
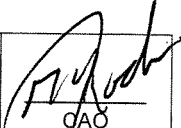


COUNCIL AGENDA/INFORMATION		
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<input type="checkbox"/> Supplemental	Date: _____	Item # _____

	
Director	CAO

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✓Special December 8, 08 Item #5

DISTRICT OF WEST VANCOUVER  
750 - 17<sup>TH</sup> STREET, WEST VANCOUVER, BC V7V 3T3

## COUNCIL REPORT

Date: November 28, 2008 File: 1610-20-4587  
From: Richard Laing, Director, Finance  
Raymond Fung, Director, Engineering & Transportation  
Subject: **Water User Rates 2009**

### RECOMMENDED THAT:

1. Water user rates for 2009 be approved at amounts set out in the schedules to Bylaw 4587 as attached;
2. "Waterworks Regulation Bylaw No. 4490, 2006, Amendment Bylaw No.4587, 2008" be introduced and read a first, second and third time.

### Purpose

This report proposes water user rates for 2009, and includes a 2008 variance analysis and a Five Year Financial Plan for the Water Utility Fund.

### 1.0 Background

#### 1.1 Prior Resolutions and History

The Eagle Lake Development Plan is a long term strategy adopted by Council in 2002 to make the best use of the municipal water source. The Plan confirms District policy to maximize access to Eagle Lake water and to reduce dependence on the purchase of bulk, treated water from Metro Vancouver. A major component of the Plan is a municipal water treatment plant, which was completed in 2008 with the commissioning of the \$16 Million, Eagle Lake Membrane Filtration Facility. This plant will ensure that all water drawn from that source will meet or exceed federal and provincial drinking water standards, as anticipated by the Vancouver Coastal Health Authority.

Under the Water Conservation Strategy, also adopted by Council in 2002, a universal metering project was completed in 2006, following which water utility rates were restructured for 2007 to establish a fully metered, user-pay rate structure. Prior to 2007, utility billings were predominantly based on a flat rate system that was deemed inequitable and provided little incentive for water conservation.

## 1.2 Reference to Corporate Business Plan

Goal 2, Water Stewardship Strategy, under the Environmental Sustainability priority of Sustainable Future, Three Year Corporate Business Plan, 2006 – 2008 was the basis for construction of the filtration facility and implementation of metered billing.

## 2.0 Analysis

### 2.1 Discussion

In 2007 as part of the universal metering project, it had been estimated users might reduce consumption by 10% that year, and a further 10% in 2008 due to water conservation efforts. An additional benefit of metering has been the detection of private-side leakage on service connections. In fact, heightened awareness of metering together with over 200 leaks detected to date, combined with wetter than average summers for two consecutive years have resulted in an overall 17% reduction in 2007 and a further 3% experienced in 2008. Given observed trends, another 2% reduction due to conservation behaviour has been factored into consumption figures for 2009.

### 2.2 Financial Implications

The District's self-sustaining Water Utility emphasizes three important aspects:

- Firstly, commitment to **ongoing infrastructure replacements** fully funded within the user rate structure;
- Secondly, **enhancement of our local water source** via the Eagle Lake Development Plan; and
- Finally, emphasis on **responsible stewardship of a valuable resource**, as documented in the Water Conservation Strategy.

Lower water consumption means that the conservation strategy has been more effective than anticipated, but an unintended side effect has been lower than projected revenues, which in turn makes rate setting a challenging exercise.

### *Operating and Financial Results for 2008*

Attached as Schedule "A" is the Water Utility operating projections for 2008, with notes on significant variances from budget. The bottom line is a projected contribution to surplus of \$54,585 (versus \$616,140 budgeted). The overall negative variance of \$561,555 arises from a combination of revenue shortfalls resulting from resident conservation efforts in excess of projections, additional bulk water purchases from Metro Vancouver during a period of restricted access to Eagle Lake, and interest charges on interfund balances pending draw down of MFA debt.

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### *5 Year Financial Plan 2009 – 2013*

Attached as Schedule "B" is the summary 5 Year Financial Plan. This summary indicates the projected revenue requirements, operating and maintenance costs, capital program, and projected fund balances at the end of each year of the plan.

