



**To:** General Purposes Committee **Date:** November 5, 2013  
**From:** Andrew Nazareth **File:** 03-0970-01/2013-Vol  
 General Manager, Finance & Corporate Services 01  
 Robert Gonzalez, P.Eng.  
 General Manager, Engineering & Public Works

**Re: 2014 Utility Budgets and Rates**

**Staff Recommendation**

That the 2014 Utility Expenditure Budgets, as outlined under Option 1 for Water and Sewer, Option 3 for Drainage and Diking, and Option 2 for Solid Waste and Recycling, as contained in the Staff report dated November 5, 2013 from the General Manager of Finance & Corporate Services and General Manager of Engineering & Public Works, be approved as the basis for establishing the 2014 Utility Rates and preparing the 5 Year Financial Plan (2014-2018) Bylaw.

Andrew Nazareth  
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(4150)

REPORT CONCURRENCE		
<b>ROUTED TO:</b>  Finance Division	<b>CONCURRENCE</b>  <input checked="" type="checkbox"/>	<b>CONCURRENCE OF GENERAL MANAGER</b>  
<b>REVIEWED BY STAFF REPORT / AGENDA REVIEW SUBCOMMITTEE</b>	<b>INITIALS:</b>  DW	<b>APPROVED BY CAO</b>  

## Staff Report

### Origin

This report presents the recommended 2014 utility budgets and rates for Water, Sewer, Drainage and Solid Waste & Recycling. The utility rates need to be established by December 31, 2013 in order to facilitate charging from January 1, 2014.

### Analysis

Key issues of note pertaining to the utility budgets in 2014 include:

- Metered rates have increased due to a number of variables. The primary driver relates to Greater Vancouver Sewerage and Drainage District (GVS&DD) and Greater Vancouver Water District (GVWD) operating cost increases.
- GVS&DD operating and maintenance (O&M) costs are increased by \$1.5 million (9%) which must be collected through the sewer utility rate. This increase is driven by Metro Vancouver debt retirement policy, increased operating costs for the Lulu Island Wastewater Treatment Plant and various infrastructure improvement projects. Significant, multi-year infrastructure improvement projects include Gilbert Trunk Sewer twinning and Iona and Lions Gate Wastewater Treatment Plant upgrades.
- GVS&DD debt costs are reduced by 91% (\$0.83 million) as a result of debt repayments. Debt costs are recovered through property taxes and don't directly impact utility rates; however, Metro Vancouver policy increases O&M costs the same amount as the retired debt, which directly impacts utility rates. For 2014, this policy represents 54% of the Metro Vancouver O&M increase.
- GVWD regional water rates are increased by 4% (from \$0.6054 per cubic meter to \$0.6296 per cubic meter [blended rate]).
- Metro Vancouver solid waste tipping fees have increased to \$108 per tonne for 2014 (from \$107 in 2013).

A significant component of the utility budget relates to replacement of ageing/deteriorating municipal infrastructure. As noted in the "Ageing Infrastructure Planning – 2013 Update" report presented to Council on October 15, 2013, increases in the annual capital funding contributions for sanitary and drainage are required to meet long-term infrastructure replacement targets, whereas the required annual capital replacement funding contribution for water has been met.

The long-term annual contribution required to maintain sanitary sewer infrastructure is \$6.4 million, whereas the current funding level is \$4.3 million. The long-term annual contribution required to maintain drainage infrastructure is \$10.4 million, whereas the current funding level is \$8.1 million. The annual water reserve contribution is \$7.5 million and is sufficient at this time to meet reserve funding requirements. Therefore, no increase in the annual reserve contribution for water is proposed. The 2014 budget figures outlined represent options for infrastructure replacement increases in drainage and sanitary only.

Recognizing the challenges of increasing costs outside of the City's control and those associated with maintaining City infrastructure, Staff has presented various budget and rate options for 2014. Budgets and rates are presented under three different options for each of the City's utilities. Option 1 presents the minimum increases necessary to meet those demands placed on the City by external or other factors outside of the City's direct control (e.g. regional or other agency increases, contractual obligations, plant growth, fuel, insurance, etc.) based on the same level of service. Options 2 and 3 present various actions the City can take to either reduce or increase the budget and rates depending on the varying circumstances and needs within each budget area. The various options are presented for each of the City utilities in the following tables:

- Water
- Drainage & Diking
- Sewer
- Sanitation and Recycling

The concluding summary of proposed rates for 2014 is shown in Tables 12 and 13.

### Water Utility

Key Budget Areas	2013 Base Level Budget	Option 1 (Recommended) Non-Discretionary Increases	Option 2 Non-Discretionary Increases with \$250,000 Reduction to Rate Stabilization Contribution	Option 3 Non-Discretionary Increases with \$500,000 Reduction to Rate Stabilization Contribution
Operating Expenditures	\$7,784,600			
2013 OBI Adjustment	\$32,700			
Salary		\$159,500	\$159,500	\$159,500
PW Materials/Equipment/Power Costs		\$20,300	\$20,300	\$20,300
Monthly Vehicles		\$12,400	\$12,400	\$12,400
Internal Shared Costs/ Postage / Cell Phones		\$6,300	\$6,300	\$6,300
Water Meter Reading and Maintenance		\$80,000	\$80,000	\$80,000
Toilet Rebate Program	\$150,000	(\$50,000)	(\$50,000)	(\$50,000)
GVRD Water Purchases (MV)	\$21,516,000	\$2,009,000	\$2,009,000	\$2,009,000
Capital Infrastructure Replacement Program / Asset Management System	\$7,550,000	\$0	\$0	\$0
Firm Price / Receivable	\$1,761,200	\$20,000	\$20,000	\$20,000
Residential Water Metering Program / Appropriated Surplus	\$1,400,000	(\$80,000)	(\$80,000)	(\$80,000)
Overhead Allocation	\$864,600	\$0	\$0	\$0
<b>Total 2013 Base Level Budget</b>	<b>\$41,059,100</b>	<b>\$43,236,600</b>	<b>\$43,236,600</b>	<b>\$43,236,600</b>
<b>Total Incremental Increase</b>		<b>\$2,177,500</b>	<b>\$2,177,500</b>	<b>\$2,177,500</b>
Revenues				
Apply Rate Stabilization Fund	(\$750,000)	\$0	\$250,000	\$500,000
Investment Income	(\$427,000)	\$0	\$0	\$0
Firm Price / Receivable Income	(\$1,761,200)	(\$20,000)	(\$20,000)	(\$20,000)
Meter Rental Income	(\$1,194,400)	(\$511,600)	(\$511,600)	(\$511,600)
Miscellaneous Revenue	(\$10,000)	\$0	\$0	\$0
Provision (Toilet Rebate / Flushing)	(\$301,100)	\$50,000	\$50,000	\$50,000
Provision (OBI Adjustment)	(\$32,700)	\$32,700	\$32,700	\$32,700
<b>Net Budget</b>	<b>\$36,582,700</b>	<b>\$38,311,300</b>	<b>\$38,561,300</b>	<b>\$38,811,300</b>
<b>Net Difference from 2013 Base Level Budget</b>		<b>\$1,728,600</b>	<b>\$1,978,600</b>	<b>\$2,228,600</b>

The following is an explanation of the budget reductions and increases outlined in Table 1:

### ***Operating Expenditures***

Operating expenses generally increased due to inflationary factors including:

- Salary increases as per union agreements;
- BC Hydro rate increases;
- Increasing material costs;
- Postage rate increases; and
- Vehicle fuel cost increases.

