



ADMINISTRATIVE REPORT

Report Date: November 26, 2013
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 Meeting Date: December 10, 2013

TO: Standing Committee on City Finance and Services
 FROM: General Manager of Engineering Services
 SUBJECT: 2014 Annual Review of the Sewer Utility and Rates

RECOMMENDATION

- A. THAT Council approve the amendments to the Sewer & Watercourse By-law, generally as set out in Appendix A, including the establishment of the 2014 rates and fees, with the following recommended increases:

Rate	% Increase	2013 Rate	Recommended 2014 Rate
Single Dwelling Unit	3.5%	\$287	\$297
Other Sanitary Sewer User Rates	3.5%	As listed in Appendix A	
Metered Rate Per Unit (Unit = 2.8316 Cubic Meters)	3.5%	\$1.842	\$1.906
Waste Discharge Permit User Rate Per Unit (Unit = 2.8316 Cubic Meters)	3.5%	\$0.6001	\$0.6211
Public Sewer Connection Fees	2%	As listed in Appendix A, Part I	

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

REPORT SUMMARY

Each year, the Sewer Utility provides a report on the Utility’s progress in meeting its strategic objectives, plans for the upcoming year and recommends revised rates for sanitary sewer services and connection fees.

These rates cover the sanitary sewer system while the storm system is funded through general taxes. The cost of the City's sewer system include the levy paid to Metro Vancouver for sewage treatment, as well as capital and operating costs to maintain and improve the City's sewer system.

The key drivers of the rate increase are treatment costs paid to Metro Vancouver and the debt costs associated with the Sewers Capital Plan. The increase in the Capital Plan is to accelerate the sewer separation program in order to achieve the regulatory requirement to eliminate combined sewer overflows by 2050.

Operating costs are increasing at a rate lower than inflation even though the budget includes new funding for a Still Creek Sewer Cross Connection team. This has been achieved through finding more efficient ways to deliver sewer services.

For 2014, staff are recommending a 3.5% increase for sanitary services for flat and metered customers, and a 2% increase for connection fees.

COUNCIL AUTHORITY/PREVIOUS DECISIONS

Sanitary sewer user fees and public sewer connection fees are reviewed annually by Council to establish the following year's rates.

On April 4, 2000, Council approved the implementation of user fees for sanitary sewer services to fund the operating portion of the sanitary sewer costs based on volume.

In December 2008, Council approved shifting the remainder of the sanitary sewer costs (the infrastructure costs) from general taxes to user fees. This shift was implemented over two years and was complete in 2010. Currently, only the storm sewer system costs are funded by property taxes.

In December 2011, Council approved annual transfers between the Water Rate Stabilization Reserve and the Sewer Rate Stabilization Reserve based on the impact that weather related water consumption has on revenues in each utility.

REPORT

Background/Context

The City of Vancouver's sewer system has two main components, the sanitary system collects wastewater from homes and businesses, while the storm system handles surface run off from private and public property. Liquid waste and stormwater is collected from more than 100,000 service connections from homes and businesses, and stormwater is collected from more than 45,000 catch basins through a system that is 1,400 km in length.

The system delivers liquid waste to the treatment facilities operated by the Greater Vancouver Sewerage and Drainage District (Metro Vancouver) and stormwater to outfalls along the City's waterfront.

The costs of running the system include the capital costs for maintaining the system, the cost of sanitary treatment provided by Metro Vancouver and the operating costs to maintain the system.

The sanitary system is funded through sewer user rates and the storm system is funded through general property taxes.

Like the water utility, only some of the utility's customers are metered; these are mainly commercial and multifamily properties. Only single family dwelling and duplexes (referred to as SFD's) remain unmetered, although since 2012, 1,357 new homes have been constructed with the now required meter. Metered properties pay based on consumption and unmetered single family dwellings pay a flat rate on an annual basis.

A third group of customers, referred to as Permittees, are those industries that discharge more than 300 cubic metres of wastewater over a 30-day period. These customers pay Metro Vancouver directly for sanitary treatment but also pay their share of the costs the City incurs in operating the sewer system. This is a metered rate covering only City costs and is less than the metered rate charged to other customers (which includes both City and GVS&DD costs).