The increase in overall system revenue requirements is 15% for 2009, decreasing to 5% for each year thereafter. The previous 5 year plan had projected increases of 5% for 2009 and thereafter. The reason for the change in revenue increase for 2009 is in part to recover shortfalls due to relatively wet summers and the value of over 300,000 cubic metres of water adjusted for service leaks over the last two years.

The significant financial drivers in the water utility are as follows:

- **Variability of water consumption.** This variability is in part determined by a successful leak detection program, complicated by the effects of weather (a wet versus a dry year), and in part by the conservation incentives built into the inclining block rate structure. Consumption for 2008 was somewhat less than projected, but is anticipated to be relatively constant for the period 2009 - 2013.
- **The amount of water that can be drawn from our own source at Eagle Lake.** For 2008, that amount was significantly lower than projected, due to restricted access during membrane plant construction. A return to more normal levels is anticipated for 2009, increasing by approximately 3% annually thereafter.
- **The bulk rate paid for Metro Vancouver water.** Between 45% - 50% of total water consumption is projected to be purchased from Metro Vancouver at their bulk rate. That bulk rate is projected at 44.28 cents per cubic metre for 2009 (a 15.7% increase over 2008) and is projected to increase as follows: 5.51% for 2010, and approximately 4% per year thereafter.
- **Local system operating costs.** Operating costs for 2009 are slightly less than projected in the previous 5 year plan, but with some important differences. Metro Vancouver water purchases are more conservative given the first full year of treatment plant optimization, and the membrane treatment facility maintenance costs will be higher; these costs will be more than offset by a one year reduction in debt service costs due to a deferral of the borrowing program. Operating and maintenance costs beyond 2009 are projected to increase at 2.5% annually.
- **The extent of the capital program.** The Eagle Lake Development Plan, including the replacement of two reservoirs, extends into 2010, but still within the overall expenditures anticipated during 2008. The replacements program has increased slightly for 2009, but levels out at \$1 Million annually thereafter as in the previous plan.

### *User Rates for 2009*

The attached bylaw, "Waterworks Regulation Bylaw No. 4490, 2006, Amendment Bylaw No.4587, 2008", sets user rate increases sufficient to provide a 15% overall revenue increase to the utility, consistent with the requirements of the 5 Year Financial Plan.

The actual rate structure is broken down into two parts:

- a base charge that varies by meter size (to reflect the utility's fixed costs of providing customer/accounting services, fire flows, meter maintenance, etc.; and
- a volume charge, according to an inclining, three block structure for single family (to reflect the cost to the utility of providing peak flows) and single block for all other customer classes.

Complicating matters, approximately 2,500 accounts had meters installed through new development prior to the universal project. While these "existing metered customers" had been paying for water per unit consumed, the former rate structure did not include a base charge, nor did the volume charge reflect inclining blocks. Therefore to transition these users to the new structure, Council endorsed phasing in the base charge for "existing metered customers" (EMC) over a number of years. Full parity in the base charge between these users and "universally metered customers" (UMC) has now been reached for 2009.

Thus, taking into account all these complexities, the impact of the overall 15% revenue requirement on each user is dependent on specific circumstances and consumption behaviour.

For the typical UMC residential customer at the median rate of consumption, the annual water bill is estimated to increase by \$4 over 2008 for a total of approximately \$272. For the corresponding EMC residential customer, the annual water bill is estimated to increase by \$64 over 2008, primarily due to the full base charge. Of course, users above the median will see greater increases, and those below the median will see smaller increases. Compared to the net, annual flat rates for water charged in 2006 ranging from \$363 to \$496, a majority of customers are still benefiting from a fully metered rate structure.



