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CITY OF VANCOUVER | 125 YEARS

ADMINISTRATIVE REPORT

Report Date: November 29,2011
Contact: Brian Crowe
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Meeting Date: December 13, 2011

TO: Vancouver City Council

FROM: General Manager of Engineering Services

SUBJECT: 2012 Annual Review of Sewer Rates under the Sewer & Watercourse By–law

RECOMMENDATION

A. THAT Council approve the 2012 sanitary sewer user rates as detailed in this report, with metered rates increased by 9.9%, annual flat fees for single dwelling units increased by 9.9% (from $248 to $273), and other sanitary sewer user rates as set out in Appendix A.

B. THAT the 2012 public sewer connection fees included in the Sewer and Watercourse Bylaw as set out in Appendix A be increased by 3.5%.

C. THAT going forward the weather-related water consumption impact on the water and sewer utilities be reviewed and the necessary transfer between the two rate stabilization reserves be effected as part of the annual rates review.

D. THAT the Director of Legal Services be instructed to bring forward for enactment all necessary amendments to the Sewer and Watercourse By-law generally in accordance with Appendix A.

REPORT SUMMARY

The purpose of this report is to recommend revised sanitary sewer fees and public sewer connection fees for 2012. The recommended fee increase, totalling 9.9%, is comprised of the following: 1.8% to recover increased Metro treatment costs in 2012, 4.4% as a result of increased capital work to separate sewers and reduce combined sewer overflows, 3.6% to begin increasing reserves in anticipation of significant cost increases for Metro treatment upgrades, and 0.1% for City operations and maintenance. Also included in this

report is a recommendation to balance the Sewer and Water rate stabilization reserves to offset the inverted relationship caused by fluctuations in revenue due to weather-related water consumption variances.

COUNCIL AUTHORITY/PREVIOUS DESICIONS

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 September 2010, Council approved the municipal commitments in Metro Vancouver's Integrated Liquid Waste and Resource Management Plan, which the Province subsequently approved in May 2011.

CITY MANAGERS /GENERAL MANAGER'S COMMENTS

The General Manager of Engineering Services RECOMMENDS approval of A through D above.

REPORT:

Background/Context

The City 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. The system delivers this liquid waste to the treatment facilities operated by Metro Vancouver (the Greater Vancouver Sewerage and Drainage District, GVS&DD) and to storm water outfalls along the City's waterfront.

The costs associated with the City's Sewer System are projected to be $82 million in 2012. Expenditures are comprised of three main components: the levy charged by the GVS&DD for treatment (58%), City debt charges (32%), and City operating and maintenance costs (10%).

Vancouver's and Metro's sewer systems are regulated by the Province through the Integrated Liquid Waste and Resource Management Plan (LWMP). For Vancouver, the two most significant requirements within the LWMP are that Vancouver must eliminate combined sewer overflows (CSO's) by 2050, and Metro Vancouver must upgrade its primary sewage treatment plants (North Shore and Iona) to secondary treatment by 2020 and 2030 respectively. These initiatives put significant upward pressure on sewer rates, as described further in this report.

The Vancouver system was originally constructed as a combined system in which sanitary and storm flows are collected in one pipe system and are disposed of together through a Metro Vancouver treatment plant. The combined system requires more treatment capacity and is subject to overflows (CSO's) during heavy rainfall events. A long-term program to separate our sewers is well underway. In the meantime, a technical assessment of the system is utilized to determine the most appropriate distribution of the storm and sanitary system costs.

The Greenest City Action Plan identifies water stewardship as a priority within the Clean Water goal. The Plan recommends actions to improve stormwater management and receiving water quality in English Bay, the Fraser River and Georgia Straight. These actions are undertaken through the City's sewer utility and related regulations. The Plan also recommends that the City advocate for expedited upgrades to Metro's wastewater treatment plants.

Strategic Analysis

2012 Preliminary Sewer Budget and Rates

The preliminary 2012 sewer operating budget is summarized in Table 1 with the 2011 budget and projections for comparative purposes.

