



CITY OF VANCOUVER

ADMINISTRATIVE REPORT

Date: November 15, 2004  
Author: Kenneth Bayne  
Phone No.: 604.873.7223  
RTS No.: 4680  
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TO: Standing Committee on City Services and Budgets  
FROM: Director of Finance and General Manager of Engineering Services  
SUBJECT: Review of Water Rates for 2005

RECOMMENDATION

- A. *THAT Council approve an increase in fees contained in the Water Works By-law for 2005 of approximately 6.5% as detailed in this report; this increase to apply to:*
- *Flat fees for single dwelling units (increase from \$287 to \$306) (Schedule B),*
  - *Other flat water service charges for residential properties (Schedule "B"),*
  - *Charges for metered water service (Schedule "D"), and*
  - *Charges for temporary water service during construction (Schedule "F")*
- B. *THAT fees for other services included in the Water Works Bylaw be increased as follows:*
- *Flat rate water connection fees for services of 40mm and 50mm by 4.5% (Schedule "A"),*
  - *All other fees included in Schedule A, C, E and G by 2.0%.*
- C. *THAT Council approve an amendment to the definitions in the Water Works Bylaw to clarify that a "unit" for billing purposes means 2,831.6 litres of water and to ensure consistency with similar provisions in the Sewer and Watercourse Bylaw.*

- D. THAT the Director of Legal Services be instructed to bring forward the necessary amendments to the Water Works By-law to give effect to the recommendations of this report.*

#### GENERAL MANAGER'S COMMENTS

*The General Manager of Corporate Services and the General Manager of Engineering Services RECOMMEND approval of A through D.*

#### COUNCIL POLICY

*Water rates for both metered and non-metered customers are specified in the Schedules of Rates and Charges included in the Water Works By-law. These schedules are updated annually by Council to establish the following year's water rate*

#### PURPOSE

The purpose of this report is to recommend a general increase in water charges for 2005 to fund GVWD and City water system costs.

#### BACKGROUND

The waterworks distribution system of the City of Vancouver operates as a utility. City operating costs and debt charges are combined with the cost of water purchased from the Greater Vancouver Water District (GVWD) supply system and are recovered through charges to system users.

The utility is managed using a Revenue Stabilization Fund which enables the City to match revenues and expenditures each year and to manage year over year increases in water rates.

The cost of purchasing water from the regional district is expected to increase by an additional 55% by 2009 primarily as a result of the capital costs of regional water quality initiatives. In anticipation of significant increases in costs, Council adopted a strategy of building the Water Rates Stabilization Reserve to provide funding to "smooth" future increases in water rates.

#### DISCUSSION

##### 1. 2004 Waterworks Operating Budget

The waterworks budget is dominated by debt charges and water purchase costs which account for 87% of total expenditures. The balance of the expenditure budget is comprised of the costs of operation and maintenance of the City's water system and of billing.

Table 1 summarized the 2004 Water Works Operating Budget and the proposed budget for 2005.

**Table 1**  
**2005 and 2004 Water Budget**

|                            | 2004<br>Budget      | 2005<br>Proposed<br>Budget | Inc/(Dec)          | %           |
|----------------------------|---------------------|----------------------------|--------------------|-------------|
| <b><u>Expenditures</u></b> |                     |                            |                    |             |
| Debt Charges               | \$22,271,800        | \$24,449,600               | \$2,177,800        | 9.8%        |
| Water Purchases (GVWD)     | 28,985,000          | 32,532,400                 | 3,547,400          | 12.2%       |
| Water Rates Billing        | 628,200             | 608,400                    | (19,800)           | (3.2)%      |
| Operating and Maintenance  | 7,362,300           | 7,563,600                  | 181,300            | 2.5%        |
| <b>Total Expenditures</b>  | <b>\$59,247,300</b> | <b>\$65,154,000</b>        | <b>\$5,886,700</b> | <b>9.9%</b> |
| <b><u>Revenues</u></b>     |                     |                            |                    |             |
| Flat Rate Revenues         | \$24,496,300        | \$26,118,000               | 1,621,700          | 6.5%        |
| Service Charges            | 2,262,800           | 2,274,100                  | 11,300             | 0.4%        |
| Metered Rate Revenues      | 34,771,700          | 36,293,000                 | 1,521,300          | 7.0%        |
| Other Revenues             | 4,600               | 0                          | (4,600)            | -           |
|                            | 61,535,400          | 64,685,100                 | 3,149,700          | 5.1%        |
| Transfer from/(to) Reserve | (2,288,100)         | 468,900                    | 2,737,000          |             |
| <b>Total Revenues</b>      | <b>\$59,247,300</b> | <b>\$65,154,000</b>        | <b>\$5,886,700</b> | <b>9.9%</b> |

