CITY OF VANCOUVER

ADMINISTRATIVE REPORT

Report Date: December 2, 2014
Contact: Brian Crowe
Contact No.: 604.873.7313
RTS No.: 10715
VanRIMS No.: 08-2000-20
Meeting Date: December 16, 2014

TO: Vancouver City Council

FROM: General Manager of Engineering Services

SUBJECT: Annual Review of the Water Utility and 2015 Rates

RECOMMENDATION

A. THAT Council approve the amendments to the Waterworks By-law, generally as set out in Appendix A, including the establishment of the 2015 rates and fees, with the following recommended increases:

Rate	% Increase	2014 Rate	Recommended 2015 Rate
Single Dwelling Unit	4%	$546	$568
Metered Rate Per Unit (Unit = 2.8316 Cubic Meters) - Off Season	4%	$2.385	$2.480
Metered Rate Per Unit (Unit = 2.8316 Cubic Meters) - Peak Season	4%	$2.988	$3.108
Public Water Connection Fees	3%	As Listed in Appendix A, Schedule A	
All Other Water Utility User Rates	Varies	As Listed in Appendix A, Schedules B, C, E, F, G & H	

B. THAT Council instruct the Director of Legal Services to bring the Waterworks By-law amendment, generally as set out in Appendix B, forward for enactment.

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 2014 overall performance and some specific initiatives already underway such as seismic improvements, conservation efforts, and the Pay as You Go strategy for debt financing. Also included in this report, a look ahead to work planned in 2015.

This report seeks Council approval of the recommended 2015 rates and fees for water service, which incorporates a 4% increase for single family flat rates and consumption driven metered rates, a 3% increase for connection fees, no increase for meter service charges; and a 2% 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.

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 approved 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.

CITY MANAGER'S/GENERAL MANAGER'S COMMENTS

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

REPORT

Background/Context

The City's water system is comprised of approximately 1,470 km of water mains that distribute water to more than 100,000 service connections and 6,000 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, 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 designed to fully recover all of these costs so that no costs related to the delivery of water are included in the general tax levy.

In the City of Vancouver, only some of the water utility's customers are metered; these are mainly commercial and multifamily properties. In 2012, Council approved revisions to the Waterworks By-law requiring residential metering for all new single-family and duplex properties. Approximately 2,500 or 3% of these homes, built since this requirement came into effect are now metered.

Strategic Analysis

The Water Utility has a mandate to provide the best drinking water of any major city in the world by 2020, to use potable water efficiently, to ensure continued availability and accessibility, and to ensure we are prepared for emergencies.

Maintaining and renewing the water system infrastructure is a key component of all of these critical goals. We have an ongoing program of replacement to ensure the City's investment is protected. Capital investments also work towards improving access to water and availability of water in emergencies.

Water conservation plans are in place to meet the City's Greenest City Action Plan (GCAP) goal of reducing total per capita water use by 33% from 2006 levels by 2020.

The following sections highlight the work being done in these areas and what is planned for next year.

2014 Update

For 2014, the Waterworks Utility continued to make progress to improve water system reliability by replacing deteriorating infrastructure, improving public access to water through the installation of water filling stations and drinking fountains, and by encouraging water conservation. The Water Utility's Service Metrics are shown in Table 1, followed by a detailed discussion of the key metrics.

Table 1 – Waterworks Service Metrics

Service	Metric Type	COV Metric	2010	2011	2012	2013	2014F
Water	Quantity	Water Consumed Per Capita (litres) - Residential	298	283	286	262	265
		Water Consumed Per Capita (litres) - Total	508	486	491	480	494
		# of Water Connections Replaced	1912	1930	1673	1,558	1,600
		Km of Water Pipe Replaced	17.3	12.4	5.3	8.9	7.3
	Quality	# of main breaks	68	65	48	68	80
		# of Service Connection Breaks	529	599	617	437	550
		% of samples with turbidity within Health Canada acceptable range	96.9%	98.7%	98.7%	98.6%	99.0%

Infrastructure & Resiliency

By year's end, 7.3 km (0.5%) of the City's 1,470 km of water mains will have been replaced as part of the long-term strategy to manage the frequency and impacts of water main failures.

Major projects included management of the multi-partner construction project on Cambie Street downtown. This $4.6 million coordinated construction project for the replacement and rehabilitation of water and sewer mains involved BC Hydro and various 3rd party utilities. This was followed by curb, sidewalk and roadway paving. Another major project highlight was the substantial completion of two phases of transmission main replacement on Pender Street from Clark to Gore Street. Strategic procurement of pipe relining services (pilot scale pipe

rehabilitation) and a water main construction benchmarking contract were successfully completed. Physical work for both of these contracts is scheduled to complete in the spring of 2015.

To increase the resiliency of the water system to withstand seismic events, and to provide post-event water supply for consumption and fire suppression, a plan for a network of reinforced mains has been developed in consultation with Vancouver Fire and Rescue Services and the Office of Emergency Management. Further, in our ongoing efforts to investigate new technologies, 800 metres of earthquake resistant pipe (Japanese standard) has been procured for a trial installation in 2015. It is the only pipe design that has a 100% proven success rate in surviving earthquakes. If successful, the City will advocate industry for a North American standard/equivalent to be tested and produced.

Service connection breaks are an indication of the condition of the water system but also vary depending on weather, particularly in the winter months. Another common cause of failure is differential settlement over time that causes stresses in the pipe. The forecasted number of connection breaks in 2014 (550) is consistent with the trend over the past five years where connections installed during the peak in home construction in the post war period are reaching the end of their service life.

The number of watermain breaks experienced in 2014 (80) is forecasted to be higher than in previous years, due to an increase in the first quarter of this year related to the prolonged spell of cold weather. The increase in breaks is not indicative of a trend; the number varies from year to year and failure rates will continue to be closely monitored to ensure that the reduced rate of replacement remains appropriate.

Public Access to Water and Consumption Trends

In 2014, three new drinking fountains were installed, including two fountains leveraged from adjacent development increasing the City's overall total to 230. The utility continues to work with representatives from the Extreme Heat Committee (Vancouver Police Department, Emergency Management and Social Planning) to determine potential locations for siting new fountains.

As shown in Figure 1, water consumption in 2014 has been atypical compared to the trend over the last decade, as total consumption is forecast to increase 4% over 2013 levels. Various factors can affect water consumption patterns including weather (dry summers), population growth and economic conditions. Upon review of over 16,000 customer accounts, it was determined that the recent increase is primarily due to an increase in water use of industrial, commercial and institutional (ICI) metered customers. Forecasted residential water use to year end is essentially flat resulting in the total per capita consumption rising from 480 to 494 litres per capita per day.

Since 2012, water use across Institutional, Commercial and Industrial (ICI) sectors have shown double digit increases in water consumption. Together, these sectors consume 30% of the City's water (Figure 2).

Major trends that have been identified as contributors include:

- Increase in tourism (according to Tourism Vancouver a 3% increase in 2013, and a 4.8% increase forecast in 2014) has been a primary driver of water use in the commercial sector including hotels (13% increase) & bed and breakfasts (20% increase). In 2013,

for example, the 3% increase in tourists represented 226,000 overnight visitors to the City each staying an average of 4.8 nights which is roughly equivalent to supporting 3,000 full-time residents in the City. Of the $97 million these additional visitors add to the local economy, $57 million is spent on food & beverage, retail, and recreation/entertainment.