Table 1
2011 and 2012 Sewers Operating Budget

	2011 Budget	2011 Projected Results	Prelim 2012 Budget	Inc/(Dec) from 2011Budget	%
Expenditures					
Operating and Maintenance	7,666,100	7,371,499	7,742,094	75,994	1.0%
Sewer Debt Charges	23,948,230	23,977,901	25,964,250	2,016,020	8.4%
GVS&DD Levy	46,851,226	46,821,483	47,823,011	971,785	2.1%
Total Expenditures	**78,465,556**	**78,170,883**	**81,529,355**	**3,063,799**	**3.9%**
Revenues					
Funded by Sewer User Fees	49,368,063	47,563,519	53,293,496	3,925,433	8.0%
Funded by General Property Taxes	29,189,220	29,189,220	30,677,859	1,488,639	5.1%
Transfer (to)/from Sewer Stabilization Reserve	-91,637	1,418,144	-2,442,000	-2,350,363	2564.9%
Total Revenues	**78,465,646**	**78,170,883**	**81,529,355**	**3,063,709**	**3.9%**
Sewer User Fees Details:					
Sewer Fees - Flat Rate	20,830,518	20,830,518	22,910,888	2,080,370	10.0%
Sewer Fees - Metered	28,370,951	26,566,407	30,198,426	1,827,475	6.4%
Industrial Waste Water Fees	660,065	660,065	680,193	20,128	3.0%
	49,861,534	48,056,990	53,789,507	3,927,973	7.9%
Less: Sewer Billing and Administration Costs	493,471	493,471	496,011	2,540	0.5%
Net Funding from Sewer User Fees	**49,368,063**	**47,563,519**	**53,293,496**	**3,925,433**	**8.0%**
Rates					
Flat Rates	248	248	273	24	9.9%
Metered Rates	1.596	1.596	1.754	0.15	9.9%
Industrial Waste Water Fees	0.47	0.47	0.57	0.10	21.3%

Expenditures

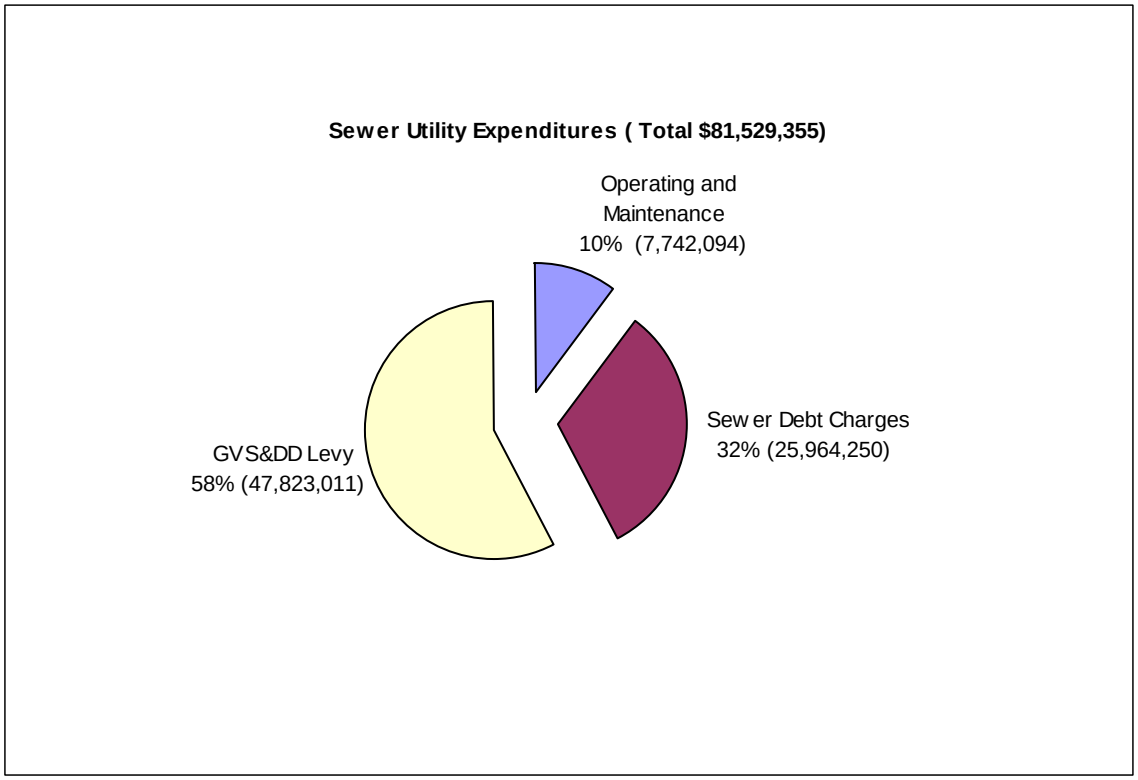
The Sewer Utility expenditures consist of three components: the Greater Vancouver Sewerage and Drainage District (GVS&DD) levy, City operating costs and debt costs associated with Sewers Capital Plan expenditures.

Metro Vancouver has approved a 2.1% increase in the GVS&DD levy. This increase is mainly due to an increase in costs as a result of replacement of aging infrastructure.