It is anticipated that 2004 actual results will show a net negative variance of approximately \$1.1 million. Water purchase costs have been higher than anticipated by approximately \$600,000 as a result of higher than anticipated consumption. Revenues have been under by approximately \$874,000, primarily because of a shift in consumption patterns between metered and flat rate accounts. In addition, Operating and Maintenance accounts will likely be under budget by approximately \$380,000 as a result of better system performance than anticipated when the budget was prepared. The actual transfer to the Water Rates Stabilization Reserve should be approximately \$1.2 million, compared to the \$2.3 million anticipated earlier.

2. 2005 Waterworks Operating Budget

Table 1 also summarizes the anticipated operating expenditures for the waterworks utility for 2005. The table includes estimates of City operating and debt costs as well as the costs of purchasing water from the Greater Vancouver Water District. Also included are adjustments to the budget based on the revenue and expenditure variances indicated above.

The Water District has approved an increase in water costs of 12.0% for 2005. With the implementation of the water quality initiatives at the Water District, it is anticipated that water costs will increase a further 40% by 2007, making this cost the most significant driver in the water utility during the period.

City operating costs are anticipated to increase by 2.5% from the 2004 budget level as a result of inflationary increases in employment and other costs. In addition, the proposed 2005 budget includes an increase in debt charges related to the waterworks capital program approved as part of the 2003 - 2005 Capital Plan.

Despite these increases, utilizing the Water Rates Stabilization Reserve will allow the City to hold its water rate increase to 6.5% in 2005. This increase will bring the flat water rate for residential properties to \$306, up from \$287 in 2004. Charges for metered service will also increase by approximately 6.5% over the 2004 levels.

The proposed fees are included in Appendix A, attached.

### 3. Water Rates Stabilization Reserve

The City utilizes the Water Rates Stabilization Reserve as a "shock absorber" to moderate significant year-over-year increases in water rates. This strategy will be particularly effective over the next three to five years as the cost of water purchased from the region increases, placing significant pressure on the City's water rates.

On the assumption of a 6.5% rate increase in 2005, Table 2 projects water rate increases from 2006 through 2009. By using the Water Rates Stabilization Reserve, it is anticipated that increases to users during this period can be held in the 6.5% range annually despite anticipated increases in the cost of water purchased from the region of 17% in 2006 and 22% in 2007.

**Table 2  
 Forecast of Water Stabilization Reserve**

|  | 2005     | 2006     | 2007     | 2008     | 2009     |
|--|----------|----------|----------|----------|----------|
| <b>Projected GVWD Water Rate</b><br>(\$ per cubic meter) | \$ .2502 | \$ .2936 | \$ .3559 | \$ .3712 | \$ .3898 |
| % Increase   | 12.0%    | 17.3%    | 21.2%    | 4.3%     | 5.0%     |
| <b>Anticipated Change in City Water Rate</b>             | 6.5%     | 6.5%     | 7.0%     | 6.5%     | 6.5%     |
| <b>Water Rate Stabilization Reserve</b>                  |          |          |          |          |          |
| Reserve Balance Beg. of Year (\$ millions)               | \$16.51  | \$16.05  | \$10.66  | \$5.07   | \$2.60   |
| Operating Surplus / (Deficit) (\$ millions)              | (.46)    | (5.39)   | (5.59)   | (2.47)   | (1.64)   |
| Reserve Balance End of Year (\$ millions)                | \$16.05  | \$10.66  | \$5.07   | \$2.60   | \$0.96   |

Success in achieving the anticipated result indicated above will depend on the region completing its capital program and translating those costs to water rates as anticipated.