### ***Toilet Rebate Program***

All options recommend reducing the Toilet Rebate Program funding to \$100,000. In 2013, the program had a funding level of \$150,000. Approximately \$66,000 in toilet rebates have been issued to date in 2013 and Staff estimate that there will be an additional \$14,000 in rebates issued before the end of the year. As such, it is recommended that the program funding be reduced by \$50,000 to a funding level of \$100,000 to better match the current level of participation in this program. This program is funded through the Water provision (not the utility rates) and, as such, does not impact the water rates.

To date, approximately 3,800 toilets have been replaced through the Toilet Rebate Program. This program is one of the key water conservation programs for existing apartments, townhomes and single-family homes. The program includes a rebate of \$100 per toilet, with a maximum allowable rebate of \$200 per household replacing 6 litre (or more) toilets with 4.8 litre or 4.1 litre/6 litre dual-flush (or less) toilets.

### ***GVRD Water Purchases – Metro Vancouver***

Water is purchased from Metro Vancouver on a unit volume basis. Metro Vancouver has indicated that the unit rate for bulk water will increase from \$0.6054 per cubic meter to \$0.6296 per cubic meter (blended rate), or 4%, for 2014. The volume of water the City purchases from Metro Vancouver has a degree of variability, primarily due to weather impacts on summer irrigation demand. The total volume estimated for budget purposes is based on average City water demand over the last 5 years. The variability in the demand during this period has been approximately plus or minus 5%, and a similar variability can be anticipated in the 2014 water purchase.

### ***Capital Infrastructure Replacement Program***

There are no proposed increases for contribution to water capital infrastructure replacement under any of the proposed options. The annual capital contribution for water-related infrastructure replacement has reached \$7.5 million, plus \$50,000 for future upgrade/replacement of the asset management system. Per the “Ageing Infrastructure Planning – 2013 Update” report presented to Council on October 15, 2013, the long-term annual water infrastructure replacement funding requirement is \$7.2 million. A reduction in the annual funding contribution is not recommended as inflation will reduce the difference in the medium term. Staff will continue to undertake further assessments to determine infrastructure replacement requirements going forward and identify any recommended changes to the annual contribution, if required.

### ***Residential Water Metering Program***

Currently, \$1.4 million is allocated annually to the residential water metering program. The proposed budget re-allocates \$80,000 of this funding for meter reading and maintenance, thereby reducing the

Residential Water Metering Program budget to \$1.32 million. Council has endorsed a mandatory single-family water meter program to be completed over the next 5 years. Given this program, the funding requirement will diminish over the next 5 years. Accordingly, Staff are proposing that the additional cost for meter maintenance and replacement be offset by a corresponding reduction in meter installation funding.

*Universal Single-Family Water Metering:* Building on the success of the Volunteer Single-Family Water Meter Program, the City is implementing universal metering for remaining unmetered single-family homes. Universal single-family metering has a target completion of 5 years. To support this program, a capital submission has been included in the 2014 Capital Program to utilize \$600,000 from the Capital Infrastructure Replacement Program for installation of mandatory single-family water meters. Utilizing this funding strategy will help the City avoid large fluctuations in the overall water utility budget when the universal single-family metering program concludes at the end of 2018.

*Multi-Family Water Meter Program:* The City's Multi-Family Water Meter Program has been very successful. To date, the City has received approval from 127 volunteer complexes (comprising 7,883 multi-family dwelling units) to install water meters. Of these, 121 complexes have been completed (7,640 units), including 47 apartment complexes (5,079 units) and 70 townhouse complexes (2,121 units). These voluntary installations will continue to be funded through the water metering program funding allocation.

### ***Metered Rate***

From inception, the metered rate has included an incentive to encourage those on the flat rate to switch to meters. As endorsed by Council, over the next 5 years the City will complete universal metering of single-family customers and the number of multi-family residential volunteers will continue to grow. As metering becomes the typical method of water billing and the number of flat rate customers decline, most customers will pay for the actual amount of water they use instead of an estimated quantity. Given that the average metered customer uses less water than the estimated quantity for a flat rate customer, the metered rate must be adjusted to ultimately harmonize with the financial requirements of the Water Utility. This harmonization began in 2013 with a metered rate increase that was larger than the flat rate increase. The proposed 2014 rates are a continuation of this trend. The tables presented in this report detail the impacts of proposed budget options on both metered and flat rate customers.

### ***Water Rate Stabilization Contribution***

The rate stabilization fund was established by Council as a tool to offset anticipated spikes in regional water purchase costs. Capital projects associated with the Capilano Seymour Water Filtration Plant are substantially complete and the forecasted spike in rate increases is being realized. The base level budget currently reflects a \$750,000 drawdown from the water rate stabilization fund. Option 1 (recommended) maintains the \$750,000 drawdown of the rate stabilization fund, while Options 2 and 3 include reducing the drawdown to \$500,000 and \$250,000 respectively.

By the end of 2013, the water stabilization account will have a balance of \$4.4 million plus any surplus that is allocated to this account at year-end.

### ***Regional Issues***

The Regional District increases support the drinking water treatment program and transmission improvement programs. Metro Vancouver's current 5-year projections for the regional water rate are outlined in Table 2.

	2014	2015	2016	2017	2018
Projected Metro Vancouver Water Rate (per m <sup>3</sup> )	\$ .6296	\$ .6806	\$ .7344	\$ .7976	\$ .8367
% Increase Over Prior Year	4%	8.1%	7.9%	8.6%	4.9%

### ***Impact on 2014 Water Rates***

The impact of the three budget options on water rates is shown in Tables 3 and 4. Table 3 shows the various options for metered rate customers; Table 4 shows the options for flat rate customers.

Option 1 (recommended) results in the lowest rates as it includes the highest rate stabilization fund drawdown. Options 2 and 3 have increasingly higher rates as they include lower contributions from the rate stabilization fund. The percentage increase of the recommended Option 1 is lower than the Metro Vancouver increase, as efficiencies in City operations and well-managed budgets have allowed the City to mitigate cost impacts from Metro Vancouver.