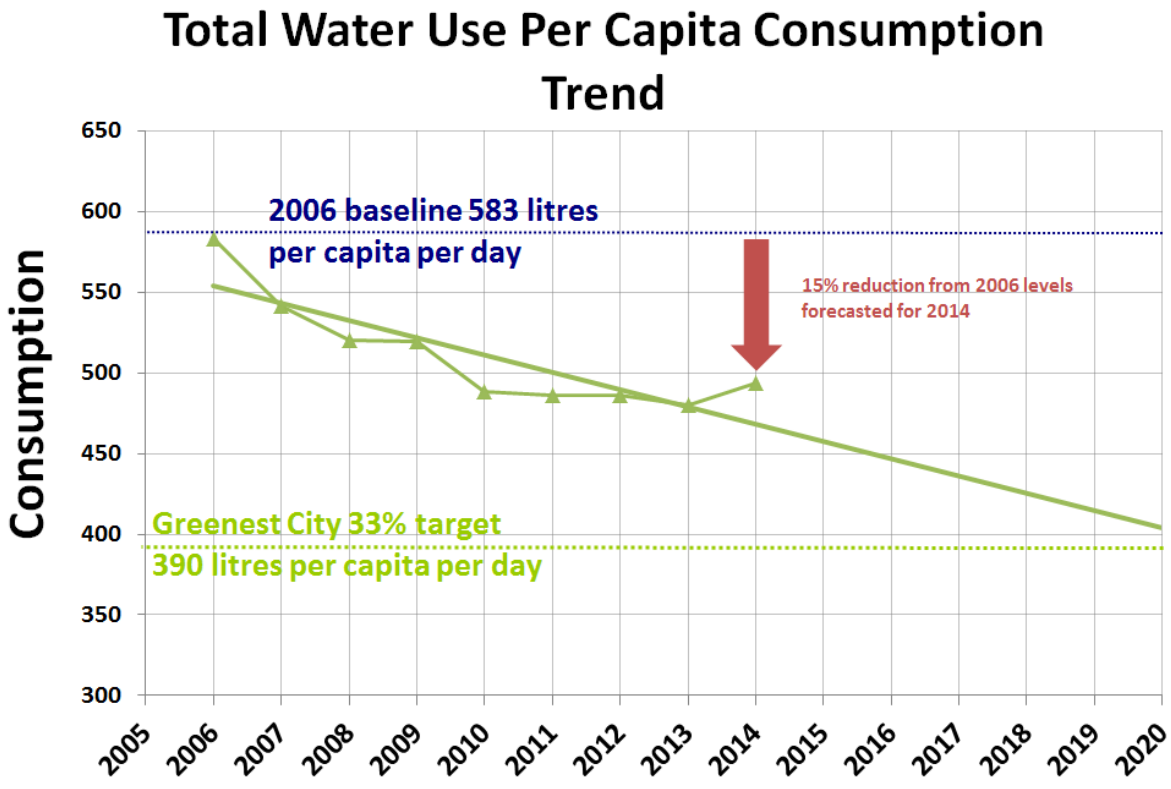
- Office buildings have shown a 9% increase in water consumption. Further consultation with property owners and building managers is required to determine how existing tenants or changes in building operations have altered consumption patterns.
- Continued campus expansion and growth at Vancouver based post-secondary schools & universities resulted in a 14% increase in water use in this sector.
- Increased production by several major account holders in food processing and fabricating/manufacturing sub-sectors, as well as growth in the number of craft breweries operating in the City.

Our 2014 conservation programs included:

- A continuation of the lawn sprinkling education and enforcement program (Residential)
- 30 waterwise garden parties promoting efficient outdoor water use and urban agriculture (Residential)
- Replacement of 500 pre-rinse spray valves in restaurants, in partnership with FortisBC and BC Hydro (Commercial)
- A Washing Machine Rebate program, in partnership with FortisBC and BC Hydro (Residential)
- Toilet retrofit of 425 high-efficiency toilets in facilities operated by participants of the City's Green Landlord Pilot program (Multi-family residential)
- Seasonal Rainwater Diversion Study – Recipient of RBC Blue Water Grant (Residential)
- Advanced leak detection in the water system using new equipment

In response to the consumption trend experienced this year, a new external advisory group with strong representation from the ICI sector (over 20 representatives) was assembled. The advisory group is providing insight and advice on how to strengthen conservation efforts within specific industries/sectors, to allow the City to meet with 33% reduction target by 2020. Advisory members will play a key role in early 2015 in the development and launch of sector specific programs, as described below.

Figure 1- Consumption per Capita



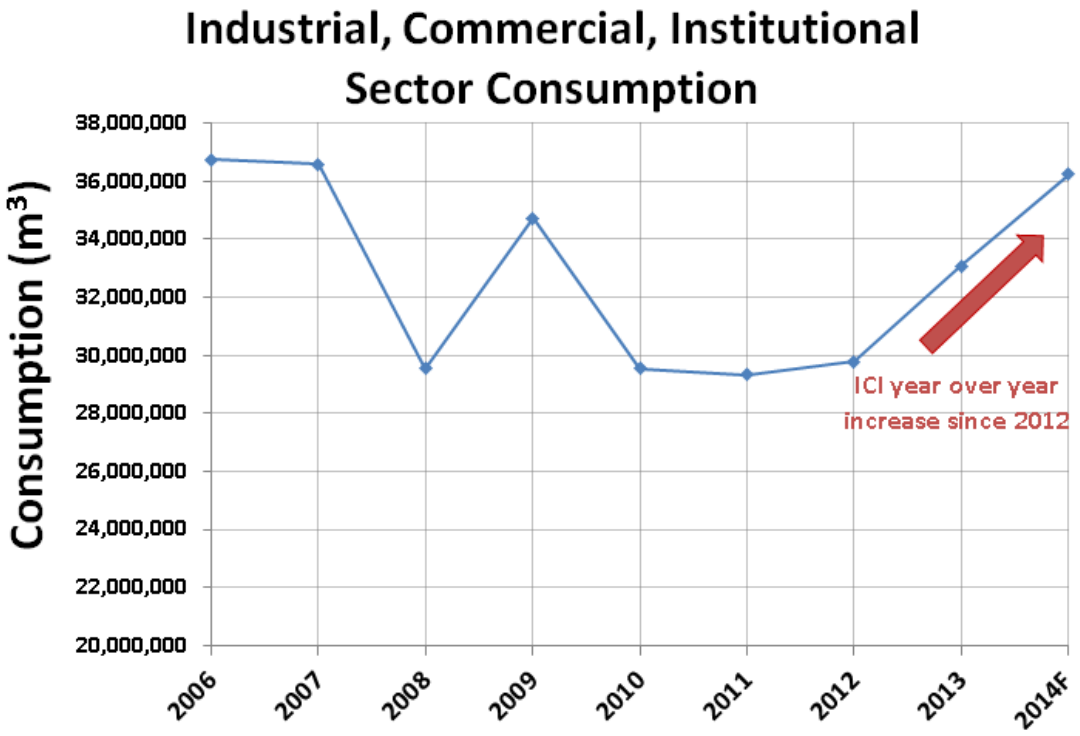
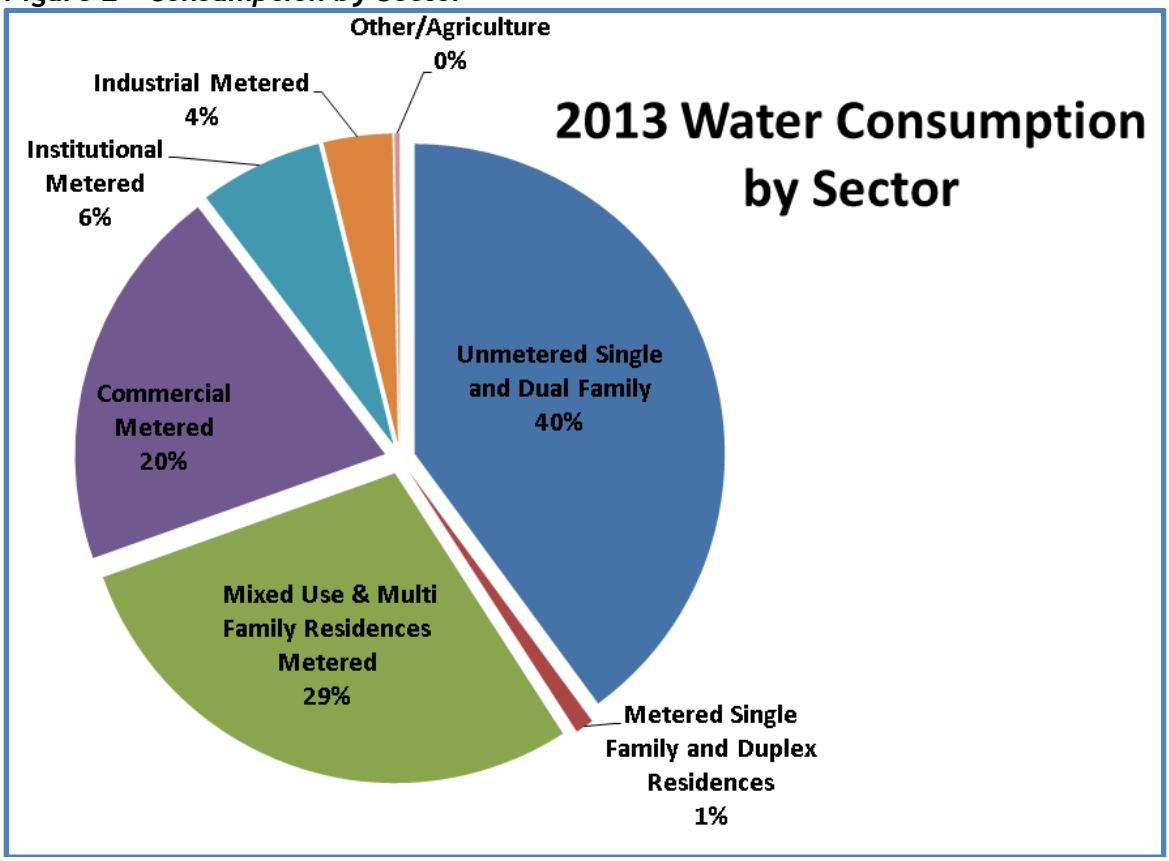