### 4. Connection Fees and Other Water Fees and Charges

In addition to consumption based charges, the Water Works By-law includes fees and charges for a variety of services provided by the City, including service connection fees, unmetered

fire service fees and meter installation and service charges. These are provided through a cost recovery program and the applicable fees are detailed in Schedules A, A.1, C, E, and G of the by-law.

It is recommended that the following fee adjustments be approved:

- 4.5% increase for connections of 40mm and 50mm in Schedule A. This increase reflects general inflationary increases in wages, equipment rental and materials as well as an extra-ordinary increase (67%) in the cost of copper piping utilized in installing these services. Alternative materials for connections of this size are not currently available.
- 2.0% increase in all other fees in Schedules A, C, E and G to reflect general inflationary increases in wages, equipment rental and materials.

No changes are recommended to fees in Schedules H and I.

The proposed fees are included in Appendix 1, attached.

#### 5. Housekeeping Amendment to the Water Works Bylaw

It is recommended that Council approve an amendment to the definition of the unit of measure for water consumption in the bylaw to read "unit means 2,831.6 litres" instead of "unit means 2,832 litres". This change will ensure a higher level of accuracy in conversion of consumption for billing purposes and ensures that this definition in the Water Works Bylaw is consistent with the similar definition in the Sewer and Watercourse Bylaw.

### CONCLUSION

Rates for water consumption and services are adjusted annually to offset cost increases in the water utility, including operating and debt charge costs and the costs of purchasing water from the GVWD. Based on a review of the waterworks costs for 2005, it is recommended that consumption based fees be increased by approximately 6.5% and service and connection fees be increased by 2.0% to 4.5%, as described in this report.

\* \* \* \* \*

**Water Works By-Law No. 4848**  
**Schedules of Rates and Charges for 2005**  
(with comparable rates for 2004)

| <b>Recommended Fee Adjustments</b> |       |                                 |
|------------------------------------|-------|---------------------------------|
| Water rate increase                | 6.50% | Applicable to Sch B, D & F      |
| Connection Fee Increase            | 4.50% | Schedule A: 40mm & 50mm         |
|                                    | 2.00% | Schedule A: all other fees      |
| Service Fee Increase               | 2.00% | Applicable to Sch A.1, C, E & G |

| <b>Schedule A</b> | <b>Flat Rate Connection Fees</b> |  |
|-------------------|----------------------------------|--|
|-------------------|----------------------------------|--|

| Service Pipe Size                               |                          | Present        | Proposed Fee   |
|---|--------------------------|----------------|----------------|
| <u>Single-Family &amp; Two-Family Dwellings</u> |                          |                |                |
| 20 mm (3/4")                                    | <i>Increased by 2.0%</i> | \$2,527        | \$2,578        |
| 25 mm (1")                                      | <i>Increased by 2.0%</i> | \$2,629        | \$2,682        |
| <b>40 mm (1 1/2")</b>                           | <i>Increased by 4.5%</i> | <b>\$2,959</b> | <b>\$3,092</b> |
| <b>50 mm (2")</b>                               | <i>Increased by 4.5%</i> | <b>\$2,959</b> | <b>\$3,092</b> |
| <u>Other Connections</u>                        |                          |                |                |
| 20 mm (3/4")                                    | <i>Increased by 2.0%</i> | \$5,056        | \$5,157        |
| 25 mm (1")                                      | <i>Increased by 2.0%</i> | \$5,262        | \$5,367        |
| <b>40 mm (1 1/2")</b>                           | <i>Increased by 4.5%</i> | <b>\$5,926</b> | <b>\$6,193</b> |
| <b>50 mm (2")</b>                               | <i>Increased by 4.5%</i> | <b>\$5,926</b> | <b>\$6,193</b> |
| 100 mm (4")                                     | <i>Increased by 2.0%</i> | \$8,777        | \$8,953        |
| 150 mm (6")                                     |                          | \$10,856       | \$11,073       |
| 200 mm (8")                                     |                          | \$11,855       | \$12,092       |
| 300 mm (12")                                    |                          | \$16,684       | \$17,018       |