Customer Class	2013 Rates	Option 1 (Recommended)	Option 2	Option 3
Single-Family Dwelling (based on 300 m <sup>3</sup> average)	\$323.34	\$332.88 \$9.54	\$335.52 \$12.18	\$338.07 \$14.73
Townhouse (based on 210 m <sup>3</sup> average)	\$226.34	\$233.02 \$6.68	\$234.86 \$8.53	\$236.65 \$10.31
Apartment (based on avg. 163 m <sup>3</sup> average)	\$175.68	\$180.86 \$5.18	\$182.30 \$6.62	\$183.68 \$8.00
Metered Rate (\$/m <sup>3</sup> )	\$1.0778	\$1.1096 \$.0318	\$1.1184 \$.0406	\$1.1269 \$.0491

\*Metered rates above do not include base rates.

Customer Class	2013 Rates	Option 1 (Recommended)	Option 2	Option 3
Single-Family Dwelling	\$577.95	\$589.19 \$11.24	\$592.24 \$14.29	\$595.55 \$17.60
Townhouse	\$473.11	\$482.32 \$9.21	\$484.81 \$11.70	\$487.52 \$14.41
Apartment	\$304.87	\$310.80 \$5.93	\$312.41 \$7.54	\$314.16 \$9.29

The rates outlined in Tables 3 and 4 are net rates. The Water Bylaw provides a 10% discount for utility bills paid prior to a deadline. The net rates shown will be increased by 10% in the supporting bylaws to provide for the discount incentive while ensuring appropriate cost recovery.

***Advantages/Disadvantages of Various Options*****Option 1 (recommended)**

- Represents the minimum increase necessary to sustain operations, while maintaining business as usual.
- Includes a \$50,000 reduction to the toilet rebate program to more accurately reflect current levels of program participation.
- Updates water operating expenditures to include \$80,000 for water meter reading and maintenance.
- Maintains the \$750,000 subsidy from the water rate stabilization fund.

**Option 2**

- Represents the minimum increase necessary to sustain operations, while maintaining business as usual.
- Includes a \$50,000 reduction to the toilet rebate program to more accurately reflect current levels of program participation.
- Updates water operating expenditures to include \$80,000 for water meter reading and maintenance.
- Reduces the subsidy from the water rate stabilization fund to \$500,000.

**Option 3**

- Represents the minimum increase necessary to sustain operations, while maintaining business as usual.
- Includes a \$50,000 reduction to the toilet rebate program to more accurately reflect current levels of program participation.
- Updates water operating expenditures to include \$80,000 for water meter reading and maintenance.
- Reduces the subsidy from the water rate stabilization fund to \$250,000.

***Recommended Option***

Staff recommends the budgets and rates outlined under Option 1 for Water Services. This option maintains infrastructure funding levels above those identified in the “Ageing Infrastructure Planning – 2013 Update” report, facilitates a 5-year program to universally meter single-family homes, and allows for volunteer water metering of multi-family homes. It reduces the toilet rebate budget to a level that matches current levels of program participation and maintains a \$750,000 drawdown of the rate stabilization fund to minimize rate increases.

**Sewer Utility**

Table 5. Sewer Utility Budget

Key Budget Areas	2013 Base Level Budget	Option 1 (Recommended) Non-Discretionary Increases with Operating Efficiencies	Option 2 Applying Operating Efficiencies in Option 1 to Capital Infrastructure Replacement Program	Option 3 Reducing Rate Stabilization Contribution
Operating Expenditures	\$4,658,800			
2013 OBI Adjustment	\$10,000			
Salary		\$70,400	\$70,400	\$70,400
PW Materials/Equipment		(\$96,700) <sup>1</sup>	(\$96,700) <sup>1</sup>	(\$96,700) <sup>1</sup>
Monthly Vehicles		\$25,700	\$25,700	\$25,700
Internal Shared Costs/ Postage / Cell Phones		\$1,100	\$1,100	\$1,100
Power Costs		(\$10,500) <sup>2</sup>	(\$10,500) <sup>2</sup>	(\$10,500) <sup>2</sup>
GVS&DD O&M (MV)	\$17,350,900	\$1,517,000	\$1,517,000	\$1,517,000
GVS&DD Debt (MV)	\$916,700	(\$831,000)	(\$831,000)	(\$831,000)
Capital Infrastructure Replacement Program / Asset Management System	\$4,306,400	\$0	\$120,000	\$0
Firm Price / Receivable	\$580,000	\$6,300	\$6,300	\$6,300
Overhead Allocation	\$498,200	\$0	\$0	\$0
Operating Debt	\$157,800	(\$157,800)	(\$157,800)	(\$157,800)
<b>Total 2013 Base Level Budget</b>	<b>\$28,478,800</b>	<b>\$29,003,300</b>	<b>\$29,123,300</b>	<b>\$29,003,300</b>
<b>Total Incremental Increase</b>		<b>\$524,500</b>	<b>\$644,500</b>	<b>\$524,500</b>
Revenues				
Apply Rate Stabilization Fund	(\$500,000)	\$0	\$0	\$300,000
Debt Funding	(\$42,600)	\$42,600	\$42,600	\$42,600
Investment Income	(\$166,000)	\$0	\$0	\$0
Firm Price / Receivable Income	(\$580,000)	(\$6,300)	(\$6,300)	(\$6,300)
Property Tax for DD Debt (MV)	(\$916,700)	\$831,000	\$831,000	\$831,000
Provision (OBI Adjustment)	(\$10,000)	\$10,000	\$10,000	\$10,000
<b>Net Budget</b>	<b>\$26,263,500</b>	<b>\$27,665,300</b>	<b>\$27,785,300</b>	<b>\$27,965,300</b>
<b>Net Difference from 2013 Base Level Budget</b>		<b>\$1,401,800</b>	<b>\$1,521,800</b>	<b>\$1,701,800</b>

<sup>1</sup> Combines \$100,000 efficiency and \$3,300 inflationary increase for an overall \$96,700 reduction.

<sup>2</sup> Combines \$20,000 efficiency and \$9,500 inflationary increase for an overall \$10,500 reduction.



A description explaining the increases and budget reductions in each of the areas identified above is described below.

### ***Operating Expenditures***

Operating expenses generally increased due to inflationary factors including:

- Salary increases as per union agreements;
- BC Hydro rate increases;
- Increasing materials costs;
- Postage rate increases; and
- Monthly vehicle increase due to a new service utility vehicle for sanitary pump stations.

### ***Efficiencies***

Sewer Services has identified efficiencies in materials and power purchases that are reflected in this budget. The materials efficiency is valued at \$100,000. When combined with inflationary increases of \$3,300, Public Works materials and equipment has an overall decrease of \$96,700. An efficiency of \$20,000 has been identified in hydro power consumption. An inflationary increase in hydro power costs of \$9,500 combines with the efficiency resulting in a decrease in power costs of \$10,500.

