Revenues	\$ 80.2	\$ 80.3	\$ 0.1	0.1%
Flat Rate Revenues	60.0	59.6	(0.4)	-0.7%
Meter Service Charges	4.6	4.7	0.1	2.0%
Flat Rate Fire Line Charges	3.4	3.5	0.1	2.0%
Other Revenues	0.7	0.7	0.0	4.0%
<b>Total Revenues</b>	<b>\$ 148.9</b>	<b>\$ 148.8</b>	<b>\$ (0.1)</b>	<b>-0.1%</b>
<b>Expenses &amp; Transfers</b>				
Water Purchases (GVWD)	\$ 88.2	\$ 90.8	\$ 2.6	3.0%
Waterworks Operations	15.7	15.9	0.2	1.1%
Debt Service Charges	13.3	10.3	(3.0)	-22.6%
Pay As you Go Capital	30.5	31.3	0.8	2.6%
Transfer to/(from) Stabilization Reserve	1.2	0.5	(0.7)	-61.2%
<b>Total Expenses &amp; Transfers</b>	<b>\$ 148.9</b>	<b>\$ 148.8</b>	<b>\$ (0.1)</b>	<b>-0.1%</b>
<b>Surplus/(Deficit)</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>0.0%</b>

\* Tables may not sum due to rounding. The purpose of this table is to present year-over-year changes in the budget as presented in the 2020 Budget Book where both additional revenue and expenses are presented as positive changes

### 2021 Revenues & Proposed Rates

For both metered customers and flat-fee single-family dwellings, a 1% rate increase is recommended for 2021. Since 2012, all new single-family dwellings must be metered and no longer pay the flat fee. The 2021 budget for flat-rate revenues reflects the 1% rate increase and a change to better reflect the types of housing subject to flat fees, such a higher number of single-family dwellings with lane way or suites. As a result of these changes, water rates for single-family dwellings are projected to be \$793 versus \$785 in 2020.

Also, recommended are increases of 2% for fire line charges and meter service charges. Both the revenue and expense changes for meter service charges and fire line charges reflect an increase in the number of accounts over the last several years.

### 2021 Expenditures & Transfers

The increase for the 2021 water purchase budget is \$2.6 million due to a Metro Vancouver price increase of 3.5%. There are not significant changes to the Water Utility operational costs from 2020 to 2021.

In 2012, the Water Utility began funding a portion of its annual capital program on a pay-as-you-go basis; as a result, debt service charges are decreasing. The plan is to increase the pay-as-you-go contribution until all new capital expenditures for the renewal of assets are covered through current revenues; ultimately, this will eliminate the debt interest expense. The pay-as-you-go contribution has increased from \$30.5 million to \$31.3 million which represents the revised project schedule as per the 2019-2022 Capital Plan. The current debt charges represent past borrowing and will continue to decrease over time as outstanding borrowing would be gradually retired in upcoming years.

Staff proposes to transfer \$0.5 million to the Water Rates Stabilization Reserve in 2021 to mitigate against increases in Metro Vancouver water purchase price in future years.

### **Five Year Outlook**

Table 4 summarizes the five (5) year outlook for the Water Utility and the following paragraphs discuss the assumptions used.

<b>Water Utility (\$ millions)</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>
<b>Assumptions:</b>					
<b>Water Consumption Volume (m<sup>3</sup>)</b>	<b>112,000,000</b>	<b>112,000,000</b>	<b>112,000,000</b>	<b>112,000,000</b>	<b>112,000,000</b>
<b>Metro Price Increase</b>	<b>3.5%</b>	<b>5.2%</b>	<b>6.4%</b>	<b>8.9%</b>	<b>10.8%</b>
<b>City Rate Increase</b>	<b>1.0%</b>	<b>3.5%</b>	<b>6.0%</b>	<b>6.0%</b>	<b>6.0%</b>
<b>Revenues</b>					
Metered Rate Revenues	\$ 80.3	\$ 83.1	\$ 88.1	\$ 93.4	\$ 99.0
Flat Rate Revenues	59.6	60.9	63.6	66.5	69.5
Meter Service Charges	4.7	4.8	4.9	5.0	5.1
Flat Rate Fire Line Charges	3.5	3.5	3.6	3.7	3.8
Other Revenues	0.7	0.7	0.7	0.7	0.8
<b>Total Revenues</b>	<b>148.8</b>	<b>153.0</b>	<b>160.9</b>	<b>169.3</b>	<b>178.1</b>
<b>Expenses</b>					
Water Purchases (GVWD)	90.8	95.6	101.7	110.7	122.7
Waterworks Operations	15.9	16.2	16.5	16.9	17.2
Debt Service Charges	10.3	7.4	4.7	3.0	2.0
Pay As you Go Capital	31.3	29.2	35.0	40.0	42.5
Transfer to/(from) Stabilization Reserv	0.5	4.7	3.0	(1.3)	(6.3)
<b>Total Expenses &amp; Transfers</b>	<b>148.8</b>	<b>153.0</b>	<b>160.9</b>	<b>169.3</b>	<b>178.1</b>
<b>Surplus/(Deficit)</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>