Strategic Analysis

The mandate of the City's Sewer Utility is to protect public health, the environment and property from contamination and flooding. All of the initiatives and strategies discussed here support this mandate.

One of the City's strategic priorities is to accelerate the sewer separation program in order to achieve the elimination of combined sewer overflows by 2050. This is required under provincial legislation and detailed in the region's Liquid Waste Management Plan (LWMP). This not only protects the environment from combined sewer overflows, it also protects our beaches from high coliform levels.

Work being done to maintain and renew our infrastructure protects the public and the environment by reducing any risk of contamination. Asset renewal also reduces the risk of flooding and damage to property.

Work being done on the City-Wide Integrated Stormwater Management Plan (ISMP) is designed to better protect watersheds and mitigate the effects of climate change and associated extreme storm events.

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

2013 Update

In 2013, the Sewer Utility will complete 10.4 km of storm and wastewater sewer separation progressing towards the goal to eliminate combined sewer overflows by 2050, as mandated in the Liquid Waste Management Plan (LWMP). This is less than what was done last year due to a number of deep and/or complex sewer projects. Approximately 46% of the city's sewer system is now separated with the City being on track to meet the mandated requirement - noting that it is planned to increase the separation rate over the next several capital plans.

Separation work undertaken in 2013 on the 1910 and 1920 era sewers in the West 4th Avenue area, done in conjunction with other city projects and Metro Vancouver's Jervis St. and Pine St. sanitary tunnel work, further reduced the amount of combined sewer flow through the Arbutus/Maple St outfall into English Bay.

The Sewers Design branch completed the preliminary work related to the planned replacement of the 1st and Boundary pump station. The design is complete, tender has closed and the issuance of the construction contract is expected to be complete by the end of the 2013 for construction to begin early 2014.

The Sewers Design branch, in conjunction with internal and external stakeholders, has also initiated the development of a City-Wide Integrated Stormwater Management Plan (ISMP), also mandated by the Liquid Waste Management Plan. This plan will help protect watersheds by managing rainwater at the site level, thereby minimizing stormwater runoff. This important work will create new design standards to help mitigate the effects of climate change and associated extreme storm events.

The Sewer Utility issued 1060 permits in 2013 for sewer and water connections to new homes, consistent with the high level of city re-development in the past several years. The permits include separation of private property connections and installation of water meters as part of the water conservation program.

The Sewer Operations Branch also implemented various initiatives to increase worker health and safety in consultation with Worksafe BC. This includes the phased roll out of an excavation and shoring management process and the provision of fall restraint equipment to workers that work around excavations.

Plans for 2014

Future rates for sewer service will be influenced by Metro Vancouver's wastewater facility secondary treatment costs, ongoing sewer separation and changing design standards to mitigate climate change and seismic challenges.

In 2014, the Sewer Utility plans to continue the sewer separation program by separating 12 km of sewer to meet the regulatory requirement of eliminating combined sewer overflows by 2050.

In addition, an outdated sewage pump station at 1st Avenue and Boundary Road will be replaced and the design and replacement of an outdated sewage pump station at Skeena Street and Cornett Road will be initiated.

In conjunction with the Waterworks Utility, the Sewer Utility is looking at opportunities to reuse native soil as backfill for construction purposes. Benefits of reusing excavated soil are that it reduces waste generated by construction activity, reduces trucking needed to for disposal at the landfill, and avoids the purchase of new aggregate.

2014 will also see the completion of the City-Wide Integrated Stormwater Management Plan (ISMP) resulting in recommendations on how to best manage rainwater and stormwater runoff and to improve watershed quality. Work will also begin with the Musqueam Band on the Musqueam Creek ISMP work program.

The 2014 budget includes new funding for a Still Creek Sewer Cross Connection team to identify and rectify sewer cross connections in the watershed. This program is designed to help maintain creek quality that has been achieved over many decades and which resulted in the return of spawning salmon in 2012 and 2013.

The 2014 plan will also continue transformation of service delivery and will focus on operational changes to teams related to catch basin cleaning and mainline flushing by systematically looking at how we deliver the service through service levels better aligned to criteria and metric based priority ratings.