Figure 2 – Consumption by Sector



Plans for 2015

Water Conservation

In many ways, the increase in the water consumption is a good news story because much of the increase is driven by economic growth.

Analysis of water use patterns over the last two years has shown that the increase is primarily due to growth in tourism, office space mix and growth in traditional and emerging food processing and manufacturing enterprises. The dry summer experienced this year also contributed to increased consumption for outdoor water uses such as irrigation.

The principal water conservation objective in 2015 is to support and educate thriving and growing industries to enable them to make efficient choices when planning upgrades or considering expansion. The intent is to further improve their profitability by using water more efficiently.

After meeting with an external advisory group of ICI representatives in October, smaller tactical working groups are planned for early 2015 with sector representatives from:

- Parks and Irrigation,
- Hotel and Tourism,
- Building owners and operators,
- Healthcare,

- Educational Institutions, and
- Food Processing and Craft breweries.

These small groups will help develop practical programs that can be implemented to move the dial towards the City's conservation goal, and to enable these sectors to incorporate best practices from a water perspective.

Program ideas suggested through stakeholder meetings currently under consideration include:

- Banning once through cooling fixtures
- Developing a conservation focused water pricing model
- Offering an account management service for large water users to provide individualized advice on water efficiency
- Developing a water audit program for the ICI sector
- Working closely with plumbing and irrigation industries for conservation related training
- Helping inexperienced industries develop best water practices guides (eg. craft breweries)
- Expanding full service retrofit offers to other sectors
- Continued partnerships with utility companies to offer energy and water efficiency programs

A new suite of recommended programs will be brought forward in the Spring as part of the Greenest City Refresh process.

Beyond ICI, a sustained focus on residential water efficiency by expanding programs and education to include indoor uses is also necessary to maintain progress in that sector.

The goal of reducing total per capita consumption by 33% over 2006 levels remains appropriate and will allow the City to live within our means by offsetting population growth through conservation for the foreseeable future and deferring the expense of source expansion.

The recent water consumption increase in the ICI sectors serves as a good reminder that water consumption is influenced by both public behaviour as well as economic development.

Aging Infrastructure Replacement and Rehabilitation

With over 1,470 km of water mains and appurtenances in the City, the water utility's ongoing aging infrastructure replacement program will see 1.5 km of transmission main and 5.5 km of distribution be replaced or rehabilitated in 2015. This represents 0.48% of the water mains in the City which is in accordance with the Water Utility's 10 year Capital Strategic Outlook and represents a comparable level of annual investment compared to the last capital plan.

A detailed analysis of water system age, pipe material, and performance (indicated by historical water main breaks and leaks) indicates that replacement rates in the 2015-2018 capital plan can hold steady, however, it was predicted that this rate may need to be accelerated in the next capital plan as portions of the water system will reach the end of their theoretical service lives increasing chance of failures. Performance metrics (leaks, breaks) are collected continually and analyzed regularly to determine the appropriate

balance between proactive replacement of water mains versus conducting repairs as failure occur.

Given the importance of providing drinking water to residents and scale of expenditures related to water main construction there are a number of initiatives listed below that will be undertaken in 2015 to increase reliability and/or resiliency of the water system and to ensure that investments represent the best value for Vancouver residents.

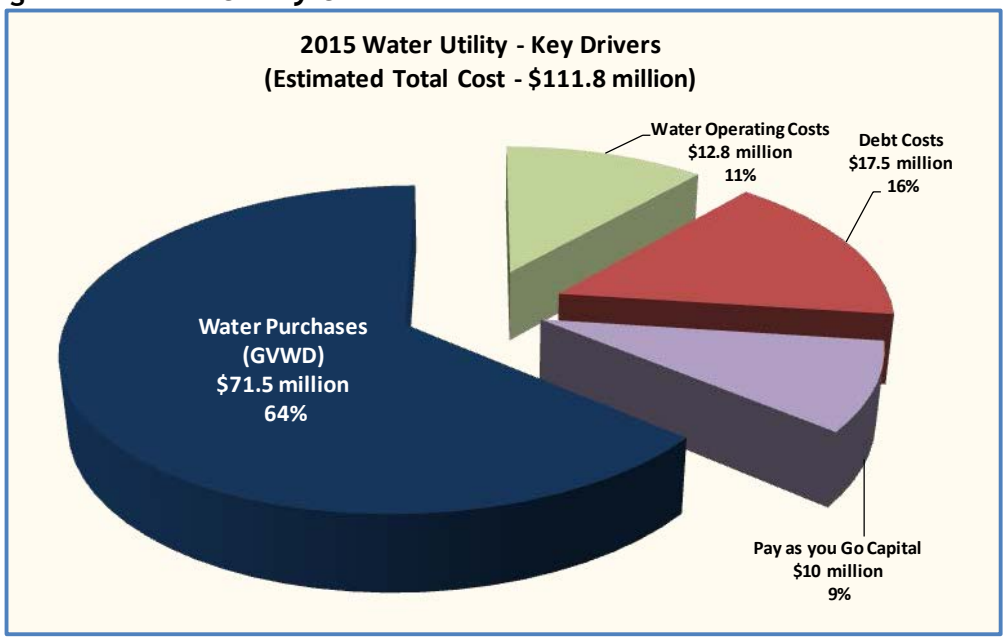
- Replacement of a key east-west transmission main on Pender Street, from Gore to Seymour to increase system resiliency and reliability to the downtown core.
- Completion of a water main replacement project built by private contractors to verify that City crews remain competitive to private industry and to carefully monitor construction methodology to potentially improve the City's operational efficiency.
- Completion of a water main structural lining (rehabilitation) project as an alternative to traditional pipe replacement -- potential benefits include less public disruption, less waste and cost savings.
- Installation of 700 metres of Japanese-specification earthquake resistant pipe, in accordance with the plan to seismically reinforce the water system and based on review of vulnerability with sustainability, Metro Vancouver and partners such as Vancouver Coastal Health

Financial Implications

Key Cost Drivers

The Water Utility expenditures consist of three key cost drivers; water purchased from Metro Vancouver, costs associated with waterworks capital expenditure, and City operating costs as shown in Figure 3.

Figure 3 – 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 meter 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 are a result of regional capital water quality initiatives - primarily the Seymour-Capilano Filtration project 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.

Although water consumption is higher than expected this year, the success of water conservation programs 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

The water capital program is funded partially by debentures and partially 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 emergency response for main breaks and other trouble calls. This also includes customer billing and general administration.

2014 Budget Performance

Table 2 summarizes the operating budget and current forecast for the Water Utility in 2014.