Richard Laing, Director of Finance



Raymond Fung, Director of Engineering

#### Appendices:

Schedule "A": Variance Analysis 2008

Schedule "B": 5 Year Financial Plan

Bylaw

**District of West Vancouver  
Water Operating Projections  
Variance Analysis 2008**

	<b>Budget</b>	<b>Projected</b>	<b>Variance</b>	<b>Note</b>
<b>Consumption and Rates</b>				
Total annual cubic meters	9,326,000	9,137,252	-188,748	
Eagle Lake capacity	4,971,000	4,249,962	-721,038	} <b>1</b>
Balance from GVRD	4,355,000	4,887,290	532,290	
GVRD rate/cubic meter (blended)	0.3825	0.3825	-	
% increase over prior year	9.91	9.91	-	
West Vancouver			-	
overall revenue % increase requirement	3	3		
<hr/>				
<b>Revenues</b>				
Metered Rates	5,935,900	5,712,300	-223,600	<b>1</b>
Meter rental Charges	580,000	580,000	-	
Micro Power Generation revenue	35,000	85,000	50,000	
Government Grants	-	-	-	
Reserve Transfers	-	-	-	
	<hr/> 6,550,900	<hr/> 6,377,300	<hr/> -173,600	
<hr/>				
<b>Expenditure</b>				
Water Purchased from GVRD	1,665,800	1,900,000	-234,200	<b>1</b>
Administration Charge	144,100	144,100	-	
Operations Centre Share	103,700	103,700	-	
Meters Maintenance & Reading	219,000	177,500	41,500	
System Operating				
Administration	364,400	364,400	-	
Supply	596,600	542,500	54,100	
Distribution	1,020,600	1,050,100	-29,500	
Membrane Filtration	200,000	186,500	13,500	
Debt Charges	720,560	925,715	-205,155	<b>2</b>
Replacements Program	900,000	928,200	-28,200	
	<hr/> 5,934,760	<hr/> 6,322,715	<hr/> -387,955	
<hr/>				
<b>Excess Of Revenue</b>	616,140	54,585	-561,555	
<hr/>				
<b>Capital Transactions</b>				
Eagle Lake Development Program	9,983,738	6,243,700	3,740,038	<b>3</b>
Universal Metering			-	
Financing Proceeds				
Eagle Lake	-9,733,738	-5,993,700	-3,740,038	
Universal Metering			-	
Prepaid Meters			-	
Government Grants			-	
DCC's and Debt Retirement Refunds Applied	-250,000	-250,000	-	
	<hr/> -	<hr/> -	<hr/> -	
<hr/>				
<b>Final Net Revenue for the Year</b>	616,140	54,585	-561,555	
Surplus, Opening	1,980,540	2,115,021		
<b>Surplus, Closing</b>	<hr/> 2,596,680	<hr/> 2,169,606		

**District of West Vancouver  
Water Operating Projections  
Variance Analysis 2008  
Explanatory Notes**

**1 Consumption, Revenues and Water Purchase from GVRD**

Higher than expected water conservation efforts by residents combined with a large number of leak adjustments resulted in lower than projected revenues.

Construction of the Eagle Lake Membrane Treatment Plant restricted access to this source for part of the year, and thus required higher than projected bulk water purchases from the GVRD.

**2 Debt Charges**

The variance amount represents interest calculated on interfund balances that had not been budgeted. The interfund balance was larger than projected, due to the accumulation of accelerated expenditures from 2007 along with lower than anticipated DCC revenues to offset against expenditures, and a deferral by one year of drawing down MFA debt in order to more closely match new debt service costs with the benefits from the new facility.

Expenditures made by the General Fund, pending draw down of debt from MFA, bear interest at the average rate of return of our investment portfolio.

**2 Eagle Lake Development Program**

Manufacturing and construction delays to the Eagle Lake Membrane Treatment Plant resulted in an underexpenditure in the development program. The unexpended amounts will be rebudgeted into 2009, as well as recognizing a reallocation of part of the program to enable upgrades to the Bonnymuir and Craigmohr reservoirs as previously approved by Council.