Policy Options

In 2012, Council approved a Pay as You Go strategy for funding the capital program for the Water Utility. It was an opportune time to do this as the price increases for purchasing water from Metro had stabilized after many years of steep increases. In addition, the Water Rate Stabilization reserve, designed to mitigate large unexpected price increases, had a balance that exceeded our internal target of 7.5% of water purchases. It is expected that by funding a gradually increasing portion of capital costs through current revenues, the City will eventually save about \$4 million per year.

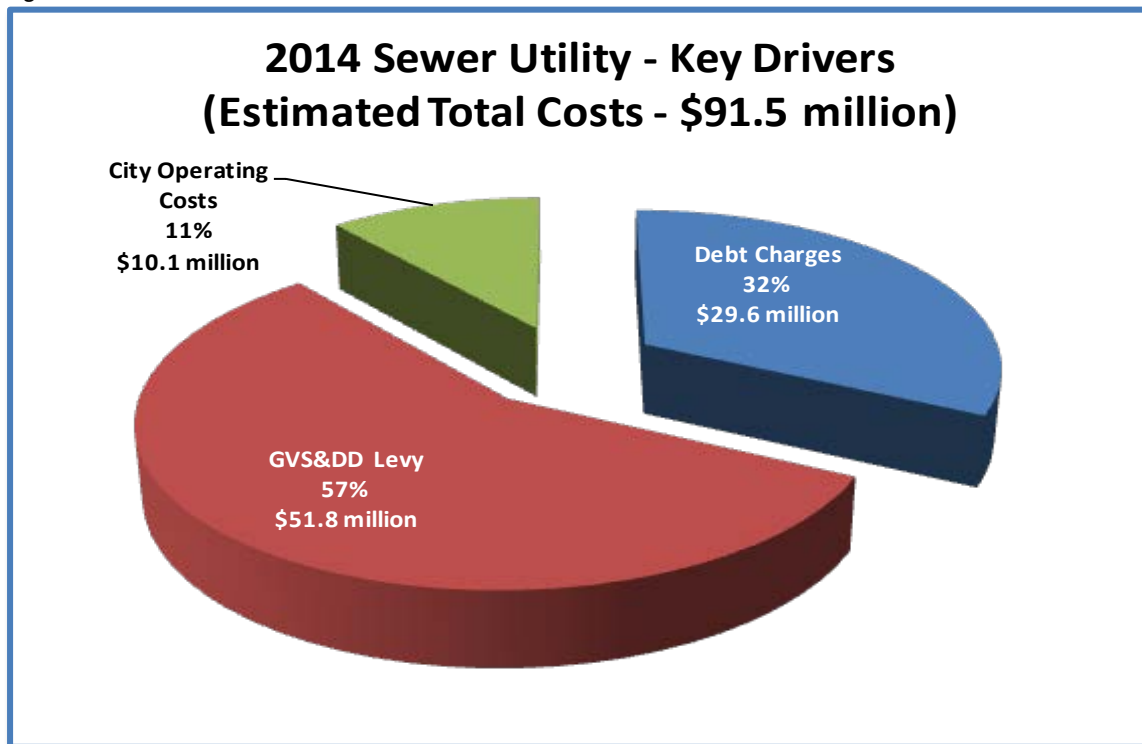
Currently, the Sewer Utility is not in a position to embark on the same, fairly aggressive strategy. However, with interest costs for the Sewer Utility being over \$6 million per year, there is an opportunity for significant operating budget savings with a user pay model. Staff will investigate strategies to embark on a Pay as You Go strategy for Sewers and will report back to Council with options.

Financial Implications

Key Cost Drivers

Sewer Utility expenditures consist of three components: the Greater Vancouver Sewerage and Drainage District (GVS&DD) levy which makes up about 57% of the total budget, City operating costs which make up about 11% of the total budget and debt costs associated with Sewers Capital Plan expenditures which make up about 32% of the budget as shown graphically in Figure 1 below. A description of each component and its related activities follows.