*\*Tables may not sum due to rounding – some of the revenues are grouped in Cost recoveries, grants & donations and Other revenue in the budget book*



Table 4 assumes a consistent purchase of bulk water over the coming years, with the assumption that conservation measures off-set population increase. This is a conservative approach for financial planning purposes, which will be reviewed annually as water consumption results are realized.

The price of water purchases from the GVWD (Metro Vancouver) is increasing 3.5% in 2021. The following four (4) years are forecasted to increase between 5.2% and 10.8%. Metro Vancouver have proposed a lower rate increase for 2021-2023 with the objective of providing short-term financial relief to the residents. However, over the five-year period, the rates are increasing back to the pre-COVID levels based on projected operating and capital costs for supply reservoirs, treatment, and delivery of high quality water to the City. In addition, continued water conservation efforts, including educational and demand management programs, contribute to the decreased use of regional drinking water, resulting in savings to residents who ultimately pay a smaller portion of regional infrastructure related costs.

Debt charges will continue to decrease due to the pay-as-you-go strategy, because we have reduced our debenture borrowing since the program started in 2012. By increasing the pay-as-you-go contribution per year in the 2019-2022 Capital Plan, all new routine capital spending for the transmission and distribution main work is expected to be funded on a pay-as-you-go basis, eliminating the need to borrow for ongoing capital programs.

While City operating costs are forecast to continue to increase by inflation over the next five years Staff will continue to look for ways to provide the same service at a lower cost.

The City plans to build a healthy Water Stabilization reserve over the next few years by keeping the Water rate increase consistent with increase in the Water purchase rates set by Metro Vancouver. However, in later years, rather than matching the high rate increases proposed by Metro Vancouver to purchase the water, the City will be using the Water Stabilization reserve to spread the rate increases over multiple years, however, these rates will ultimately need to increase to cover the cost of Metro Vancouver rate increases.

An increase to the budget to repair main breaks and impacted roadways has been incorporated into the outlook. Since 2012, the number of main breaks has increased by approximately 30.0%, reflecting an aging water system. This budget increase does not include unanticipated needs that may emerge as a result of a spike in leaks or breaks beyond the anticipated trend. Pipe breaks tend to fluctuate year to year and are dependent on weather conditions, system pressures, ground conditions and pipe age. Single year anomalies could require an offset from reserve funding, whereas an increased trend beyond what is currently anticipated would require additional program funding as an appropriate response.

### **Connection Fees**

All new development and major renovation projects in the City are required to install water connections on private property and pay connection fees for the corresponding connections on City property. Water meters are also required to be installed on all new and major renovation projects. These fees are updated regularly to ensure cost recovery.

Connection fees are collected prior to the timing of the actual work and are based on an average price model and the underlying complexities can vary by job and by job type. Fee increases are required to cover annual inflationary increases for construction costs, as well as to account for the timing of work being performed.

The Conference Board of Canada forecasted that the CPI for Metro Vancouver would increase between 1.9% and 2.3% from 2021 to 2024.

To maintain full cost recovery, it is recommended that a 2.1% increase be approved for all Water Flat Rate Connection and Removal fees.

An additional residential meter size option is added to fees in Schedule G to reflect all options available for residential water meter installations conducted independent of a service installation.

### ***Legal Implications***

The proposed amendments to the Water Works By-law are contained in Appendix B, and a red-lined version of the miscellaneous amendments is provided in Appendix C. In addition to the annual rate and fee changes, several housekeeping updates are recommended to clarify important language and modernize a selection of by-law clauses.

### ***CONCLUSION***

Rates for water services are adjusted annually to offset cost increases in the water utility, including operating and debt costs and water purchases from Metro Vancouver. Based on a review of the proposed water costs for 2021, it is recommended that flat and metered water use fees be increased by 1%, service and connection fees be increased by 2.1% and Fire Line Charges and Meter Service Charges be increased by 2% as described in this report.