Table 2 – 2014 Budget Performance

Water Utility	2014 Forecast	2014 Budget	$ Variance	% Variance
Budgeted & Forecasted Water Consumption Volume	113,500,000	106,000,000		
$ millions				
Revenues				
Metered Rate Revenues	$ 55.5	$ 51.9	$ (3.6)	(7%)
Flat Rate Revenues	45.1	45.6	0.5	1%
Meter Service Charges	3.7	3.5	(0.2)	(4%)
Flat Rate Fire Line Charges	2.7	2.5	(0.2)	(7%)
Other Revenues	0.5	0.5	(0.0)	(1%)
Total Revenues	**107.5**	**104.0**	**(3.5)**	**(3%)**
Expenses				
Water Purchases (GVWD)	71.6	66.6	(5.0)	(8%)
Waterworks Operations	12.1	12.6	0.5	4%
Debt Interest	4.6	4.6	(0.0)	0%
Total Expenses	88.3	83.8	(4.5)	(5%)
Transfers				
Debt Principal	14.3	14.3	0.0	0%
Pay As you Go Capital	7.5	7.5	0.0	0%
Transfer to/(from) Stabilization Reserve	(2.6)	(1.6)	1.0	(62%)
Total Transfers	19.2	20.2	1.0	5%
Total Expenses & Transfers	**107.5**	**104.0**	**(3.5)**	**(3%)**
Surplus/(Deficit)	**$ -**	**$ -**	**$ -**	**0%**

2014 Revenues

Metered rate revenues are estimated as a percentage of total water consumption, which is higher than anticipated this year. The 2014 budget was based on a forecast that water consumption would decrease from the previous year by about 3%; but instead consumption increased by about 4% resulting in a 7% variance.

Meter service charges and fire line charges, which apply only to multi-family and commercial accounts, are also 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, flat rate fees for high water use air conditioning units and various other cost recovery fees as set out in the Waterworks By-law. These were on budget in 2014.

2014 Expenditures

As previously stated, the largest driver of expenses in the Water Utility is the purchase of bulk water from Metro Vancouver. This is also based on water consumption, which is forecast to be 7% higher than estimated in the 2014 budget.

2014 Transfers

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 2014, there was a budgeted transfer from the Reserve of $1.6 million. An additional $1 million is expected to be drawn from the reserve. This is due to the higher than budgeted water purchases of $4.9 million, but offset by higher than budgeted revenues of $3.5 million and an anticipated positive variance in Waterworks operating costs of $0.5 million.

2015 Proposed Budget and Rates

The main drivers of the 2015 expenditure budget are the 1.7% increase in the rate for the purchase of water from Metro Vancouver, an increase in the estimated volume of water that will be purchased, and an increase in Pay as You Go funding. Table 3 shows the 2014 Operating Budget and proposed 2015 Operating Budget.

While water consumption is higher than anticipated in 2014, the longer term trend demonstrates an overall reduction. The enhanced strategic water conservation activities planned over the next few years are expected to contribute to a continued downward trend. Based on the estimated consumption in 2014, an adjustment to the volume of water purchases has been used for the 2015 budget as shown in Table 3. Following this adjustment, staff are using an estimated 1.5% reduction per year for budgeting purposes (as shown in Table 4 in the next section).

Table 3 – Proposed 2015 Budget

Water Utility	2014 Forecast	2014 Approved Budget	2015 Proposed Budget	$ Change from 2014 Budget	% Change
Water Consumption Volume		106,000,000	112,000,000		
Revenues					
Metered Rate Revenues	$ 55.5	$ 51.9	$ 57.5	$ 5.7	11%
Flat Rate Revenues	45.1	45.6	44.9	(0.7)	(2%)
Meter Service Charges	3.7	3.5	3.7	0.2	6%
Flat Rate Fire Line Charges	2.7	2.5	2.7	0.2	6%
Other Revenues	0.5	0.5	0.5	0.0	0%
Total Revenues	**107.5**	**104.0**	**109.3**	**5.3**	**5%**
Expenses					
Water Purchases (GVWD)	71.6	66.6	71.4	4.8	7%
Total Waterworks Operations	12.1	12.6	12.8	0.2	1%
Debt Interest	4.6	4.6	4.7	0.1	1%
Total Expenses	88.3	83.8	88.9	5.1	6%
Transfers					
Debt Principal	14.3	14.3	12.8	(1.5)	(10%)
Pay As you Go Capital	7.5	7.5	10.0	2.5	33%
Transfer to/(from) Stabilization Reserve	(2.6)	(1.6)	(2.4)	(0.8)	51%
Total Transfers	19.2	20.2	20.4	0.2	1%
Total Expenses & Transfers	**107.5**	**104.0**	**109.2**	**5.2**	**5%**
Surplus/(Deficit)	$ -	$ -	$ -	$ -	**0%**

2015 Revenues & Proposed Rates

The proposed rate increase for both flat-rate and metered water utility customers is 4%. A portion of that is required to cover the price increase of the water the City purchases from Metro Vancouver. The remainder of the rate increase will pay for the increase in Pay as You Go funding.

Of the $5.7 million increase in the metered revenue budget, $3.5 million can be attributed to the budgeted change in volume and $2.2 million can be attributed to the budgeted change in the Metro rate for water purchase.

Prior to 2012, all single-family dwellings and duplexes paid a flat annual rate for water. Since January 1, 2012, all new single family homes and duplexes are metered and no longer pay the flat rate. Approximately 1,200 homes per year are moving to a metered rate. This drop in the number of customers paying the flat rate has resulted in a $2.4 million decrease in the 2015 actual revenues from flat rate customers in part offset by an increase of $1.7 million attributable to the rate increase.

Staff are recommending inflationary increases of 2% for fire line charges and no increase in meter service charges. The revenues for meter service charges are sufficient to cover

anticipated costs associated with the maintenance, replacement and administration of meters in 2015. The budget increase is due to an increase in the number of accounts over the last several years, rather than a change to the meter service charges for each account.

2015 Expenditures

The increase in the 2015 water purchase budget is $4.9 million. Of this increase in total water purchases, $3.9 million is due to the increase in the budgeted volume and $1.2 million is due to Metro price increase of 1.7%. This is offset by a decrease of $0.2 million due to improved leak detection methods, better pressure management and increased efficiency in Parks.

Costs in waterworks operations have increased by 2% due to collective agreement compensation increases, and increases in utilities, insurance and materials. There is no change to the interest on debt; however, because of our pay-as-you-go strategy, we have been borrowing less in recent years and these costs will decrease over the next few years, as seen in Table 4 in the next section.

2015 Transfers

In 2012, the water utility began paying a portion of its annual capital program from current revenues. The plan is to increase the 'pay as you go' contribution until all new capital expenditures are paid for from current revenues, which will eventually eliminate the debt interest expense. In 2015, staff are recommending to increase the 'pay as you go' contribution from $7.5 million to $10 million.

The current debt charges represent past borrowing and will continue to decrease over time as current borrowing is gradually eliminated.

Four Year Outlook

Table 4 summarizes the four year outlook for the Water Utility and the following paragraphs discusses the assumptions used.

Table 4 - Water Utility Four-year Outlook

Water Utility	2015	2016	2017	2018
Assumptions:				
Water Consumption Volume	112,000,000	110,320,000	108,665,200	107,035,222
Metro Price Increase	1.7%	4.0%	4.0%	3.0%
($ millions)				
Revenues				
Metered Rate Revenues	$ 57.5	$ 59.5	$ 61.1	$ 62.0
Flat Rate Revenues	44.9	46.4	47.7	48.4
Meter Service Charges	3.7	3.8	3.9	3.9
Flat Rate Fire Line Charges	2.7	2.7	2.8	2.9
Other Revenues	0.5	0.5	0.5	0.5
Total Revenues	**109.3**	**112.9**	**116.0**	**117.7**
Expenses				
Water Purchases (GVWD)	71.5	73.5	75.3	76.4
Total Waterworks Operations	12.8	13.0	13.3	13.5
Debt Interest	4.7	4.3	4.0	3.7
Total Expenses	88.9	90.8	92.5	93.6
Transfers				
Debt Transfers	12.8	11.8	11.0	10.1
Pay As you Go Capital	10.0	11.0	12.0	13.0
Transfer to/(from) Stabilization Reserve	(2.4)	(0.7)	0.4	1.0
Total Transfers	20.4	22.1	23.4	24.1
Total Expenses & Transfers	**109.3**	**112.9**	**116.0**	**117.7**
Surplus/(Deficit)	$ -	$ -	$ -	$ -
	Est. End 2014			
Reserve Balance ($ millions)	9.0	6.5	5.8	6.2	7.2
% of Water Purchases (Target 5-10%)		9.1%	7.9%	8.3%	9.5%

Table 3 assumes an upward adjustment for 2015 consumption based on the increase in 2014, and then a moderate decline in consumption of 1.5% per year. 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 1.7% in 2015. According to Metro Vancouver's longer term forecast, the following three years are forecast to increase 7.9%, 8.6%, and 4.9%. These increases are based on projected operating and capital costs for supply reservoirs, treatment, and delivery of water to the City system. However, the actual rate increases in recent years have been well below the forecasted rate increases and staff have used more realistic 4%, 4% and 3% estimates for the next three years.