Figure 1



GVS&DD Levy

Metro Vancouver imposes a levy on each member municipality annually to cover the cost of regional collection and sewage treatment facilities. The levy is a fixed amount based on the operating and capital budgets in each of the sewerage areas in the region. The Iona Wastewater Treatment Plant provides primary sewage treatment to the City of Vancouver and drives the costs for the Vancouver Sewerage Area. The Iona plant must be upgraded to secondary treatment by no later than 2030. The levy also covers the operating and capital costs of the regional collection system. In 2014, the levy is increasing 4.5% over 2013 mainly due to increased operating costs at Iona.

Sewer Capital Program (Debt Charges)

The sewers capital program is funded through debentures and the annual charges to the operating budget are made up of several years of borrowing. The impact of capital spending on the operating budget is gradual and spread over several years.

Operating and Maintenance

Sewer operating and maintenance costs are associated with cleaning, repairing, inspecting and managing the infrastructure, as well as emergency response for sewer backups and flooding. Tasks include unblocking mains and connections, dealing with tree root intrusions, doing CCTV inspections, cleaning and maintaining catch basins, maintaining sewer pump stations, and working with property owners to locate and eliminate cross connections.

2013 Budget Performance

The 2013 budget and current forecast is summarized in Table 1.

Table 1

Sewer Utility	2013 Restated Budget	2013 Forecast	\$ Variance	% Variance
Revenues (\$ million)				
Flat Rate Revenues	24.1	24.0	(0.1)	(0.44%)
Metered Rate Revenues	30.5	31.3	0.9	2.79%
Industrial Waste Water Fees	0.7	0.6	(0.1)	(14.59%)
Other Revenues	0.6	0.9	0.3	58.95%
General Tax Levy	32.2	32.1	(0.1)	(0.37%)
TOTAL SEWER REVENUES:	88.0	88.9	0.9	0.99%
Expenditures (\$ million)				
Debt Charges	27.9	27.9	-	0.0%
GVS&DD Levy	49.6	49.6	-	0.0%
Sewers Operating Costs	9.7	9.4	0.3	3.00%
TOTAL SEWERS EXPENDITURES:	87.2	87.0	0.3	0.33%
Transfer to/(from) Rate St. Reserve	0.8	1.9	(1.1)	(145.07%)
Total Expenditures & Transfers	88.0	88.9	(0.9)	(0.97%)

*Restated budget includes a reorganization of technical staff from Community Services Group to Engineering

Revenues

The revenues from General Tax Levy fund the storm component of the sewer system and the rate supported revenues fund the sanitary component of the system. While this can vary from year to year, the storm portion typically makes up about 37% of the total sewer expenditures.

The current forecast for metered revenues is about \$1 million more than what was budgeted. This is due to the 2013 budget for metered sewer revenues being underestimated. Sewer flow volumes have been dropping in recent years and we have been adjusting the budget accordingly, however in 2013, the flow estimates were reduced too much. Staff have been working on a model that can more accurately forecast future revenues.

Other revenues include about \$300,000 in revenues from the Vernon Grit Facility that were not included in the revenue budget. This will be the subject of an accounting change for 2014 described in the next section.

Expenditures & Transfers

The expenses for 2013 are expected to be under budget mainly due to staffing vacancies. The anticipated additional transfer to the Rate Stabilization Reserve is mainly because of the greater than budgeted metered revenues described above, and in part because expenditures were lower than budgeted.

2014 Proposed Budget and Rates

The 2014 proposed budget is summarized in Table 2 with the restated 2013 budget for comparison.

Table 2

Sewer Utility	2013 Restated Budget	2014 Proposed	\$ Change	% Variance
Revenues (\$ million)				
Flat Rate Revenues	24.1	24.4	0.3	1.4%
Metered Rate Revenues	30.5	31.9	1.5	4.8%
Industrial Waste Water Fees	0.7	0.7	0.0	3.7%
Other Revenues	0.6	0.9	0.3	51.8%
General Tax Levy	32.2	33.5	1.3	4.0%
TOTAL SEWER REVENUES:	88.0	91.5	3.5	3.9%
Expenditures (\$ million)				
Debt Charges	27.9	29.6	1.7	6.0%
GVS&DD Levy	49.6	51.8	2.2	4.5%
Sewers Operating Costs	9.7	10.1	0.4	4.0%
TOTAL SEWERS EXPENDITURES:	87.2	91.5	4.3	4.9%
Transfer to/(from) Rate St. Reserve	0.8	(0.0)	(0.8)	(104.2%)
Total Expenditures & Transfers	88.0	91.5	3.5	3.9%

*Restated budget includes a reorganization of technical staff in 2013 from Community Services Group to Engineering

Revenues

The flat rates for the sewer utility are increasing by 3.5% in 2014; however total Flat Rate Revenues are only projected to increase 1.4% due to a decrease in the number of unmetered single family dwellings as more new homes are metered.