Debt charges associated with the sewers capital program are expected to increase by $2.0M (8.4%) in 2012, due mainly to increased sewer separation capital work and debenture issuance in 2011 and 2012 slightly offset by debt maturities in the same period.

Operating, maintenance, and billing expenditures, making up about 10% of the budget, are estimated to increase $76,000 (1%) from 2011.

Figure 1: 2012 Sewer Utility Expenditures Breakdown



Revenues

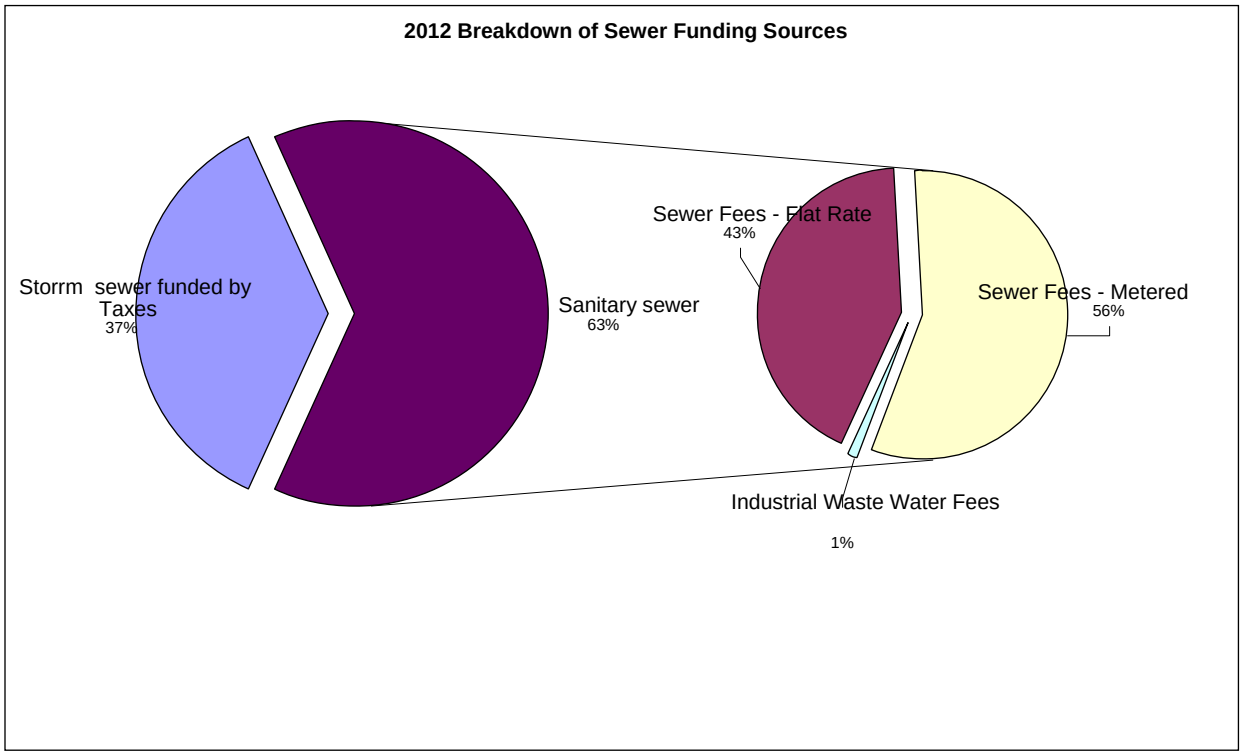
As previously stated, the Sanitary Sewer System is funded by Sewer User Fees and the Storm Sewer System is funded by General Property Taxes. A technical assessment of the system has

been developed to determine the most appropriate distribution between the storm and sanitary system costs and is reviewed annually. The current distribution based on the most recent analysis of the various system component costs is 62.8% sanitary and 37.2% storm.

The revenues in 2011 included a transfer from the Sewer Rates Stabilization Reserve (discussed in detail below). Staff are recommending building the reserve in 2012; therefore the recommended increases in rates are higher than the overall increase in expenditures.

Figure 2 shows the breakdown of funding sources between the storm system funded by taxes, and the sanitary system funded by fees. A further breakdown shows the proportion and types of fees that fund the sanitary sewer system.