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. The annual total spend for water capital is approximately $13 million. By increasing the Pay as You Go contribution by $1 million per year over the next three years, all new routine capital spending will be from current revenues by 2018, eliminating the need to borrow for ongoing capital programs.

While the city operating costs are showing inflationary increases for the purpose of this forecast, staff will continue to look for ways to provide the same service at a lower cost.

Flat Rate Fees

In addition to consumption based charges, the Water Work By-law includes fees and charges for a variety of services provided by the Water Utility, including service connection and removal fees, unmetered fire service fees and meter installation and service charges. These are detailed in Appendix A.

Staff are recommending an inflationary increase of 2% for unmetered fire service fees and meter installation and service charges.

It is recommended that a 3% increase for flat rate connection and removal fees be approved. This increase is required to cover inflationary increases in wages, equipment rental and materials. In addition to inflationary increases, several new requirements and practices have created additional costs.

These include:

- Greater reliance on geotechnical consultants for excavation and shoring plans and new procedures to comply with safety requirements such as fall protection for workers adjacent to trenches. Stricter interpretations of regulations by WorkSafe have resulted in the need for geotechnical and structural engineering approvals of excavation and shoring for all deep excavations and for structural support systems for crossing utilities such as BC Hydro and telecom ducts. These assurances improve safety and reduce service disruptions, but add cost to excavation projects.
- Increased efforts to address traffic impacts by scheduling construction on arterial roads after regular working hours, requiring overtime for projects in high impact locations.

The connection fees are based on an average price model, and the underlying complexities can vary by job. The number of complex connections have also increased, putting pressure on the average cost. In an effort to ensure fees are appropriate, a comprehensive review of fees for the connections program is planned.

Other Changes to the Flat Rate Fees

A number of miscellaneous fees in the Waterworks By-law have been identified as out-of-date. These fees are charged infrequently but currently do not fully recover City costs. These fees are under review and fee adjustments will be brought forward to Council as part of the budget approval in the Spring.

Legal Implications

The amendments to the Waterworks By-law are contained in Appendix B.

In addition to the annual rate and fee changes, a number of updates are required to the By-law wording to support and clarify existing billing processes. The Director of Legal Services has also taken the opportunity to modernize the language of the By-law and organize the section numbering for readability.

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 2015, it is recommended that flat and metered water fees be increased by 4%, service and connection fees be increased by 3%, Fire Line Charges be increased by 2% and Meter Service Charges not be increased as described in this report.

* * * * *

Appendix A
Water Works By-Law No. 4848
2015 Rate Changes

Schedule A **Flat Rate Connection Fees**

	2014	Proposed 2015	% Increase
Single-Family & Two-Family Dwellings			
20 mm (3/4")	$4,467	$4,601	3.0%
25 mm (1")	$4,626	$4,764	3.0%
40 mm (1 1/2")	$5,508	$5,673	3.0%
50 mm (2")	$6,166	$6,351	3.0%
Other Connections			
20 mm (3/4")	$8,396	$8,647	3.0%
25 mm (1")	$8,734	$8,996	3.0%
40 mm (1 1/2")	$10,079	$10,381	3.0%
50 mm (2")	$10,079	$10,381	3.0%
100 mm (4")	$14,573	$15,010	3.0%
150 mm (6")	$18,024	$18,565	3.0%
200 mm (8")	$19,683	$20,273	3.0%
300 mm (12")	$27,699	$28,530	3.0%

Schedule A.1 **Removal Fees**

	2014	Proposed 2015	% Increase
20mm (3/4") to 50mm (2") inclusive	$1,055	$1,086	3.0%
100mm (4") to 300mm (12") inclusive	$3,163	$3,258	3.0%

Schedule B **Flat Service Charges for Residential Properties**

	2014	Proposed 2015	% Increase
Single dwelling unit	$546	$568	4.0%
Single-Family with suite or laneway house	$741	$771	4.0%
Single-Family with suite and laneway house	$936	$973	4.0%
For each strata title duplex	$371	$385	4.0%

Schedule C **Flat Service Charges for Unmetered Fire Service Pipes**

	2014	Proposed 2015	% Increase
50 mm (2") or smaller	$210	$214	2.0%
75 mm (3")	$314	$320	2.0%
100 mm (4")	$434	$442	2.0%
150 mm (6")	$500	$510	2.0%
200 mm (8")	$587	$598	2.0%
250 mm (10")	$622	$635	2.0%
300 mm (12")	$667	$680	2.0%

Schedule D	**Charges for Metered Water Service**			
		2014	**Proposed 2015**	**% Increase**
Four Month Period		Rate in Dollars per Unit (2,831.6 litres)		
Rate for all metered uses				
October 1 - May 31	Per Unit	$2.385	$2.480	4.0%
June 1 - September 30	Per Unit	$2.988	$3.108	4.0%

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	**2014**	**Proposed 2015**	**% Increase**
Services with Standard Type Meters			
17 mm (1/2") and 20 mm (3/4")	$29	$29	0.0%
25 mm (1")	$29	$29	0.0%
40 mm (1 1/2")	$66	$66	0.0%
50 mm (2")	$90	$90	0.0%
75 mm (3")	$203	$203	0.0%
100 mm (4")	$247	$247	0.0%
150 mm (6")	$321	$321	0.0%
200 mm (8")	$498	$498	0.0%
250 mm (10")	$610	$610	0.0%
300 mm (12")	$723	$723	0.0%
Services with Low Head Loss Meters / Detector Check Valves			
100 mm (4")	$285	$285	0.0%
150 mm (6")	$417	$417	0.0%
200 mm (8")	$560	$560	0.0%
250 mm (10")	$698	$698	0.0%
300 mm (12")	$833	$833	0.0%

Schedule F	**Charges for Temporary Water Service during Construction**		
	2014	**Proposed 2015**	**% Increase**
Building Size in Square Meters of Gross Floor Area	Rate in Dollars of Gross Floor Area Per Building		
Up to an including 500 sq.m	$241	$251	4.0%
Over 500 but not exceeding 2,000	$472	$491	4.0%
Over 2,000 but not exceeding 9,000	$710	$738	4.0%
Over 9,000 but not exceeding 24,000	$1,193	$1,241	4.0%
Over 24,000 but not exceeding 45,000	$1,785	$1,857	4.0%
Over 45,000	$2,369	$2,464	4.0%

Schedule G	**Fees for Installation of Water Meters**			
Size of Standard Meter	Meter on City Property	**2014**	**Proposed 2015**	**% Increase**
20 mm (3/4")		$3,071	$3,133	2.0%
25 mm (1")		$3,210	$3,274	2.0%
40 mm (1 1/2")		$3,499	$3,569	2.0%
50 mm (2")		$3,617	$3,689	2.0%
75 mm (3")		$12,623	$12,875	2.0%
100 mm (4")		$13,804	$14,080	2.0%
150 mm (6")		$45,081	$45,983	2.0%
200 mm (8")		$46,366	$47,293	2.0%
250 mm (10")		$62,642	$63,895	2.0%
300 mm (12")		$69,264	$70,649	2.0%
Size of Standard Meter	Meter on Private Property	**2014**	**Proposed 2015**	**% Increase**
20 mm (3/4")		$486	$495	2.0%
25 mm (1")		$560	$571	2.0%
40 mm (1 1/2")		$747	$762	2.0%
50 mm (2")		$1,031	$1,052	2.0%
75 mm (3")		$2,278	$2,323	2.0%
100 mm (4")		$3,459	$3,528	2.0%
150 mm (6")		$7,334	$7,480	2.0%
200 mm (8")		$8,773	$8,948	2.0%
250 mm (10")		$17,682	$18,035	2.0%
300 mm (12")		$24,304	$24,790	2.0%