### ***GVS&DD Operating and Maintenance Costs – Metro Vancouver***

Greater Vancouver Sewerage and Drainage District O&M charges are increased by approximately \$1.52 million (9%). There are two reasons for this increase.

\$685,952 (45%) of this increase relates principally to the operation of the Lulu Island Wastewater Treatment Plant and the Gilbert Trunk Sewer twinning project. Other Metro Vancouver projects that influence the O&M rate are the replacement of the Lions Gate and Iona wastewater treatment plants.

The second driver is a Metro Vancouver policy regarding retiring debt. When sanitary sewer debt is retired or matures, the value of the retired debt charge is transferred to the O&M budget. For 2014, Metro Vancouver is retiring \$831,033 in debt charges for Richmond. While there will be a corresponding decrease in property tax recovery (debt charges are recovered from property tax), there is a corresponding \$831,033 increase in the Metro Vancouver O&M charges, which represents 55% of the O&M increase.

### ***GVS&DD District Debt***

As noted above, GVS&DD debt costs are reduced by \$831,033 (91%). These debt costs are recovered from property taxes; therefore, the required recovery from property tax is reduced. However, this reduction will generate an increase to the O&M charges as described above.

The overall/combined net impact of regional costs (operating/maintenance and debt) to the City is a 3.9% increase in Metro Vancouver charges.

### ***Capital Infrastructure Replacement Program***

Options 1 and 3 maintain the annual contribution to the sewer infrastructure capital replacement program at \$4.25 million (the remaining \$50,000 portion is earmarked for future upgrade/replacement of the asset management system). The “Ageing Infrastructure Planning – 2013 Update” report noted that the annual funding contribution required to support long-term sustainability is \$6.4 million. The current funding gap is \$2.15 million. Option 2 utilizes \$120,000 in materials and power efficiencies to increase contributions to the capital infrastructure replacement program for a total of \$4.37 million. Staff recommend the

funding level be maintained at current levels or \$4.25 million at this time given the significant Metro Vancouver cost increase.

### ***Metro Vancouver Special Permit ICI Users Adjustment***

This change in the sewer rate structure prevents double billing businesses that have special discharge permits. The City has 44 commercial sanitary sewer customers that hold special permits to discharge liquid waste into the Metro Vancouver sanitary sewer system. These permits are primarily required due to the volume of liquid waste produced by these customers and/or the nature of the waste being discharged. Metro Vancouver has changed the manner in which these customers are charged. Previously, these customers were surcharged based on the content of their waste, with the volume and treatment plant charges being collected through the Sewer Levy. The City's current rate structure was developed based on this strategy. Metro Vancouver has shifted the volume and treatment plant charges for special permit customers out of the sewer levy and into the permit fees charged to these customers. Based on this change, Staff will introduce a reduced rate for special permit customers that does not include the Metro Vancouver volume and treatment charges.

### ***Sewer Rate Stabilization Contribution***

The sewer rate stabilization fund was established to offset significant spikes in regional sewer treatment and capacity costs. The sewer rate stabilization account is projected to have a \$5.7 million balance by the end of 2013. Any surplus in the sewer operating budget will add to this balance.

Options 1 and 2 maintain the \$500,000 drawdown on the sewer rate stabilization fund to partially offset Metro Vancouver O&M increases. Option 3 applies \$120,000 in materials and power efficiencies to reduce the water rate stabilization drawdown to \$380,000.

### ***Regional Issues***

The main budget drivers impacting the projected increase in Metro Vancouver costs include a variety of capital infrastructure projects, such as the Gilbert Trunk Sewer twinning project, and the Lions Gate and Iona waste water treatment plant upgrades. Metro Vancouver projections indicate a 3.9% sewer levy increase (combined debt reduction and O&M cost increases) for Richmond in 2014. Staff estimate the sewer levy will increase an average of 8% per year based on trends in regional O&M costs. The O&M increases are recovered through sewer utility rates.

### ***Impact on 2014 Sewer Rates***

The impact of the three budget options on the sewer rates is shown in Tables 6 and 7. Table 6 shows the options for metered rate customers; Table 7 shows the options for flat rate customers. There is a larger percentage increase for metered customers than for flat rate customers, which will reduce the meter incentive and harmonize metered rates with sewer utility funding requirements.

Customer Class	2013 Rates	Option 1 (Recommended)	Option 2	Option 3
Single Family Dwelling (based on 300 m <sup>3</sup> average)	\$278.61	\$289.35 \$10.74	\$290.88 \$12.27	\$294.42 \$15.81
Townhouse (based on 210 m <sup>3</sup> average)	\$195.03	\$202.55 \$7.52	\$203.62 \$8.59	\$206.09 \$11.07
Apartment (based on 163 m <sup>3</sup> average)	\$151.38	\$157.21 \$5.83	\$158.04 \$6.67	\$159.97 \$8.59
Metered Rate (\$/m <sup>3</sup> )	\$.9287	\$0.9645 \$.0358	\$.9696 \$.0409	\$.9814 \$.0527

Customer Class	2013 Rates	Option 1 (Recommended)	Option 2	Option 3
Single Family Dwelling	\$385.38	\$395.45 \$10.07	\$396.74 \$11.36	\$399.87 \$14.49
Townhouse	\$352.61	\$361.83 \$9.22	\$363.01 \$10.40	\$365.88 \$13.27
Apartment	\$293.68	\$301.35 \$7.67	\$302.33 \$8.65	\$304.72 \$11.04

The rates outlined in Tables 6 and 7 are net rates. The bylaw provides a 10% discount for utility bills paid prior to a deadline. The net rates shown will be increased by 10% in the supporting bylaws to provide for the discount incentive while ensuring appropriate cost recovery.

#### *Advantages/Disadvantages of Various Options*

##### Option 1 (recommended)

- Represents the status quo with minimum inflationary increases and \$120,000 in materials and power efficiencies.
- Includes efficiencies in City operations, which mitigate the overall rate increase, which is mainly driven by Metro Vancouver operational cost increases.
- Does not meet the City's long-term infrastructure plan to increase the capital program for replacement of ageing infrastructure. Capital replacement remains fixed at \$4.25 million for 2013, which represents an annual \$2.15 million shortfall from the funding recommended in the "Ageing Infrastructure Planning – 2013 Update" report. The ultimate objective is to build the annual infrastructure replacement for sewer to \$6.4 million.
- Utilizes a \$500,000 drawdown from the sewer levy stabilization account to minimize the impact of regional increases on sewer rates.