Figure 2: Sewer Funding Sources



Sewer Rates Stabilization Reserve and Metro Vancouver's Sewer Levy

The Sewer Utility maintains a rate stabilization reserve, which has historically been used primarily to mitigate the impact of annual fluctuations in revenues and expenditures. For this purpose, past practice has been to strive for a reserve balance equal to 7.5% of water purchases (since sewer metered revenues are based on water consumption), which currently

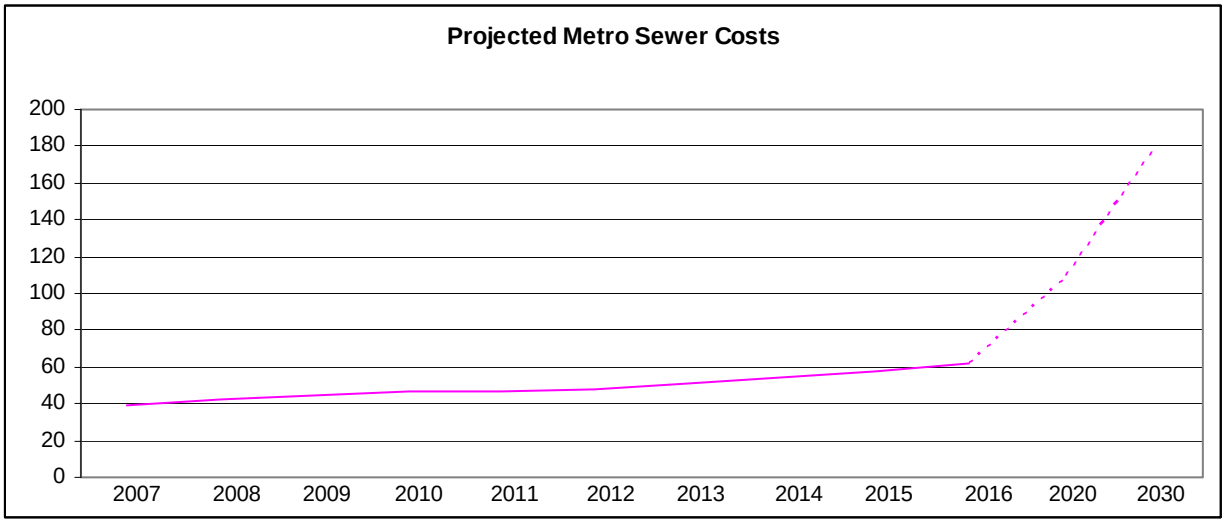
equates to about $5.2million. Staff recommends building the reserve over the next several years to mitigate anticipated rate increases from Metro Vancouver, discussed below.

As illustrated above, approximately 58% ($48 million) of the preliminary 2012 Sewer Utility expenditures are for the 2012 Metro (GVS&DD) Sewer Levy. This levy funds Metro Vancouver's bulk sewage collection and treatment costs. In Vancouver's case, Metro provides our sewage treatment at the Iona Wastewater Treatment Plant, which is a primary treatment facility.

In accordance with the Integrated Liquid Waste & Resource Management Plan, Metro has committed to upgrading the North Shore and Iona primary sewage treatment plants to secondary treatment by 2020 and no later than 2030, respectively. These upgrades are expected to cost in the order of $1.5 billion, and will have a major impact on Metro's sewer levies to their member municipalities.

The allocation of the upgrade costs among member municipalities and the amount of senior government cost-sharing is under discussion and ongoing negotiation. Metro and its members have recently struck a task force to evaluate various cost allocation options and make recommendations to the Metro Board within the next six months. The cost implications for Vancouver's sewer utility are very significant; for example, even with one-third Federal cost-sharing and a uniform sewerage levy throughout the region, the projected Metro costs for our utility will roughly double by 2020 and triple by 2030. At this time, these are very approximate estimates, but they reinforce the importance of building Vancouver's sewer utility reserves in anticipation of upcoming costs.

Figure 3: Projected Metro Costs



As a first step toward building sewer reserves, staff recommend a budget strategy that is projected to provide a $2.44 million transfer into the Sewer Rate Stabilization Reserve at year-end in 2012, which includes approximately $442,000 to stabilize the increase in debt charges in the coming years. This will restore the reserve to the minimum recommended balance to address annual revenue fluctuations. In 2013 and thereafter, staff will include recommended reserve transfers that balance the affordability of annual rate increases with the goal of increasing the reserve to mitigate upcoming Metro costs. This strategy will be

updated annually as Metro cost projections become more precise, and will be subject to Council approval through the annual rate-setting report.

Table 2 summarizes the recent and projected balances in the reserve.