Schedule H	**Miscellaneous Fees and Charges**			
		2014	**Proposed 2015**	**% Increase**
Cross Connection Control Administration Fees				
	First Assembly	$26	$27	2.0%
	Additional Assembly	$12.75	$13	2.0%
Charges when service pipes are shut off for more than ninety days (per month)				
15mm, 20mm or equivalent unmetered services		$2	$2	0.0%
Extra charge for inaccessible meter (per incident)		$46	$46	0.0%
Annual flat rate fee for air conditioning units drawing more than 28.4 litres per minute.		$306	$306	0.0%
Special meter reading (per occurrence)		$100	$102	2.0%
Customer requested meter test (deposit)		$112	$112	0.0%
Charges for Returned Cheques		$35	$35	0.0%
Residual Water Pressure Estimate Fee				
	Original calculation	$36	$36	0.0%
	Additional copies for same location	$10	$10	0.0%
Miscellaneous water information requests (per hour)		$41	$42	2.0%
City Crew call out fee (normal working hours) (per hour or portion thereof)		$51	$51	0.0%
City Crew call out fee (outside normal working hours) (per hour or portion thereof)		$204	$204	0.0%
Frozen pipe thawing		at cost	at cost	

APPENDIX B

BY-LAW NO. _____

A By-law to amend Water Works By-law No. 4848 regarding 2015 fee increases

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

1. This By-law amends the indicated provisions of Water Works By-law No. 4848.

2. Council renames Part I as "**INTERPRETATION AND ADMINISTRATION**".

3. In Part I, Council:

   a) re-numbers section 2 as "1.1" and entitles it "**Interpretation**";

   b) in re-numbered section 1.1, strikes out the definitions of "TO DISCONTINUE WATER SERVICE", "TO ESTABLISH WATER SERVICE", "TO SHUT OFF", and "TO TURN ON"; and

   c) adds the following after section 1.1:

"**1.2 Authority of the Collector and the Engineer**

The Collector and the Engineer are authorized to administer the provisions of this By-law.

1.3 Power of Entry

The Collector, the Engineer and any person authorized to act on behalf of the Collector or the Engineer are authorized to enter any building or premises at any reasonable time for the purpose of administering or enforcing this By-law.

1.4 Notice of Contravention

If, in the opinion of the Collector or the Engineer, a person is contravening the provisions of this By-law, the Collector or the Engineer may issue a notice requiring that the contravention cease by the date specified in the notice.

1.5 Service of Notice

A notice issued in accordance with By-law is deemed to have been received:

(a) four days after mailing, if sent by ordinary prepaid mail to the address of the premises which are the subject of the notice;

(b) 24 hours after sending, if sent by electronic mail to the electronic mail address of the customer; and

(c) upon delivery, if delivered by hand to the customer.

1.6 Remedies for Non-compliance

If a person fails to comply with a notice issued pursuant to this By-law, the Collector or Engineer may:

(a) shut off the service pipe supplying water to the property;

(b) reduce the supply of water to the property to a maximum volume and flow of one litre per minute, until the necessary repairs have been completed;

(c) in the case of an un-metered service, install a meter;

(d) in the case of a metered service, install an additional meter on city property; or

(e) carry out such repairs, either on or off the property as, in the opinion of the Engineer, are necessary to repair any defective apparatus, fitting or fixture, or to prevent or eliminate excessive noise, pressure surges, or damage to a private water system or the City's water system.

1.7 Insertion of Costs on Tax Roll

If the Collector or Engineer takes steps to reduce or shut off water service, install a meter, or carry out repairs pursuant to this By-law, the costs so incurred may be recovered by insertion on the real property tax roll."

4. Council renames Part II as "**ESTABLISHMENT AND DISCONTINUANCE OF METERED SERVICE**".

5. In Part II, Council:

a) strikes out sections 3 and 3A and substitutes:

"2.1 Metered Service to Building Sites

Every building site must be connected to a metered water service.

2.2 Connection to Metered Service

A metered water service must be installed by means of a new connection to the City's water system, or a connection to an existing service pipe.

2.3 Application for Metered Service

A customer who wishes to establish a metered water service must submit an application in a form satisfactory to the Engineer, together with the applicable fees in accordance with Schedules A and G of this By-law.

2.4 Extraordinary Work Outside of Fee Schedules

Despite the provisions of Schedules A and G of this By-law, the installation of a metered service to a building site must be billed to the customer on an "at cost" basis in accordance with section 5.4 if, in the opinion of the Engineer:

(a) the installation cost will be greater than 1.5 times the combined total of the flat rate connection fee in Schedule A plus the water meter installation fee in Schedule G; or

(b) the City water main must be replaced due to the size of the requested service pipe.

2.5 Application for Connection to Existing Service Pipe

A customer who wishes to reconnect to an existing service must submit an application in a form satisfactory to the Engineer and must submit the applicable fees in accordance with the provisions in section 2.8.

2.6 Reconnection for Building Sites

The Engineer may approve reconnection to an existing service pipe to provide water service to a premise that is a building site, if the existing service pipe:

(a) measures no more than 50 mm in diameter and is no more than 24 years old; or

(b) measures more than 50 mm in diameter, is no more than 50 years old, and is made of cement-lined ductile iron.

2.7 Reconnection for Premises other than Building Sites

The Engineer may approve reconnection to an existing service pipe to provide water service to a premise that is not a building site, if, in the opinion of the Engineer, such a reconnection would be effective and sound given the size and condition of the existing service pipe.

2.8 Reconnection Fees

A person applying for reconnection to an existing service must pay the following fees:

(a) for an existing water service for which a connection fee has never been paid to the city, the service pipe connection fee set out in Schedule A;

(b) for an existing water service for which a connection fee has been paid to the city, a fee which is 20% of the service pipe connection fee set out in Schedule A; and

(c) for an existing service described in section (a) or (b) above, which is not metered, the additional meter installation fee set out in Schedule G.;

b) re-numbers sections 4, 5, 6, 7 and 8, as 2.9, 2.12, 2.13, 2.14 and 2.15, respectively;

c) in re-numbered section 2.9 strikes out "not the second or subsequent service referred to in section 3." and substitutes " the only service to the premises.";

d) after re-numbered section 2.9, adds:

"**2.10. Permitted Connection Device**

The connection between a private service pipe and a service pipe must be secured by a flexible rubber joint connector.

2.11 Prohibited Connection Devices

A person must not use a wedge action restraint, tie rods, restrained coupling or similar device capable of transferring pressure or force, to connect a private service pipe to a service pipe.";

e) in re-numbered section 2.13:

(i) in paragraph (a)
A. strikes out "dwelling referred to in section 29" and substitutes "dwelling with an existing unmetered water service", and
B. strikes out "Collector" wherever it appears and substitutes "Engineer", and

(ii) in paragraph (b) strikes out "19" and substitutes "5.4";

f) in re-numbered section 2.14, strikes out ", subject to a written notice of intent to the customer being mailed or delivered by the Collector allowing the customer 96 hours to make the meter or accessories accessible." and substitutes "."; and

g) strikes out re-numbered section 2.15, and substitutes:

"**2.15 Discontinuing Water Service**

A customer who wishes to discontinue water service must apply to the Engineer in a form satisfactory to the Engineer."

6. In Part III, Council:

a) strikes out sections 9, 9.1, 9.2, 9.3, 9.4, 9.5, 9.6, 9.7, 10, 11, 12, 12.1, 12.2, 12.3, 12.4, 12.5, 12.6, 12.7, 12.8 and 13, and substitutes:

"3.1 Obligation to Maintain Plumbing

A customer must maintain pipes, fittings, meter chambers, meter supports and fixtures in proper repair and free from leakage.

3.2 Prohibition against Damage to Meter

A customer must not remove, damage or tamper with a meter, or suffer, permit or allow removal of, damage to or tampering with a meter.

3.3 Protection of Meter from Frost

A customer must protect any meter on the customer's property from damage caused by freezing.

3.4 Access to Meter

A customer must ensure that there is unobstructed access to the city valve that controls the water supply to the customer's property.

3.5 Access for Inspection

A customer must allow the Collector, the Engineer, or any person authorized to act on behalf of the Collector or the Engineer, to enter any building or premises at any reasonable time for the purpose of administering or enforcing this By-law.