\* \* \* \* \*

**Appendix A**  
**Water Works By-Law No. 4848**  
**2021 Rate Changes**

<b>Schedule A</b>		<b>Flat Rate Connection Fees</b>		
	<b>2020</b>	<b>Proposed 2021</b>	<b>% Increase</b>	
<u>Single-Family &amp; Two-Family Dwellings</u>				
20 mm (3/4")	\$6,212	\$6,342	2.1%	
25 mm (1")	\$6,431	\$6,566	2.1%	
40 mm (1 1/2")	\$7,733	\$7,895	2.1%	
50 mm (2")	\$8,575	\$8,755	2.1%	
<u>Other Connections</u>				
20 mm (3/4")	\$10,429	\$10,648	2.1%	
25 mm (1")	\$10,850	\$11,078	2.1%	
40 mm (1 1/2")	\$12,521	\$12,784	2.1%	
50 mm (2")	\$12,521	\$12,784	2.1%	
100 mm (4")	\$18,102	\$18,482	2.1%	
150 mm (6")	\$22,390	\$22,860	2.1%	
200 mm (8")	\$24,450	\$24,963	2.1%	
300 mm (12")	\$34,409	\$35,132	2.1%	
<b>Schedule A.1</b>		<b>Removal Fees</b>		
	<b>2020</b>	<b>Proposed 2021</b>	<b>% Increase</b>	
20mm (3/4") to 50mm (2") inclusive	\$1,213	\$1,238	2.1%	
100mm (4") to 300mm (12") inclusive	\$3,639	\$3,715	2.1%	
<b>Schedule B</b>		<b>Flat Service Charges for Residential Properties</b>		
	<b>2020</b>	<b>Proposed 2021</b>	<b>% Increase</b>	
Single dwelling unit	\$785	\$793	1.0%	
Single-Family with suite or laneway house	\$1,065	\$1,076	1.0%	
Single-Family with suite and laneway house	\$1,345	\$1,359	1.0%	
For each strata title duplex	\$532	\$537	1.0%	
Parking Lot/Community Garden	\$241	\$243	1.0%	
Water Service - Turned Off	\$178	\$180	1.0%	
Other Property	\$178	\$180	1.0%	
<b>Schedule C</b>		<b>Flat Service Charges for Unmetered Fire Service Pipes</b>		
	<b>2020</b>	<b>Proposed 2021</b>	<b>% Increase</b>	
50 mm (2") or smaller	\$238	\$243	2.0%	
75 mm (3")	\$357	\$364	2.0%	
100 mm (4")	\$493	\$503	2.0%	
150 mm (6")	\$570	\$581	2.0%	
200 mm (8")	\$667	\$680	2.0%	
250 mm (10")	\$710	\$724	2.0%	
300 mm (12")	\$760	\$775	2.0%	

**Schedule D Charges for Metered Water Service**

		2020	Proposed 2021	%
		Increase		
Four Month Period				
Rate for all metered uses				
October 16 - April 30	Per Unit	\$3.427	\$3.462	1.0%
May 1 - October 15	Per Unit	\$4.296	\$4.339	1.0%

**Schedule E Meter Service Charge**

The following schedule shows the meter charge based on the size and type of meter, payable on each service, in addition to water consumption charges.

Per Four Monthly Period		2020	Proposed 2021	%
		Increase		
<u>Services with Standard Type Meters</u>				
17 mm (1/2") and 20 mm (3/4")		\$34	\$35	2.0%
25 mm (1")		\$34	\$35	2.0%
40 mm (1 1/2")		\$73	\$74	2.0%
50 mm (2")		\$101	\$103	2.0%
75 mm (3")		\$227	\$232	2.0%
100 mm (4")		\$276	\$282	2.0%
150 mm (6")		\$359	\$366	2.0%
200 mm (8")		\$556	\$567	2.0%
250 mm (10")		\$681	\$695	2.0%
300 mm (12")		\$808	\$824	2.0%
<u>Services with Low Head Loss Meters / Detector Check Valves</u>				
100 mm (4")		\$319	\$325	2.0%
150 mm (6")		\$467	\$476	2.0%
200 mm (8")		\$625	\$638	2.0%
250 mm (10")		\$780	\$796	2.0%
300 mm (12")		\$930	\$949	2.0%