##### Option 2

- Represents the minimum increase necessary to sustain operations, while maintaining existing service levels.
- Utilizes \$120,000 in materials and power efficiencies to increase funding of the Capital Infrastructure Replacement Program to \$4.37 million. This is in alignment with the long-term goal to build the sewer infrastructure replacement program to \$6.4 million, and reduces the annual shortfall to \$2.03 million.

- Utilizes a \$500,000 drawdown from the sewer levy stabilization account to minimize the impact of regional increases on sewer rates.

### Option 3

- Represents the minimum increase necessary to sustain operations, while maintaining existing service levels.
- Does not meet the City's long-term infrastructure plan to increase the capital program for replacement of ageing infrastructure. Capital replacement remains fixed at \$4.25 million for 2013, which represents an annual \$2.15 million shortfall from the funding recommended in the "Ageing Infrastructure Planning – 2013 Update" report. The ultimate objective is to build the annual infrastructure replacement for sewer to \$6.4 million.
- Includes a \$300,000 reduction in rate stabilization drawdown.

### ***Recommended Option***

In light of the considerable impact of the Metro Vancouver operations and maintenance charges, Staff recommend the budgets and rates outlined under Option 1 for Sewer Services.

### **Drainage and Diking Utility**

Utility Area	2013 Rates	Option 1	Option 2	Option 3 (Recommended)
Drainage	\$110.31	\$110.31	\$115.31	\$120.31
Diking	\$10.00	\$10.00	\$10.00	\$10.00
Total Drainage & Diking	\$120.31	\$120.31	\$125.31	\$130.31
<i>Increase Over 2013</i>		<i>\$0</i>	<i>\$5.00</i>	<i>\$10.00</i>

The rates outlined in the above tables are net rates. The bylaw provides a 10% discount for utility bills paid prior to a deadline. The net rates shown will be increased by 10% in the supporting bylaws to provide for the discount incentive while ensuring appropriate cost recovery.

### ***Background***

#### Drainage

In 2003, a drainage utility was created to develop a reserve fund for drainage infrastructure replacement costs. The objective, as outlined in the "Ageing Infrastructure Planning – 2013 Update" report, is to build the fund to an anticipated annual contribution of approximately \$10.4 million, subject to ongoing review of the drainage infrastructure replacement requirements.

As adopted by Council in 2003, the rate started at \$10 (net) per property and is increased an additional \$10 each year until such time as the \$10.4 million annual reserve target is reached. This can be achieved in two years. The net rate in 2013 was \$110.31, resulting in approximately \$8.13 million being collected towards drainage services.

Option 1 presents no increase from 2013; Option 2 has an increase of \$5; Option 3 (recommended) includes the full increase of \$10, as per prior Council approvals. The recommended increase under Option 3 will result in approximately \$9 million in annual reserve contributions for drainage in 2014. A continued increase in capital contributions for drainage is recommended due to the importance of drainage infrastructure in Richmond.

Diking

An annual budget amount of approximately \$600,000 was established in 2006 to undertake structural upgrades at key locations along the dike, which equated to a net charge of \$10 per property. Continued annual funding is required to support studies and dike upgrades required to protect the City from long-term sea level rise due to climate change. There is no increase proposed to the \$10 net rate for 2014. This will result in revenues of approximately \$749,400 in 2014, based on total estimated number of properties in Richmond.

**Recommended Option**

Staff recommends the budgets and rates outlined under Option 3 for Drainage and Diking Services.

**Solid Waste and Recycling**

Key Budget Areas	2013 Base Level Budget	Option 1 Non-Discretionary Increases	Option 2 (Recommended) Includes Funding for Pilot Weekly/Bi-Weekly Collection	Option 3 Multi-Family Food Scraps Pilot Funded from Utility Rates
Salaries	\$2,077,700	\$111,300	\$111,300	\$111,300
Contracts	\$5,556,400	\$458,400	\$558,400	\$558,400
Equipment/Materials	\$428,300	\$27,700	\$252,700	\$252,700
Metro Disposal Costs (MV)	\$1,753,800	\$56,800	\$56,800	\$56,800
Recycling Materials Processing	\$1,104,700	\$43,600	\$43,600	\$43,600
Container Rental/Collection	\$149,300	\$12,000	\$12,000	\$12,000
Operating Expenditures	\$158,300	\$29,700	\$29,700	\$29,700
Internal Shared Costs	\$159,200	\$1,400	\$1,400	\$1,400
Agreements	\$171,300	\$2,900	\$2,900	\$2,900
Rate Stabilization	\$138,700	(\$61,700)	(\$61,700)	(\$61,700)
<b>Total 2013 Base Level Budget</b>	<b>\$11,697,700</b>	<b>\$12,379,800</b>	<b>\$12,704,800</b>	<b>\$12,704,800</b>
<b>Total Incremental Increase</b>		<b>\$682,100</b>	<b>\$1,007,100</b>	<b>\$1,007,100</b>
Revenues				
Apply General Solid Waste and Recycling Provision	(\$205,500)	(\$244,500)	(\$344,500)	\$105,500
Recycling Material	(\$781,400)	\$211,800	\$211,800	\$211,800
Garbage Tags	(\$17,500)	\$0	\$0	\$0
Revenue Sharing Grant	\$0	(\$2,100)	(\$2,100)	(\$2,100)
Allocation from Capital	\$0	\$0	(\$225,000)	(\$225,000)
<b>Net Budget</b>	<b>\$10,693,300</b>	<b>\$11,340,600</b>	<b>\$11,340,600</b>	<b>\$11,790,600</b>
<b>Net Difference Over 2013 Base Level Budget</b>		<b>\$647,300</b>	<b>\$647,300</b>	<b>\$1,097,300</b>

A description explaining the increases and budget reductions in each of the areas outlined above is outlined below.

### ***Salaries***

Salary cost increases under all options correspond with collective agreements. Approximately one-half of the increase (\$52,200) is for temporary staffing to support the multi-family organics recycling pilot program, which runs through to the end of 2014. There is no impact to the rates associated with the temporary support component of this increase under Options 1 and 2 as all costs for the multi-family pilot organics program are offset by a contribution from provision. Option 3 includes recovery of the temporary support component from rates.

### ***Contracts***

Option 1 contract costs relate to non-discretionary increases for solid waste and recycling collection services as outlined in Council-approved agreements. In addition, contract costs include the full year implementation for the Green Cart program and large item pickup programs, which were approved by Council on September 24, 2012 and commenced in June, 2013. The total increased annual operating cost of these programs is approximately \$950,000, of which \$550,000 was reflected in the 2013 budget and rates (due to the June start date) and the balance of costs (or \$400,000) is included in the budget and rates for 2014. These programs impact the rate only to those residents who benefit from these services, i.e. single-family and townhome residents. There is no impact to the rates for multi-level multi-family residents associated with these new programs. Contract costs also include a portion related to the multi-family pilot organics program, which is offset by a contribution from provision under Options 1 and 2. Option 3 includes recovery of these contract costs from rates.