**District of West Vancouver  
Water Operating Projections  
Five Year Financial Plan 2009**

2006

	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>
	Actual	Forecast	Proposed	Projected	Projected	Projected	Projected
	7	3	15	5	5	5	5
<b>Revenue and Expenditure</b>							
<b>Revenues</b>							
Metered Consumption Rates	6,004,184	5,712,300	6,569,100	6,897,600	7,242,500	7,604,600	7,984,800
Meter Rental Charges	575,351	580,000	580,000	580,000	580,000	580,000	580,000
Government Grants	-	-	-	-	-	-	-
Micro Power Generation revenue	15,671	85,000	85,000	85,000	85,000	85,000	85,000
Reserve Transfers	18,678	-	-	-	-	-	-
	<b>6,613,884</b>	<b>6,377,300</b>	<b>7,234,100</b>	<b>7,562,600</b>	<b>7,907,500</b>	<b>8,269,600</b>	<b>8,649,800</b>
<b>Expenditure</b>							
Water Purchased from GVRD	1,763,807	1,900,000	2,070,700	2,140,500	2,178,500	2,186,600	2,246,500
Administration Charge	0.025 150,000	144,100	150,000	153,800	157,600	161,500	165,500
Operations Centre Share	0.025 105,500	103,700	113,100	115,900	118,800	121,800	124,800
Meters Mtce & Reading	0.025 230,235	177,500	244,300	250,400	256,700	263,100	269,700
System Operating -							
Administration	0.025 340,050	364,400	438,000	449,000	460,200	471,700	483,500
Supply	0.025 538,641	542,500	529,800	543,000	556,600	570,500	584,800
Distribution	0.025 998,473	1,050,100	1,073,000	1,099,800	1,127,300	1,155,500	1,184,400
Membrane Filtration	0.025 -	186,500	563,000	577,100	591,500	606,300	621,500
Debt Charges	768,130	925,715	858,389	1,668,327	1,927,236	2,181,563	2,181,563
Emergency Response	2,052	-	-	-	-	-	-
Replacements Program	900,060	928,200	950,000	1,000,000	1,000,000	1,000,000	1,000,000
	<b>5,796,948</b>	<b>6,322,715</b>	<b>6,990,289</b>	<b>7,997,827</b>	<b>8,374,436</b>	<b>8,718,563</b>	<b>8,862,263</b>
<b>Operating Net Revenue</b>	<b>816,936</b>	<b>54,585</b>	<b>243,811</b>	<b>-435,227</b>	<b>-466,936</b>	<b>-448,963</b>	<b>-212,463</b>
<b>Capital Transactions</b>							
Eagle Lake Dev Expenditures	9,906,353	6,243,700	2,440,000	1,300,000			
Universal Metering Project	448,598	-					
Financing Requirements							
Eagle Lake	-7,280,497	-6,193,700	-2,440,000	-1,050,000		250,000	
Universal Metering	-130,598	-					
Prepaid Meters	-318,000	-					
DCC's and Debt Surplus refunds	-361,446	-50,000		-250,000		-250,000	
Government Grants	-2,264,410	-					
	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Final Net Revenue</b>	<b>816,936</b>	<b>54,585</b>	<b>243,811</b>	<b>-435,227</b>	<b>-466,936</b>	<b>-448,963</b>	<b>-212,463</b>
Surplus Opening	1,298,085	2,115,021	2,169,606	2,413,417	1,978,190	1,511,254	1,062,291
<b>Surplus Closing</b>	<b>2,115,021</b>	<b>2,169,606</b>	<b>2,413,417</b>	<b>1,978,190</b>	<b>1,511,254</b>	<b>1,062,291</b>	<b>849,829</b>

**District of West Vancouver  
Water Operating Projections  
Five Year Financial Plan 2009**

2006

	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>
	Actual	Forecast	Proposed	Projected	Projected	Projected	Projected
<b>Consumption and Rates</b>							
Total annual cubic meters	9,426,271	9,137,252	9,039,322	9,075,479	9,111,781	9,148,228	9,184,821
Drawn from Eagle Lake & Mz	4,421,339	4,249,962	4,496,722	4,629,271	4,765,719	4,906,261	5,051,019
Balance from GVRD	5,004,932	4,887,290	4,542,600	4,446,208	4,346,062	4,241,967	4,133,802
% total from own sources	46.90	46.51	49.75	51.01	52.30	53.63	54.99
GVRD rate/cubic meter (blended)	0.3480	0.3825	0.4428	0.4672	0.4859	0.5053	0.5255
% increase over prior year	19.67	9.91	15.76	5.51	4.00	3.99	4.00
* West Vancouver rate increase %	7	3	15	5	5	5	5
Dollar increase	24	n/a	n/a	n/a	n/a	n/a	n/a
New flat rate	339	363	n/a	n/a	n/a	n/a	n/a
Water meter rentals -							
Debt service reqmt		587,647	587,647	587,647	587,647	587,647	587,647
New meter count		10,000	10,000	10,000	10,000	10,000	10,000
Annually per meter		58.76	58.76	58.76	58.76	58.76	58.76
Say		60	60	60	60	60	60