3.6 Uses Prohibited without Permit

A customer must not:

(a) sell or convey or permit, suffer or allow the sale or conveyance of water beyond the property lines of the property to which water service is provided; or

(b) use or suffer permit or allow the use of water to power machinery,

without having first obtained a permit to do so from the Engineer.

3.7 Prohibition against Wasting Water

A customer must not waste water, or suffer permit or allow waste of water.

3.8 Prohibited Air Conditioning Units

A customer must not use or permit, suffer or allow the use of an air-conditioning unit that:

(a) is designed to discharge water without recirculation; and

(b) draws 28.4 litres of water per minute or more,

unless the unit was installed before February 1, 1970, and is subject to an annual flat rate charge pursuant to Schedule H, payable on January 1 of each calendar year, in addition to the metered consumption rate.

3.9 Defective Apparatus, Fitting or Fixture

A customer must not connect, or permit suffer or allow the connection, or maintain a connection to the city's waterworks system of any apparatus, fitting or fixture that, in the opinion of the Engineer, causes or is likely to cause:

(a) excessive noise or pressure surges; or

(b) damage to a private water system or the City's water system.";

b) re-numbers section 16 as 3.10;

c) re-numbers section 41 as 3.11; and

d) strikes out section 14 and substitutes:

"PART IV
CROSS-CONTAMINATION

4.1 Prohibition against Cross-contamination

A person must not permit, suffer or allow any back flow or substance to enter the City's water system from any piping, drain, fixture, fitting, container or appliance.

4.2 Authority of the Engineer regarding cross-contamination

If, in the opinion of the Engineer, there is a risk of back flow, or of substances entering the City's water system from any piping, drain, fixture, fitting container or appliance, the Engineer may:

(a) shut off the service;

(b) order correction of the fault within the time period specified in the order, and, should the customer fail to comply with the order, shut off the service;

(c) require the installation of cross-connection control devices to be installed on the customer's water piping at all potential sources of contamination and on the water service pipes;

(d) install cross-connection control devices on City property;

(e) in the case of a severe potential hazard, order, as a precondition to providing water service, the installation of a cross connection control device on the customer's private pipe service as well as cross connection control devices at all potential sources of contamination, to the satisfaction of the Engineer;

(f) require that cross control connection devices be inspected upon installation, annually, and from time to time as required by the Engineer; and

(g) require that inspection reports be provided to the Engineer.

4.3 Water Service for Premises with Cross-connection Devices

A person must not turn on the water service pipe at the curb stop for premises with cross-connection control devices unless the private plumbing system has been:

(a) approved by the City Plumbing Inspector; or

(b) inspected for cross connections by the Engineer.

4.4 Limited Water Service for Construction

Despite the provisions of section 4.3, the Engineer may permit the use of a water service for construction purposes for a limited time on premises with cross-connection control devices, if, in the opinion of the Engineer, there are adequate measures in place to prevent backflow into the City water system.

4.5 Fees for Cross-connection Control Devices

All customers whose premises contain one or more cross connection control devices must pay a yearly administration fee as specified in Schedule "H", except for un-metered customers.

4.6 Charges for Installation of Device on City Property

If, in the opinion of the Engineer, it is necessary to install a cross connection device on City property, the device will be installed at a cost that is double the “at cost” rate provided for in Section 5.4.

7. Council renames **Part IV** as **Part V,** and re-numbers 15, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26 and 27 as 5.1, 5.2, 5.3, 5.4, 5.5, 5.6, 5.7, 5.8, 5.9, 5.10, 5.11 and 5.12.

8. In re-numbered section 5.3, Council strikes out “19” and substitutes “5.4”.

9. In re-numbered section 5.4, Council:

(a) strikes out the words “will require an advance payment” and substitutes “may require an advance payment”; and

(b) strikes out the words “must be refunded’ wherever they occur and substitutes “will be credited to the customer’s account”.

10. In re-numbered section 5.10, Council strikes out “Section 3 herein with 30 days, except that all costs shall be in accordance with Section 18 herein.” and substitutes “this By-law.”.

11. In re-numbered section 5.11, Council strikes out "Schedule I" wherever it appears and substitutes "Schedule H".

12. Council strikes out section 28 and substitutes:

"5.13 Investigation of Frozen Service Pipes

If, in the opinion of the Engineer, service pipes may be frozen, the Engineer may carry out an investigation to determine the location of the frozen pipes.

5.14 Customer Obligations regarding Frozen Service Pipes

If, the Engineer determines that the frozen service pipe is located on private property, the customer must:

(a) pay the costs of the investigation on at "at cost" basis as provided in Section 5.4 of this By-law; and

(b) arrange to thaw the affected service pipes forthwith."

13. Council strikes out sections 29 and 30 and substitutes:

"

6.1 Un-metered Water Rate

An un-metered property will be assessed an annual flat rate service charge in accordance with the provisions of Schedule B.

6.2 Metered Water Rate

A property with a metered water service will be assessed a meter service consumption charge in accordance with Schedule D and a meter service charge in accordance with Schedule E.

6.3 Water Service to Un-metered Fire Service Pipes

The Collector or Engineer may provide water service for un-metered fire service pipes at the applicable annual flat rate service charge set out in Schedule C.

6.4 Sealing valves to Un-metered Water Service

The Engineer may seal the valves or outlets leading from the water service to an unmetered fire service pipe.

6.5 Prohibition against Breaking Seal

A person must not break a seal on a valve or outlet leading from the water service to an un-metered fire service pipe, except in the case of fire on the premises.

6.6 Obligation to Notify of Broken Seal

A person must notify the Engineer immediately of any break in a seal on a valve or outlet leading from the water service to an un-metered fire service pipe.

6.7 Charges for Un-metered Water Service with Broken Seal

If the Collector or Engineer determines that there has been a break in a seal on a valve or outlet leading from the water service to an un-metered fire service pipe and the customer or occupant of premises has failed to notify the Engineer as required by this By-law, the Collector must:

(a) estimate the water consumption based on median consumption rates for similar properties or pervious average consumption; and

(b) issue an invoice for both the applicable annual flat rate service charge set out in Schedule C and the estimated water consumption at the applicable rate or rates set out in Schedule D.

6.8 Installation of Meter on Fire Service Pipe

The Collector or the Engineer may install a meter on a fire service pipe and levy metered water service rates in accordance with this By-law."

14. Council strikes out sections 31, 32.1, 32.2 and 32.3 and substitutes:
"

6.9 New Application Fees and Charges

Fees and charges for a new water service will commence on the earliest of the date that the water service is activated, or 14 days after the installation of a meter.

6.10 Annual Flat Rate Service Billing

The annual flat rate service charges in Schedules "B" and "C" of this By-law are due and payable on the 1st of January in each year and must be entered by the Collector on the tax roll for that year against the parcel of land to which water service is supplied, except that:

(a) for a parcel of land that is exempt from taxation, the charges must be due and payable by the occupier of the land, in advance, on the 1st of January in each year;

(b) for new premises, the charges listed in Schedule B must commence on the expiration of the temporary construction period provide for in section 6 of this By-law; and

(c) for new premises, the charges listed in Schedule C for un-metered fire service pipes must commence on the date of installation of the service pipe.

6.11 Meter Rate Service Billing

The Collector must issue bills for the meter rate service charges at the intervals listed in Schedules "D" and "E" of this By-law and the meter rate service charges are due and payable on the due date specified on the bill issued by the Collector.

6.12 Single-Metered Multiple Dwelling Billing

In the case of a building or premises that contains three or more dwelling units serviced by a single meter, the Collector must issue a single bill for the meter rate service charges for the entire building or premises.

6.13 Single-Metered Duplex Billing

In the case of a duplex that contains two separate legal parcels serviced by a single meter, the Collector must calculate the total meter rate service charges for the building and issue a bill to each customer for one half of the total, except that the Collector may alter the apportionment of the bill with the consent of the owners of both parcels."

15. Council:

(a) strikes out the words "34. Non-Payment";

(b) strikes out the words "35. Collection of Water Rates, Fees and Charges"; and

(c) re-numbers sections 32.4, 33, 34.1, 34.2, 35.1 and 35.2 as 6.14, 6.15, 6.16, 6.17, 6.18 and 6.19 respectively.

16. In re-numbered section 6.17, Council strikes out the words "after the date on which a penalty was added to those charges in accordance with section 34.1:" and substitutes "30 days after the due date:".