#### ***Weekly vs. Bi-Weekly Garbage Collection Pilot***

Option 2 contract costs include an additional estimated amount to undertake a six-month pilot program for cart-based weekly vs. bi-weekly garbage collection (\$100,000). As background, the Public Works and Transportation Committee, at their October 23, 2013 meeting, requested that Staff formulate a 6-month pilot program to test the recycling and environmental performance of weekly vs. bi-weekly garbage collection using carts. The purpose of the pilot would be to gain information on which approach produces better results for recycling diversion performance and other environmental benefits from which to formulate a full-scale program. Staff will bring forward a separate report with further information and seek approval for the proposed pilot program. Costs for the 6-month pilot have been included with this report for Council's consideration in order to secure the funding at this opportune time in the event Council's wishes to proceed with the pilot. The additional costs relates to the fact that additional equipment is required for this service due to the additional time required to service carts compared to cans. The amount is proposed to be offset from a contribution from provision, thereby having no impact on rates under all Options.

### ***Equipment/Materials***

Material costs are increased associated with demand requirements as well as costs for Green Cart replacements due to wear and tear (breakage, damage, etc.) as well as to accommodate growth under this program.

*Weekly vs. Bi-Weekly Garbage Collection Pilot*

Equipment/materials costs under Options 2 and 3 include estimated costs for acquisition of carts for the cart-based weekly vs. bi-weekly collection pilot (\$225,000). There is available funding in the existing capital project for the Green Cart program previously approved by Council to fund the purchase of the carts needed for the pilot program. Therefore, the offset for this cost is shown in the revenue portion of the table “Allocation from Capital”.

*Metro Vancouver Disposal Costs (MV)*

The regional tipping fee is increased by \$1.00/tonne for 2014, from \$107/tonne to \$108/tonne. Single-family residential waste volumes are declining in Richmond due to implementation of recycling initiatives such as the Green Cart program. The increased amount of \$56,800 is net of the reduction in costs for single-family waste disposal plus the estimated cost for waste disposal from the multi-family pilot organics program. This pilot program includes an option for City provided waste disposal for those multi-family complexes in the program as part of measuring waste reduction performance and evaluating overall waste management costs. This increased amount does not impact the rates charged to residents under Options 1 and 2 since it is offset by a contribution from provision associated with the multi-family pilot organics program. Option 3 includes recovery of the portion relating to the multi-family pilot organics program from the rates.

Regional tipping fee projections are outlined below. Increases are anticipated as part of helping to drive additional recycling as well as managing increased infrastructure:

	2014	2015	2016	2017	2018
Projected Metro Vancouver Tipping Fee/Tonne	\$108	\$119	\$137	\$151	\$157
% Increase from Prior Year	1%	10%	15%	10%	4%

*Recycling Materials Processing*

Recycling materials processing costs are increased associated primarily with the multi-family pilot organics recycling program, which are offset by a contribution from provision for this program under Options 1 and 2. Under Option 3, these costs are funded from rates. A portion of the costs under all options are attributed to the addition of Styrofoam at the City’s Recycling Depot as approved by Council at their July 22, 2013 meeting.

*Container Rental/Collection and Operating Expenditures*

Container rental/collection costs are increased associated with the addition of Styrofoam at the Recycling Depot. Operating expenditures are increased associated with the Green Cart and Large Item collection programs in accordance with costs previously identified as part of these initiatives.

*Agreements*

Agreement costs are increased slightly based on the consumer price index and contractual increase with Vancouver Coastal Health Authority for the City’s public health protection service agreement.

*Rate Stabilization*

The contribution to rate stabilization is reduced to help minimize the impact on rates.

***Revenues – General Solid Waste and Recycling Provision***

The contribution from the general solid waste and recycling provision is increased under Option 1 to a total of \$450,000 to offset the total annual cost impact of the multi-family pilot organics program.

The increased amount drawn from the provision under Option 2 (to \$550,000) represents the offset to the anticipated additional collection costs for the weekly vs. bi-weekly garbage collection pilot. By offsetting the cost, there is no impact to the rates charged to residents. It is typical to offset these costs from provision for pilot initiatives since they are designed to help the City gather information to formulate future programs.

The contribution from provision is reduced to \$100,000 under Option 3 to offset only the weekly vs. bi-weekly garbage collection pilot. Costs for the multi-family pilot organics program are not offset under Option 3, resulting in full cost recovery for this program from rates.

***Recycling Material Revenues***

Revenues from the sale of recycling commodities are decreased as a result of declining market prices for these materials based on the 2013 experience to date. Revenues from recycling materials are subject to market conditions and can vary greatly from year to year. The City bears the risk and absorbs the loss during down markets but also benefits from any gains directly during strong markets. As such, revenue amounts shown are estimates only. Revenues from the sale of recycling materials are applied against expenditures to help offset rates.

***Allocation from Capital***

As noted under the “Equipment/Materials” section above, the \$225,000 amount reflects existing available funding within the existing Green Cart acquisition project previously approved by Council which Staff suggest be used to fund the purchase of the garbage carts required for the weekly vs. bi-weekly garbage collection pilot program.

***Impact on 2014 Rates***

The impact of the budget options to ratepayers is provided in the table which follows. It should be noted that the cost increases in 2014 under Options 1 and 2 are principally associated with the expanded food scraps/large item pick up program. These costs are reflective of the full annual operating costs for these programs. The rates in 2013 reflected roughly 60% of total annual costs due to implementation in June, 2013. The 2014 rates include the balance of the full annual program costs.

Option 3 costs reflect full cost recovery for the multi-family pilot organics program from rates.

Staff recommends Option 2 as it includes full funding for all programs. In addition, all costs associated with the multi-family pilot organics program and the proposed weekly vs. bi-weekly garbage collection pilot are fully offset from provision under this option.



Customer Class	2013 Rates	Option 1	Option 2 (Recommended) Includes Funding for Pilot Weekly/Bi- Weekly Collection	Option 3 Multi-Family Food Scraps Pilot Funded from Utility Rates
Single Family Dwelling	\$251.40	\$263.80 \$12.40	\$263.80 \$12.40	\$270.05 \$18.65
Townhouse	\$197.90	\$224.00 \$26.10	\$224.00 \$26.10	\$230.25 \$32.35
Apartment	\$51.45	\$54.40 \$2.95	\$54.40 \$2.95	\$60.80 \$9.35
Business Rate	\$25.76	\$26.75 \$0.99	\$26.75 \$0.99	\$26.75 \$0.99

As noted previously within the water and sewer sections, the above rates are net rates and will be increased by 10% in the rate amending bylaws in accordance with the bylaw early payment discount provisions.