Table 2
Sewer Rate Stabilization Reserve

Sewer Rate Stabilization Reserve				
	2009 Actual	**2010 Actual**	**2011 Projected**	**2012 Projected**
Opening Balance (millions)	8.3	6.75	4.69	3.69
Transfer to /(from) Reserve (millions)	(1.55)	(2.06)	(1.00)	2.44
Ending Balance (millions)	6.75	4.69	3.69	6.13

Relationship to Water Reserve

Like the Sewer Utility, the Water Utility also has a rate stabilizing reserve. The relationship between the two utilities is inverted. During wet years, the water utility tends to have a favourable variance and sewer has an unfavourable variance. In dry years when consumption is higher, the reverse is true. In order to balance the relationship and minimize fee impacts, staff recommend that the weather-related water consumption impact on the two utilities be reviewed annually and a year-end balancing transfer between the two utilities' stabilizing reserves be effected as part of the rate reviews at year end. The transfer will be based on balancing the seasonal variation between the two utilities. In 2011 this equates to a $400,000 transfer from the water reserve into the sewer reserve. It is anticipated that the long term effect will be neutral between the two reserves. The transfer will only be used to balance weather related variations as opposed to rate buffering between utilities.

Implications/Related Issues/Risk (if applicable)

Future sewer utility rates will depend primarily on Metro Vancouver's sewage treatment costs and how those costs are allocated among member municipalities, as well as the cost of future capital works (such as sewer separation to eliminate CSO's) undertaken by the City. Regardless of the outcome of related negotiations and cost-reduction measures, the sewer utility is facing significant upward pressure on its rates. For this reason, staff are recommending building reserves to help mitigate upcoming rate increases.

Connection and Other Fees

In addition to consumption based charges, 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:

- 3.5% increase for flat rate connection fees. This increase is required to cover increases in wages, equipment rental and materials. This figure is required to maintain full cost recovery for these services.
- To be consistent with other rate increases for sewage discharge, a 9.9% increase in rates for specific types of discharges/disposals is proposed. These include discharge of contaminated groundwater, ship wastewater and discharges by Utilities (per manhole connected).

The proposed fees are included in Appendix A.

CONCLUSION

Rates for sewer services are adjusted annually to offset cost increases in the sewer utility, including operating and debt charge costs and the Metro (GVS&DD) levy.

Based on a review of the proposed sewer costs for 2012, it is recommended that flat and metered sewer fees be increased by approximately 9.9% and service and connection fees be increased by 3.5%, as described in this report.

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Schedule A

Part I: Sewer Connection Flat Rates

	2011	Proposed 2012
1. Public Sewer Connection, for One-Family or Two-Family Dwellings	$7,841	$8,116
2. Public Sewer Connection, other than One-Family or Two-Family Dwellings		
a) 4 inch/100 mm diameter	$10,906	$11,288
b) 6 inch/150 mm diameter	$13,164	$13,625
c) 8 inch/200 mm diameter	$14,892	$15,413
d) 10 inch/250 mm diameter	$17,180	$17,781
e) 12 inch/300 mm diameter	$19,521	$20,205
f) 15 inch/375 mm diameter	$21,830	$22,594
g) Greater than 15 inch/375 mm diameter pursuant to Sentence 2.7 of Sewer and Watercourse By-law	$21,830	$22,594
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)	$4,069	$4,212
5. New fitting on a single sewer pursuant to Sentence 2.7 (4)	$1,794	$1,856
6. Inspection of a plumbing system, subsoil drainage pipes and a building sewer	$256	$265

Part III: Flat Rates for Unmetered Property

	2011	Proposed 2012
Single Family Dwelling	$248	$273
Single Family Dwelling with Suite	$335	$368
Single Family Dwelling with Laneway House	$335	$368
Single Family Dwelling with Suite and Laneway House	$423	$464
Strata Duplex (per dwelling unit)	$168	$185
2 Services, 1 Lot	$496	$545
3 Services, 1 Lot	$744	$817
4 Services, 1 Lot	$992	$1,090
Parking Lot/Garden	$141	$155

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

	2011	Proposed 2012
Other Property	$141	$155
Turned Off, 1 Service	$141	$155
Turned Off, 2 Services	$141	$155
Turned Off, 3 Services	$141	$155

Part V: Unit-Based Rates for Metered Property

	2011	Proposed 2012
Metered Property Rate	$1.596	$1.754
Waste Discharge Permit User Rate	$0.4669	$0.5715

Part VI: FLAT RATE FOR SPECIFIC TYPES OF DISCHARGES/DISPOSALS

	2011	Proposed 2012
For the discharge of contaminated groundwater pursuant to Section 7.11 (per cubic metre)	$0.73	$0.80
For the disposal of ship wastewater pursuant to Section 7.12 (per cubic metre)	$0.73	$0.80
For discharges by Utilities pursuant to Section 7.13 (per manhole connected)	$191	$210