The total revenue from metered customers is increasing by 4.8% against the 2013 restated budget but less than 1% compared to 2013 actuals.

Expenditures & Transfers

Debt charges associated with the sewer capital program are expected to increase by \$1.67 million (6%) in 2014, related to our ongoing prioritization of the sewer separation program.

The GVS&DD levy for Vancouver is increasing 4.5% in 2014. While this levy does include GVS&DD capital costs, the increase this year is driven operating costs at the Iona Wastewater Treatment Plant.

The 2014 operating budget also includes new funding for a Still Creek Sewer Separation program to identify and rectify sewer cross connections in the watershed. This is offset by a reduction in the costs associated with sewer main inspections, catch basin cleaning, and after

hours dispatch. These savings were achieved through realigning how we are providing service.

Change in Accounting

The Vernon Grit Facility is a dewatering facility used by the City. This facility has been generating external revenues which have, in the past, been netted into the expenditure budget. This year, a change in the budget was made to recognize both gross costs and gross expenditures. This has resulted in an increase in the expenditure budget and a matching increase in the revenue budget.

This change explains much of the increase of 4% in Sewer Operating Costs as well as the change in "Other Revenues" of 51.8%.

Three Year Outlook

The Utility's three year outlook and estimated balance of the rate stabilization reserve is summarized in Table 3.

Table 3

Sewer Utility	2014	2015	2016
Revenues (\$ million)			
Sewer Fees - Flat	24.4	25.9	28.1
Sewer Fees - Metered	31.9	33.1	34.4
Industrial Waste Water Fees	0.7	0.8	0.8
Other Revenues	0.9	0.9	0.9
General Tax Levy	33.5	35.0	37.1
TOTAL SEWER REVENUES:	91.5	95.7	101.4
Expenditures (\$ million)			
Debt Charges	29.6	31.6	34.2
GVS&DD Levy	51.8	54.7	57.7
Sewers Operating Costs	10.1	9.4	9.6
TOTAL SEWERS:	91.5	95.7	101.4
Transfer to/(from) Rate St. Reserve	-	-	-
Total Expenditures & Transfers	91.5	95.7	101.4
Sewer Stabilization Reserve:			
Estimated Opening Balance	5.6	5.6	5.6

The GVS&DD levy for Vancouver is increasing 4.5% in 2014 and the projections for the increase in the GVS&DD levy for the next 2 years are 5.5% per year. These projections are based on operating and capital costs at the Iona Wastewater Treatment Plant.

We know that the Iona plant must be upgraded to secondary treatment no later than 2030, and Lions' Gate Treatment Plant no later than 2020. Consequently we can expect to see larger increases in Metro costs in the future.

Debt costs are expected to increase as we continue to invest in our sewer infrastructure and strive to meet the LWMP requirement of eliminating combined sewer overflows by 2050. In order to do this, we should be separating the system at a rate of more than 1% of the system per year and will need to ramp up the capital program.

Although this three-year outlook assumes inflationary increases in the sewer operating costs, we will continue to look for ways to provide the service at a lower cost by finding more efficient ways to maintain the system.

Connection and Other Fees

In addition to the annual charges for sewers services in general, the Sewer & Watercourse By-law includes flat fees and charges for a variety of services and discharges/disposals. It is recommended that the following fee adjustments be approved:

- 2% increase for flat rate connection fees. These are new connections that are paid for in advance by the builder. This increase is required to cover inflationary increases in labour, equipment and materials. This is required to maintain full cost recovery for these services.
- To be consistent with other flow related rate increases, a 3.5% increase in rates for specific types of disposals is proposed. These include discharge of contaminated groundwater, ship wastewater and discharges by Utilities (per manhole connected).