### ***Regional Issues***

As previously noted, the regional tipping fee is increased to \$108/tonne in 2014. Key drivers impacting regional costs include landfill management contracts, costs for managing fly and bottom ash, proposed contributions to recycling depot operations, and expected decreases in waste quantities disposed. Key actions at the regional level in 2014 will include further progress and consultation toward implementation of the organics disposal ban in 2015, identification of potential sites for waste to energy capacity, implementation of the Waste Flow Management Bylaw and Strategy (subject to provincial approval) as well as other related initiatives. Projections continue to be based on achieving approximately 70% diversion by 2015.

Costs for regional and local government initiatives identified in the Integrated Solid Waste and Resource Management Plan are other factors that will impact costs going forward. For its part, the City's key actions in 2014 will be implementing organics recycling programs for all residents in preparation for the regional organics disposal ban as well as additional initiatives to reduce overall waste disposed.

### ***Recommended Option***

Staff recommends the budgets and rates as outlined under Option 2 for Solid Waste and Recycling. This option provides full funding for all existing programs as well as establishes the estimated funding to undertake a weekly vs. bi-weekly cart-based garbage collection pilot program in 2014.

### **Total Recommended 2014 Utility Rate Option**

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

- Option 1 is recommended for Water and Sewer
- Option 3 is recommended for Drainage and Diking
- Option 2 is recommended for Solid Waste and Recycling

Table 12 summarizes the estimated total metered rate utility charge, based on average water and sewer consumption. Table 13 summarizes the total flat rate utility charge.

Table 12. 2014 Estimated Total Net Rates to Metered Customers		
Customer Class	2013 Estimated Net Metered Rates	2014 Estimated Net Metered Rates (Recommended)
Single-Family Dwelling (based on 300 m <sup>3</sup> average)	\$973.66	\$1,016.34 \$42.68
Townhouse (on City garbage service) (based on 210 m <sup>3</sup> average)	\$739.58	\$789.87 \$50.30
Townhouse (not on City garbage service) (based on 210 m <sup>3</sup> average)	\$633.58	\$683.67 \$50.10
Apartment (based on 163 m <sup>3</sup> average)	\$498.82	\$522.79 \$23.97
Commercial/Industrial		
Metered Water (\$/m <sup>3</sup> )	\$1.0778	\$1.1096 \$.0318
Metered Sewer (\$/m <sup>3</sup> )	\$0.9287	\$0.9645 \$.0358
Business: Garbage	\$25.76	\$26.75 \$0.99
Business: Drainage & Diking	\$120.31	\$130.31 \$10.00

As 70% of single-family dwellings are on meters, the metered charges in Table 12 are representative of what the majority of residents in single-family dwellings would pay vs. the flat rate charges outlined in Table 13.

Table 13. 2014 Total Net Rates to Flat Rate Customers		
Customer Class	2013 Net Flat Rates	2014 Net Flat Rates (Recommended)
Single-Family Dwelling	\$1,335.04	\$1,378.75 \$43.71
Townhouse (on City garbage service)	\$1,143.93	\$1,198.46 \$54.53
Townhouse (not on City garbage service)	\$1,037.93	\$1,092.26 \$54.33
Apartment	\$770.31	\$796.86 \$26.55

As noted previously, the rates highlighted in this report reflect the net rates. This is the actual cost that property owners pay after the 10% discount incentive is applied, as outlined in the rate bylaws. The discount incentive provided in the bylaws is a very effective strategy in securing utility payments in a timely manner. To ensure full cost recovery while maintaining the payment incentive, the bylaw rates are adjusted by the discount amount. The recommended rates outlined above result in gross rate charges to

residents as outlined in Attachment 1. These rates would be reflected in the amending bylaws for each utility area, should they be approved by Council.

### ***Flat Rate and Metered Customers***

The residential metering program has been successful in transitioning the majority of single-family households from flat rates. Approximately 70% of single-family homes are now on meters. The majority of townhouses and apartments are still on flat rate; however, the number with meters will continue to increase with the volunteer and mandatory water meter programs for multi-family dwellings. The number of units by customer class, including those on meters, is shown below. The number of units will vary to some degree based on the type of service (e.g. some units are not on sewer service); therefore, the following is based on the water services unit count:

		2013 Counts	2014 Counts (Estimated)	Difference
Single-Family Residential	Flat Rate (30%)	8,573	7,273	(1,300)
	Metered (70%)	20,172	21,632	1,460
Townhouse	Flat Rate (78%)	12,485	12,235	(250)
	Metered (22%)	3,538	4,508	970
Apartment	Flat Rate (59%)	16,137	15,387	(750)
	Metered (41%)	7,957	10,187	2,230
Total Residential Units		68,862	71,222	2,360
Commercial Units	Metered	3,848	3,858	10
Farms	Metered	48	48	0

### **Comparison of 2013 City Utility Rates to Other Major Household Expenses**

In relation to other common household expenses, City utility expenses represent good value when compared with other daily major household expenses such as telephone, cable, internet, electricity, transit and others. Water, sewer, garbage and drainage utility services are fundamental to a quality lifestyle for residents as well as necessary infrastructure to support the local economy. The following Figure 1 illustrates the value of these services when compared to other common household expenses.

Figure 1. Cost Comparison of Main Household Expenses for a Single-Family Dwelling