17. In re-numbered Section 6.18, Council strikes out the words "within 30 days of the date of mailing of the invoice." and substitutes "on the due date."

18. Council re-numbers sections 36, 37 and 38 as 6.20, 6.21 and 6.22 respectively.

19. In section 39, Council:

(a) strikes out sections 39.1, 39.2 and 39.3;

(b) re-numbers section 39 as 6.23; and

(c) substitutes:

"6.23 Adjustment for Inaccurate Meter Record

If, in the opinion of the Collector, the water consumption rate is inaccurate as the result of a malfunctioning, damaged or broken meter, the Collector must:

(a) estimate actual water consumption based on:

(i) an average of the water consumption for the current year and up to two previous years, or

(ii) if there is no consumption history, median consumption rates for similar properties; and

(b) issue a bill for the estimated water consumption:

(i) from the actual date of the damage, or

(ii) for up to a twelve month period if the actual date of damage cannot be determined.

6.24 Adjustment for Meter Removal or Tampering

If, in the opinion of the Collector, the water consumption rate is inaccurate as the result of removal of or tampering with the meter, the Collector must:

(a) estimate actual water consumption based on:

(i) an average of the water consumption for the current year and up to two previous years, or

(ii) if there is no consumption history, median consumption rates for similar properties; and

(b) issue a bill for:

(i) the estimated water consumption for the entire period during which the meter was removed or tampered with, as determined by the Collector; and

(ii) all costs incurred in estimating consumption and repairing or replacing the meter.

20. Council strikes out Section 40 and substitutes:

"6.25 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; and

(b) could not reasonably have been detected by the customer,

the water consumption rate may be adjusted as provided in section 6.23.

21. Council re-numbers sections 42, 43, 44, 45 and 46 as 6.26, 6.27, 6.28, 6.29 and 6.30 respectively.

22. Council strikes out re-numbered sections 6.26 and 6.27 and substitutes:
"

6.26 Adjustment for Overpayment

If a recalculation or a change results in a reduction in fees or charges, the Collector may refund or credit an overpayment, except that:

(a) the Collector must calculate the refund or credit from the later of the date of the change or the date of notice of the change;

(b) the Collector must refund or credit any overpayment for the current year and may refund or credit overpayments for up to two years from the later of the date of the change or the date of notice of the change;

(c) the Collector must not pay interest on any overpayment, refund or credit; and

(d) the Collector must not issue a refund or credit for any overpayment that was made more than two years before the later of the date of the change or the date of notice of the change;

6.27 Back Billing

If a change or recalculation results in an increase in fees, rates, meter charges or other charges, the Collector must issue an invoice to a customer, except that:

(a) the Collector must calculate the increase from the date of the change, as determined by the Collector; and

(b) the Collector must not back bill for a period greater than twelve months, except as provided in section 6.24 of this By-law."

23. Council re-names "**Part VI GENERAL**" as "**Part V OFFENCES AND PENALTIES**".

24. Council re-numbers sections 47. 48 and 49 as 7.1, 7.2 and 7.3 respectively.

25. Council repeals Schedules A to I and substitutes:

"SCHEDULE A: Flat Rate Connection Fees

Service Pipe Size	*Single-Family and Two-Family Dwelling with or without a Laneway House*
20 mm (3/4")	$4,601.00
25 mm (1")	4,764.00
40 mm (1 ½")	5,673.00
50 mm (2")	6,351.00

Service Pipe Size	*Other Connections*
20 mm (3/4")	$ 8,647.00
25 mm (1")	8,996.00
40 mm (1 ½")	10,381.00
50 mm (2")	10,381.00
100 mm (4")	15,010.00
150 mm (6")	18,565.00
200 mm (8")	20, 273.00
300 mm (12")	28,530.00

SCHEDULE A.1
Service Pipe Removal Fees

Service Pipe Size	
20 mm (3/4") to 50 mm (2") inclusive	$1,087.00
100 mm (4") to 300 mm (12") inclusive	3,258.00

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	$568.00
Single-Family with suite or laneway house	771.00
Single-Family with suite and laneway house	973.00
For each strata title duplex	385.00

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

Fire Service Pipe Size

50 mm (2”) or smaller	$214.00
75 mm (3”)	320.00
100 mm (4”)	442.00
150 mm (6”)	510.00
200 mm (8”)	598.00
250 mm (10”)	635.00
300 mm (12”)	680.00

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 1 - May 31	Per unit	$2.480
June 1 - September 30	Per unit	$3.108

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”)	$ 29.00
25 mm (1”)	29.00
40 mm (1 1/2”)	66.00
50 mm (2”)	90.00
75 mm (3”)	203.00
100 mm (4”)	247.00
150 mm (6”)	321.00
200 mm (8”)	498.00
250 mm (10”)	610.00
300 mm (12”)	723.00

Services with Low Head Loss Meters/Detector Check Valves

100 mm (4”)	$285.00
150 mm (6”)	417.00
200 mm (8”)	560.00

250 mm (10”)	698.00
300 mm (12”)	833.00

SCHEDULE F
Charges for Temporary Water Service During Construction

	Building Size in Square Meters of Gross Floor Area	*Rate in Dollars of Gross Floor Area Per Building*
Up to and including	500	$ 251.00
Over 500 but not exceeding	2,000	491.00
Over 2,000 but not exceeding	9,000	738.00
Over 9,000 but not exceeding	24,000	1,241.00
Over 24,000 but not exceeding	45,000	1,857.00
Over 45,000		2,464.00

SCHEDULE G
Fees for Installation of Water Meters

Size of Standard Meter	*Meter on City Property*	*Meter on Private Property*
20 mm (3/4”)	$ 3,133.00	$ 495.00
25 mm (1”)	3,274.00	571.00
40 mm (1 1/2”)	3,569.00	762.00
50 mm (2”)	3,689.00	1,052.00
75 mm (3”)	12,875.00	2,323.00
100 mm (4”)	14,080.00	3,528.00
150 mm (6”)	45,983.00	7,480.00
200 mm (8”)	47,293.00	8,948.00
250 mm (10”)	63,895.00	18,035.00
300 mm (12”)	70,649.00	24,790.00

SCHEDULE H
Miscellaneous Fees and Charges

Cross Connection Control Administration Fees	
First Assembly	$ 27.00
Additional Assembly	13.00
Charges when service pipes are shut off for more than 90 days for 15mm, 20mm or equivalent unmetered services, for each month or part thereof	2.00
Extra charge for inaccessible meter (per month)	46.00
Annual flat rate fee for air conditioning units drawing more than 28.4 litres per minute	312.00

Special Meter Reading (per occurrence)	102.00
Customer Requested Meter Test (deposit)	112.00
Charges for Returned Cheques	$ 35.00
Residual Water Pressure Estimate Fee	
Original calculation	36.00
Additional copies for same location	10.00
Miscellaneous water information requests (per hour)	42.00
City Crew Call Out fee (normal working hours) (per occurrence)	51.00
City Crew Call Out fee (outside normal working hours) (per occurrence)	204.00
Frozen pipe thawing	At cost (Section 5.4)”

26. Council strikes out the Table of Contents and substitutes the Table of Contents attached as Schedule A.

27. A decision by a court that any part of this By-law is illegal, void, or unenforceable severs that part from this By-law, and is not to affect the balance of this By-law.

28. This By-law is to come into force and take effect on the date of enactment except for Section 25 which is to come into force and take effect on January 1, 2015.

ENACTED by Council this day of , 2014

_____
Mayor

_____
City Clerk

Schedule A

WATER WORKS BY-LAW
TABLE OF CONTENTS

SECTION

PART III
RESPONSIBILITIES OF THE CUSTOMER

PART IV
CROSS-CONTAMINATION

PART V
OPERATION AND INSPECTION

PART VI
BILLING AND COLLECTION

PART VII
OFFENCES AND PENALTIES

EXPLANATION

Water Works By-law
regarding 2015 fee increases and
miscellaneous amendments regarding meter billing and new numbering system

Enactment of the attached By-law will implement Council's resolution of December 16, 2014 respecting miscellaneous amendments related to billing, as well as new water rates and fees that are to be effective from January 1, 2015 and the reorganization and re-numbering of By-law provisions for ease of reference and clarity.

Director of Legal Services
December 16, 2014