Legal Implications

The Sewer and Watercourse By-law annual rate and fee changes are contained in Appendix A. No other By-law changes are being put forward at this time.

CONCLUSION

Rates for sewer services are adjusted annually to offset cost increases in the sewer utility, including operating and debt costs and the Metro (GVS&DD) levy. Based on a review of the proposed sewer costs for 2013, it is recommended that flat and metered sewer fees be increased by 3.5% and service and connection fees be increased by 2%.

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Appendix A
Sewer & Watercourse By-law No. 8093
2014 Rate Changes

Schedule A

Part I: Sewer Connection Flat Rates

	2013	Proposed 2014	% Increase
1. Public Sewer Connection, for One-Family or Two-Family Dwellings	\$8,359	\$8,526	2.0%
2. Public Sewer Connection, other than One-Family or Two-Family Dwellings			2.0%
a) 4 inch/100 mm diameter	\$11,627	\$11,859	2.0%
b) 6 inch/150 mm diameter	\$14,034	\$14,314	2.0%
c) 8 inch/200 mm diameter	\$15,875	\$16,193	2.0%
d) 10 inch/250 mm diameter	\$18,314	\$18,681	2.0%
e) 12 inch/300 mm diameter	\$20,811	\$21,227	2.0%
f) 15 inch/375 mm diameter	\$23,272	\$23,737	2.0%
g) Greater than 15 inch/375 mm diameter pursuant to Sentence 2.7 of Sewer and Watercourse By-law	\$23,272	\$23,737	2.0%
h) Manhole installation in conjunction with a public sewer connection pursuant to Sentence 2.7 (3) of Sewer and Watercourse By-law	At Cost pursuant to Sentence 2.7 (3)		
3. Where a public sewer connection will be placed more than 5 feet below the ground elevation, taken to the nearest foot and measured at the centre line of the street or lane as determined by the City Engineer, the fees payable shall be an amount equivalent to an increase of 10%, for each additional foot below 5 feet, of the fee otherwise payable by section 1 or 2 above.			
4. New fitting on a twin sewer pursuant to Sentence 2.7 (4)	\$4,338	\$4,425	2.0%
5. New fitting on a single sewer pursuant to Sentence 2.7 (4)	\$1,912	\$1,950	2.0%
6. Inspection of a plumbing system, subsoil drainage pipes and a building sewer	\$273	\$278	2.0%

Part III: Flat Rates for Unmetered Property

	2013	Proposed 2014	% Increase
Single Family Dwelling	\$287	\$297	3.5%
Single Family Dwelling with Suite	\$387	\$400	3.5%
Single Family Dwelling with Laneway House	\$387	\$400	3.5%
Single Family Dwelling with Suite and Laneway House	\$487	\$504	3.5%
Strata Duplex (per dwelling unit)	\$194	\$201	3.5%
2 Services, 1 Lot	\$572	\$592	3.5%
3 Services, 1 Lot	\$858	\$888	3.5%
4 Services, 1 Lot	\$1,145	\$1,185	3.5%
Parking Lot/Garden	\$163	\$168	3.5%

Part IV: Flat Rates for Other Property or Shut Off Water Service

	2013	Proposed 2014	% Increase
Other Property	\$163	\$168	3.5%
Turned Off, 1 Service	\$163	\$168	3.5%
Turned Off, 2 Services	\$163	\$168	3.5%
Turned Off, 3 Services	\$163	\$168	3.5%

Part V: Unit-Based Rates for Metered Property

	2013	Proposed 2014	% Increase
Metered Property Rate	\$1.842	\$1.906	3.5%
Waste Discharge Permit User Rate	\$0.6001	\$0.6211	3.5%

Part VI: Flat Rate for Specific Types of Discharges/Disposals

	2013	Proposed 2014	% Increase
For the discharge of contaminated groundwater pursuant to Section 7.11 (per cubic metre)	\$0.84	\$0.87	3.5%
For the disposal of ship wastewater pursuant to Section 7.12 (per cubic metre)	\$0.84	\$0.87	3.5%
For discharges by Utilities pursuant to Section 7.13 (per manhole connected)	\$221	\$228	3.5%