**Schedule F Charges for Temporary Water Service during Construction**

		2020	Proposed 2021	%
		Increase		
Building Size in Square Meters of Gross Floor Area				
Up to an including 500 sq.m		\$347	\$350	1.0%
Over 500 but not exceeding 2,000		\$679	\$686	1.0%
Over 2,000 but not exceeding 9,000		\$1,020	\$1,030	1.0%
Over 9,000 but not exceeding 24,000		\$1,716	\$1,733	1.0%
Over 24,000 but not exceeding 45,000		\$2,567	\$2,593	1.0%
Over 45,000		\$3,406	\$3,440	1.0%

**Schedule G Fees for Installation of Residential Water Meters**

		2020	Proposed 2021	% Increase
<u>Single-Family &amp; Two-Family Dwellings</u>				
20 mm (3/4") meter assembly and box		\$1,204	\$1,204	0.0%
25 mm (1") meter assembly and box		\$1,313	\$1,313	0.0%
40 mm meter assembly and box		-	\$1,788	0.0%

**Fees for Installation of Water Meters**

Size of Standard Meter	Meter on City Property	2020	Proposed 2021	%
		Increase		
20 mm (3/4")		\$3,499	\$3,572	2.1%
25 mm (1")		\$3,658	\$3,735	2.1%
40 mm (1 1/2")		\$3,986	\$4,070	2.1%
50 mm (2")		\$4,121	\$4,208	2.1%
75 mm (3")		\$14,383	\$14,685	2.1%
100 mm (4")		\$15,728	\$16,058	2.1%
150 mm (6")		\$51,367	\$52,446	2.1%
200 mm (8")		\$52,831	\$53,940	2.1%
250 mm (10")		\$71,377	\$72,876	2.1%
300 mm (12")		\$78,921	\$80,578	2.1%

Size of Standard Meter	Meter on Private Property	2020	Proposed 2021	%
		Increase		
20 mm (3/4")		\$553	\$565	2.1%
25 mm (1")		\$638	\$651	2.1%
40 mm (1 1/2")		\$852	\$870	2.1%
50 mm (2")		\$1,175	\$1,200	2.1%
75 mm (3")		\$2,594	\$2,648	2.1%
100 mm (4")		\$3,941	\$4,024	2.1%
150 mm (6")		\$8,357	\$8,532	2.1%
200 mm (8")		\$9,996	\$10,206	2.1%
250 mm (10")		\$20,147	\$20,570	2.1%
300 mm (12")		\$27,694	\$28,276	2.1%

**Schedule H Miscellaneous Fees and Charges**

	2020	Proposed 2021	%
	Increase		
Cross Connection Control Administration Fees			
First Assembly	\$32	\$33	2.1%
Additional Assembly	\$13	\$13	2.1%
Extra charge for inaccessible meter (per incident)	\$79	\$81	2.1%
Special meter reading (per occurrence)	\$105	\$107	2.1%
Customer requested meter test (deposit)	\$210	\$214	2.1%
Charges for Returned Cheques	\$37	\$38	2.1%
Residual Water Pressure Estimate Fee			
Original calculation	\$38	\$39	2.1%
Additional copies for same location	\$10	\$10	2.1%
Miscellaneous water information requests (per hour)	\$47	\$48	2.1%
City Crew call out fee (normal working hours) (per hour or portion thereof)	\$105	\$107	2.1%
City Crew call out fee (outside normal working hours) (per hour or portion thereof)	\$210	\$214	2.1%
Frozen pipe thawing	at cost	at cost	

DRAFT By-law to amend Water Works By-law No. 4848  
Regarding 2021 Water Rates and Fees and Housekeeping Amendments

*Note: A By-law will be prepared generally in accordance with the provisions listed below, subject to change and refinement prior to posting.*

THE COUNCIL OF THE CITY OF VANCOUVER, in public meeting, enacts as follows:

1. This By-law amends the indicated provisions of By-law No. 4848.
2. In section 1.1, Council adds the following new definitions in the correct alphabetical order:
  - (a) ““AUTOMATIC SHUT-OFF DEVICE” means a device attached to a water hose that shuts off the supply of water automatically unless hand pressure is applied to operate the device;” and
  - (b) ““PRESSURE REDUCING VALVE (PRV)” means a type of safety valve used to control or limit the pressure in a system;”.
3. In section 3.1, Council:
  - (a) adds “at their expense” after “A customer must maintain”; and
  - (b) adds “pressure reducing valves (PRVs),” after “fittings;”.
4. In section 3.7, Council:
  - (a) in subsection (b), adds “(including irrigation systems)” after “systems”; and
  - (b) in subsection (c), strikes out “ponds, waterways;”.
5. Council strikes out section 5.1 and substitutes the following:

**“5.1 Watering Restrictions**

For the purpose of this section and of regulations made hereunder, watering shall be understood to include the distribution of City-delivered potable water by any means on lawns, gardens, or other outdoor areas.