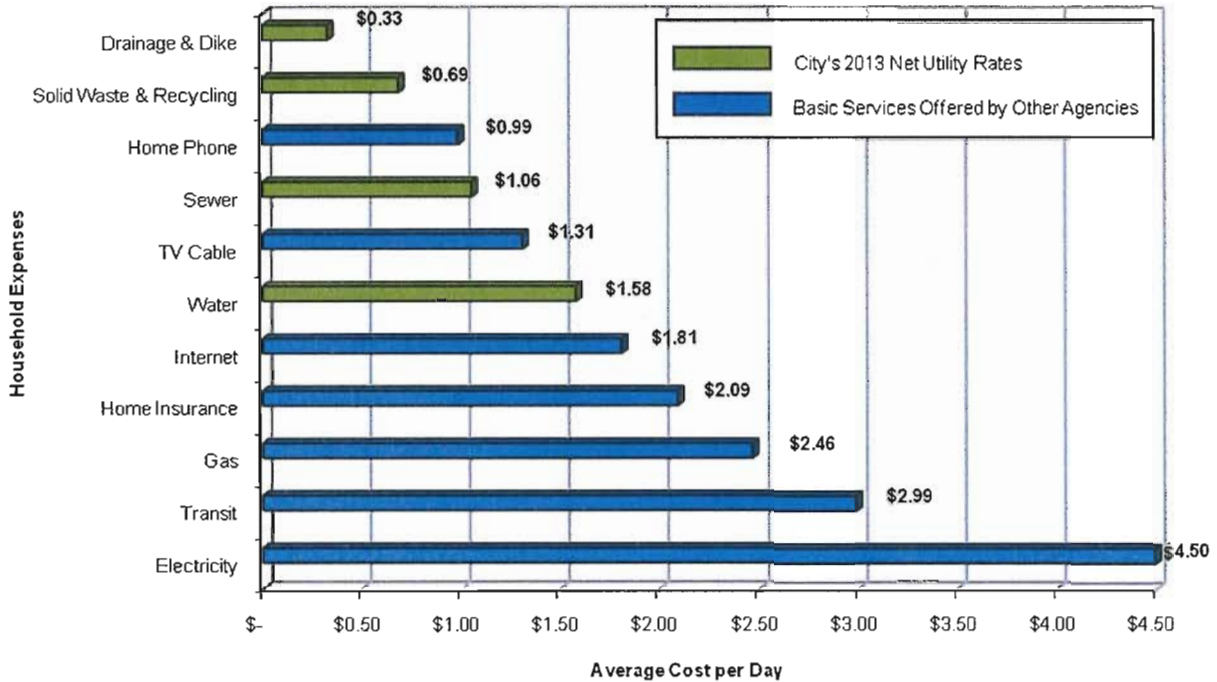


Figure 1 Reference REDMS 4025829  
 Source: BC Hydro, Fortis BC, TD Insurance, Translink

**Financial Impact**

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

The key impacts to the recommended 2014 utility budgets and rates stem from the need to reallocate fixed water/sewer system costs over a smaller volume base due to increased residential metering, increases in regional water rates and sewer levy, and total funding amounts for new programs in recycling and solid waste management. Staff recommend the budget and rates options as follows:

- Option 1 is recommended for Water and Sewer
- Option 3 is recommended for Drainage and Diking
- Option 2 is recommended for Solid Waste & Recycling

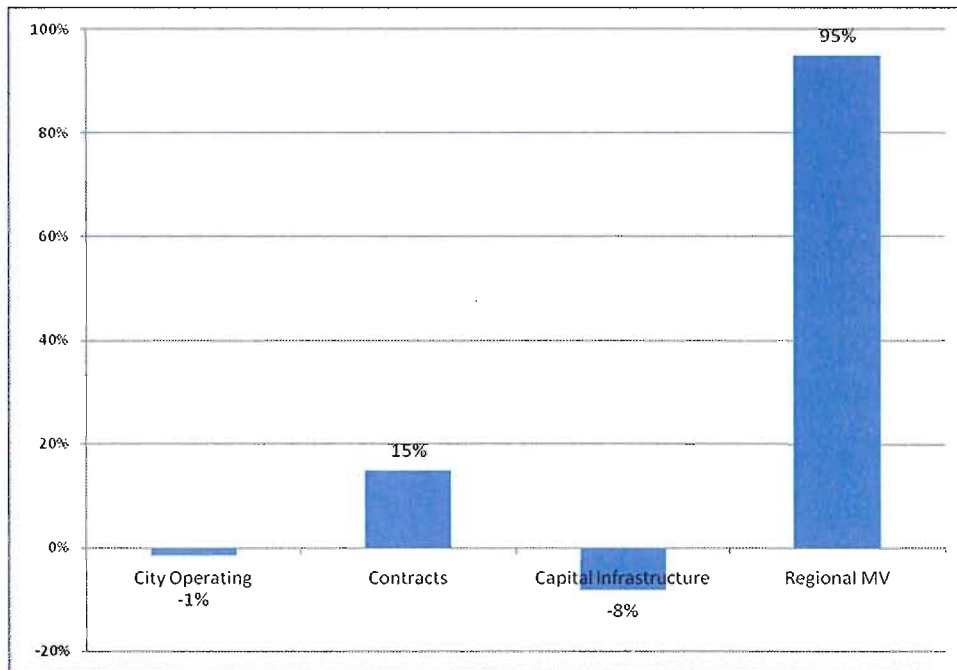
Considerable effort has been made to minimize City costs and other costs within our ability in order to minimize the impact to property owners. The following Figure 2 illustrates the principal factors in determining the 2014 budget in terms of regional costs, contract costs, net capital infrastructure contribution (drainage) and other City operating costs.

**Attachment 1**

## 2014 Annual Utility Charges – Recommended Gross Rates per Bylaw (Estimated Metered and Actual Flat Rates)

	<b>Water</b>	<b>Sewer</b>	<b>Drainage/ Diking</b>	<b>Garbage/ Recycling</b>	<b>Total</b>
<b>Metered (Based on Average Consumption)</b>					
Single-Family Dwelling	\$369.87	\$321.50	\$144.79	\$293.11	\$1,129.27
Townhouse (on City garbage)	\$258.91	\$225.05	\$144.79	\$248.89	\$877.64
Townhouse (no City garbage)	\$258.91	\$225.05	\$144.79	\$130.89	\$759.64
Apartment	\$200.96	\$174.68	\$144.79	\$60.44	\$580.87
<b>Flat Rate (Actual)</b>					
Single-Family Dwelling	\$654.66	\$439.39	\$144.79	\$293.11	\$1,531.95
Townhouse (on City garbage)	\$535.91	\$402.03	\$144.79	\$248.89	\$1,331.62
Townhouse (no City garbage)	\$535.91	\$402.03	\$144.79	\$130.89	\$1,213.62
Apartment	\$345.33	\$334.83	\$144.79	\$60.44	\$885.39
<b>General – Other/Business</b>					
Metered Water (\$/m <sup>3</sup> )	\$1.2329				
Metered Sewer (\$/m <sup>3</sup> )		\$1.0717			
Business: Garbage				\$29.72	
Business: Drainage & Diking			\$144.79		


Figure 2. % Change of 2014 Utility Budget Recommended Option (by Category)



**Conclusion**

This report presents the 2014 proposed utility budgets and rates for City services relating to the provision of water, the connection of wastewater, flood protection, as well as the provision of solid waste and recycling services. Considerable measures are taken to reduce costs where possible in order to minimize the impact of increased costs. A significant portion of the City’s costs relate to impacts from influences outside of the City’s direct control, such as regional cost impacts, power and fuel cost increases, etc. Regional costs are expected to continue increasing as part of meeting demands for ensuring high quality drinking water and managing sewer treatment. The percentage increase of the recommended options is lower than the Metro Vancouver increase, as efficiencies in City operations and well-managed budgets have allowed the City to mitigate cost impacts from Metro Vancouver. This budget also presents full costs associated with the City’s expanding Green Cart and Large Item Pickup programs as part of meeting new regional waste diversion goals, i.e. 70% by 2015.

Staff recommends that the budgets and rates as outlined in this report be approved and that the appropriate amending bylaws be brought forward to Council to bring these rates into effect.

  
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