District of West Vancouver

**Waterworks Regulation**  
**Bylaw No. 4490, 2006**  
**Amendment Bylaw**  
**No. 4587, 2008**

Effective Date –

**Waterworks Regulation  
Bylaw No. 4490, 2006  
Amendment Bylaw No. 4587, 2008**

**Table of Contents**

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Part 1	Citation.....	1
Part 2	Severability .....	1
Part 3	Substantive Provisions.....	1
	Schedule A – Water Meter Base Rates and Service Charges .....	3
	Schedule B – Water Meter Volume Rates and Service Charges.....	4

District of West Vancouver

# **Waterworks Regulation Bylaw No. 4490, 2006 Amendment Bylaw No. 4587, 2008**

A bylaw to amend the fees related to the use of water

WHEREAS the Council of The Corporation of the District of West Vancouver deems it expedient to amend "Waterworks Regulation Bylaw No. 4490, 2006",

NOW THEREFORE, the Council of the District of West Vancouver, in open meeting assembled, enacts as follows:

## **Part 1 Citation**

- 1.1 This bylaw may be cited as Waterworks Regulation Bylaw No. 4490, 2006, Amendment Bylaw No. 4587, 2008.

## **Part 2 Severability**

- 2.1 If a portion of this bylaw is held invalid by a Court of competent jurisdiction, then the invalid portion must be severed and the remainder of this bylaw is deemed to have been adopted without the severed section, subsequent, paragraph, subparagraph, clause or phrase.

## **Part 3 Substantive Provisions**

- 3.1 That "Waterworks Regulation Bylaw No. 4490, 2006" be amended by deleting Schedule "A", and "B" and substituting new Schedules "A" and "B". as attached hereto.

## **Schedules**

Schedule A – Schedule of Water Meter Base Rates and Service Charges

Schedule B – Schedule of Water Meter Volume Rates and Service Charges

READ A FIRST TIME on

READ A SECOND TIME on

READ A THIRD TIME on

ADOPTED by the Council on

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Mayor

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Municipal Clerk

## Schedule A

### Water Meter Base Rates and Service Charges

#### 1 Water Base Charge (Quarterly)

Meter Size	Single Family Residential	Multi Family Residential	Commercial
16mm	35.32	71.59	99.60
19mm	35.32	71.59	99.60
25mm	35.32	71.59	99.60
38mm	55.34	127.89	183.92
50mm	87.06	203.13	292.78
75mm	229.63	447.27	615.36
100mm	327.09	689.82	969.97
150mm	564.55	1,290.01	1,850.30
200mm		2,005.28	2,901.75

#### 2 Meter Fee Per Unit (Quarterly) For Universal Metered Customers

	Single Family Residential	Multi Family Residential	Commercial
Per Unit	16.67	16.67	16.67

## **Schedule B**

### **Water Meter Volume Rates and Service Charges**

**1 Metered Water Volume Rates**  
**Based On Quarterly (3 months) Consumption**

<b>Single Family Residential</b>	<b>Per Cubic Metre</b>
First 60 Cubic Metres	\$0.53
From 61 - 180 Cubic Metres	\$0.75
All in excess of 181 Cubic Metres	\$0.97

<b>Multi Family Residential</b>	<b>Per Cubic Metre</b>
All Usage	\$0.64

<b>Commercial</b>	<b>Per Cubic Metre</b>
All Usage	\$0.73

**2 Water Leaks Administration Fee**      \$200.00