The City Engineer may from time to time impose restrictions on watering, or change or revoke such restrictions, and in so doing may make the restrictions applicable at specified times or on specified days and may differentiate between classes of customers or areas of the City. Sufficient notice of such restrictions shall be deemed to have been given by publication in a local daily newspaper.”.
6. In section 6.20, Council adds “or the date on which the owner was notified of the issue, whichever is the shorter period of adjustment” after “and the meter reading date for the meter bill immediately preceding the meter bill containing the unusual increase”.

7. Council strikes out Schedules A, B, C, D, E, F, G and H and substitutes the following:

**“SCHEDULE A  
Flat Rate Connection Fees  
And Service Pipe Removal Fees**

***Flat Rate Connection Fees***

<i>Service Pipe Size</i>	<i>Single-Family and Two-Family Dwelling with or without a Laneway House</i>	
20 mm (3/4")		\$ 6,342.00
25 mm (1")		6,566.00
40 mm (1 1/2")		7,895.00
50 mm (2")		8,755.00
<i>Service Pipe Size</i>	<i>Other Connections</i>	
20 mm (3/4")		\$10,648.00
25 mm (1")		11,078.00
40 mm (1 1/2")		12,784.00
50 mm (2")		12,784.00
100 mm (4")		18,482.00
150 mm (6")		22,860.00
200 mm (8")		24,963.00
300 mm (12")		35,132.00

***Service Pipe Removal Fees***

<i>Service Pipe Size</i>	
20 mm (3/4") to 50 mm (2") inclusive	\$ 1,238.00
100 mm (4") to 300 mm (12") inclusive	3,715.00

**SCHEDULE B  
Annual Flat Rate Service Charges for Residential Properties**

The following charges apply to unmetered single family dwellings and dwellings comprising not more than two separate dwelling units:

Single Dwelling Unit	\$ 793.00
Single-Family with suite or laneway house	1,076.00
Single-Family with suite and laneway house	1,359.00
For each strata title duplex	537.00
Parking Lot/Community Garden	\$ 243.00
Water Service - Turned Off	180.00
Other Property	180.00

**SCHEDULE C**  
**Annual Flat Rate Service Charges for Unmetered Fire Service Pipes**

*Fire Service Pipe Size*

50 mm (2") or smaller	\$ 243.00
75 mm (3")	364.00
100 mm (4")	503.00
150 mm (6")	581.00
200 mm (8")	680.00
250 mm (10")	724.00
300 mm (12")	775.00

**SCHEDULE D**  
**Charges for Metered Water Service**

*Four Month Period*

*Rate In Dollars per  
Unit (2,831.6 Litres)*

Rate for all metered uses

October 16 - April 30	Per unit	\$3.462
May 1 – October 15	Per unit	\$4.339

**SCHEDULE E**  
**Meter Service Charge**

The following schedule shows the meter charge based on the size and type of meter, payable on each service, in addition to water consumption charges:

Per Four Month Period

*Services with Standard Type Meters*

17 mm (1/2") and 20 mm (3/4")	\$ 35.00
25 mm (1")	35.00
40 mm (1 1/2")	74.00
50 mm (2")	103.00
75 mm (3")	232.00
100 mm (4")	282.00
150 mm (6")	366.00
200 mm (8")	567.00
250 mm (10")	695.00
300 mm (12")	824.00

*Services with Low Head Loss Meters/Detector Check Valves*

100 mm (4")	\$ 326.00
150 mm (6")	476.00



200 mm (8")	638.00
250 mm (10")	796.00
300 mm (12")	949.00

**SCHEDULE F**  
**Charges for Temporary Water Service During Construction**

<i>Building Size in Square Meters of Gross Floor Area</i>	<i>Rate in Dollars of Gross Floor Area Per Building</i>
Up to and including 500	\$ 350.00
Over 500 but not exceeding 2,000	686.00
Over 2,000 but not exceeding 9,000	1,030.00
Over 9,000 but not exceeding 24,000	1,733.00
Over 24,000 but not exceeding 45,000	2,593.00
Over 45,000	3,440.00

**SCHEDULE G**  
**Fees for Installation of Water Meters**

***Fees for Installation of Water Meters for Single and Two Family Dwellings with or without a Laneway House***

*Size of Standard Meter*

20 mm (3/4") meter assembly and box	\$1,204
25 mm (1") meter assembly and box	\$1,313
40 mm meter assembly and box	\$1,788

***Fees for Installation of Water Meters on Other Connections***

<i>Size of Standard Meter</i>	<i>Meter on City Property</i>	<i>Meter on Private Property</i>
20 mm (3/4")	\$ 3,572.00	\$ 565.00
25 mm (1")	3,735.00	651.00
40 mm (1 1/2")	4,070.00	870.00
50 mm (2")	4,208.00	1,200.00
75 mm (3")	14,685.00	2,648.00
100 mm (4")	16,058.00	4,024.00
150 mm (6")	52,446.00	8,532.00
200 mm (8")	53,940.00	10,206.00
250 mm (10")	72,876.00	20,570.00
300 mm (12")	80,578.00	28,276.00

**SCHEDULE H**  
**Miscellaneous Fees and Charges**

Cross Connection Control Administration Fees	
First Assembly	\$ 33.00
Additional Assembly	13.00
Extra charge for inaccessible meter (per incident)	81.00
Special Meter Reading (per occurrence)	107.00
Customer Requested Meter Test (deposit)	214.00
Charges for Returned Cheques	38.00
Residual Water Pressure Estimate Fee	
Original calculation	39.00
Additional copies for same location	10.00
Miscellaneous water information requests (per hour)	48.00
City Crew call out fee (normal working hours) (per hour or portion thereof)	107.00
City Crew call out fee (outside normal working hours) (per hour or portion thereof)	214.00
Frozen pipe thawing	At cost (Section 5.4)".

\*\*\*\*\*

**Proposed Amendments to Water Works By-law No. 4848**

**PART III  
RESPONSIBILITIES OF THE CUSTOMER AND OTHER PERSONS**

**3.1 Obligation to Maintain Plumbing**

A customer must maintain at their expense pipes, fittings, pressure reducing valves (PRVs), meter chambers, meter supports and fixtures in proper repair and free from leakage.

**3.7 Prohibition Against Wasting Water**

A customer or other person must not waste water, or suffer, permit or allow waste of water, including but not limited to:

- (a) the free discharge or flow of water from premises, on or into a sanitary sewer, watercourse, storm drain, street or adjacent premises;
- (b) leaking of water from appliances, devices, machines, equipment, systems (including irrigation systems), ponds, fountains or water features;
- (c) the use of water features, fountains or swimming pools which do not have a water recirculation device;
- (d) the use of an irrigation system which applies water to an impervious surface; or
- (e) the use of a water hose, which is not equipped with an automatic shut-off Device.

**PART V  
OPERATION AND INSPECTION**

**5.1 Watering Restrictions**

For the purpose of this section and of regulations made hereunder, watering shall be understood to include the distribution of City-delivered potable water by any means on lawns, gardens, or other outdoor areas.

The City Manager may from time to time impose restrictions on watering, or change or revoke such restrictions, and in so doing may make the restrictions applicable at specified times or on specified days and may differentiate between classes of customers or areas of the City. Sufficient notice of such restrictions shall be deemed to have been given by publication in a local daily newspaper.

**PART VI**  
**BILLING AND COLLECTION**

**6.20 Adjustment for Underground Leak**

If, in the opinion of the Engineer, an underground leak on a metered service:

- (a) has resulted in an inaccurate water consumption record;
- (b) could not reasonably have been detected by the customer;
- (c) is not associated with a landscape irrigation system; and
- (d) has, in the opinion of the Engineer, been repaired by the customer in such a manner as to effectively prevent future leaks of a similar nature;

the water consumption rate may be adjusted by the Collector, as provided in section 6.18(a), except that the adjustment must only be made for the period between two weeks after the first meter billing date on which the meter bill indicates an unusual increase in water consumption, as determined by the Collector, and the meter reading date for the meter bill immediately preceding the meter bill containing the unusual increase or the date on which the owner was notified of the issue, whichever is the shorter period of adjustment, to a maximum adjustment period of six months.