| <b>Schedule A.1</b> | <b>Removal Fees</b> |  |
|---------------------|---------------------|--|
|---------------------|---------------------|--|

|                                     |         |         |
|-------------------------------------|---------|---------|
| 20mm (3/4") to 50mm (2") inclusive  | \$636   | \$649   |
| 100mm (4") to 300mm (12") inclusive | \$1,906 | \$1,944 |

| <b>Schedule B</b> | <b>Annual Flat Service Charges for Residential Properties</b> |  |
|-------------------|---|--|
|-------------------|---|--|

|                              | Present  | Proposed |
|------------------------------|----------|----------|
| Single dwelling unit         | \$287.00 | \$306.00 |
| For an extra dwelling unit   | \$101.00 | \$108.00 |
| For each strata title duplex | \$194.00 | \$207.00 |

| Schedule C | Flat Service Charges for Unmetered Fire Service Pipes |  |
|------------|---|--|
|------------|---|--|

| Pipe Size             | Present | Proposed |
|-----------------------|---------|----------|
| 50 mm (2") or smaller | \$139   | \$142    |
| 75 mm (3")            | \$209   | \$213    |
| 100 mm (4")           | \$288   | \$294    |
| 150 mm (6")           | \$333   | \$340    |
| 200 mm (8")           | \$390   | \$398    |
| 250 mm (10")          | \$415   | \$423    |
| 300 mm (12")          | \$444   | \$453    |

| Schedule D | Charges for Metered Water Service |  |
|------------|-----------------------------------|--|
|------------|-----------------------------------|--|

| Two Monthly Period | Four Monthly Period | Present                                   | Proposed |
|--------------------|---------------------|---|----------|
|                    |                     | Rate in Cents per Unit<br>(2831.6 liters) |          |
| Per unit           | Per unit            | 138.9                                     | 147.9    |

A minimum charge of 8 units per month will be charged should lower or no consumption be recorded in any billing period

| Schedule E | Meter Service Charge |
|------------|----------------------|
|------------|----------------------|

The following schedule shows the meter charge based on the size and type of meter, payable on each service, in addition to water consumption charges.

| Per Two Monthly Period        | Present | Proposed |
|-------------------------------|---------|----------|
| 17 mm (1/2") and 20 mm (3/4") | \$22    | \$22     |
| 25 mm (1")                    | \$24    | \$24     |
| 40 mm (1 1/2")                | \$27    | \$28     |
| 50 mm (2")                    | \$34    | \$35     |
| 75 mm (3")                    | \$70    | \$71     |
| 100 mm (4")                   | \$85    | \$87     |
| 150 mm (6")                   | \$110   | \$112    |
| 200 mm (8")                   | \$171   | \$174    |
| 250 mm (10")                  | \$210   | \$214    |
| 300 mm (12")                  | \$251   | \$256    |

| Services with Low Head Loss Meters / Detector Check Valves | Present | Proposed |
|--|---------|----------|
|--|---------|----------|

|              |       |       |
|--------------|-------|-------|
| 100 mm (4")  | \$99  | \$101 |
| 150 mm (6")  | \$144 | \$147 |
| 200 mm (8")  | \$193 | \$197 |
| 250 mm (10") | \$240 | \$245 |
| 300 mm (12") | \$287 | \$293 |

Services with Low Head Loss Meters / Detector Check Valves (con't)

| Per Four Monthly Period       | Present | Proposed |
|-------------------------------|---------|----------|
| 17 mm (1/2") and 20 mm (3/4") | \$27    | \$28     |
| 25 mm (1")                    | \$31    | \$32     |
| 40 mm (1 1/2")                | \$42    | \$43     |
| 50 mm (2")                    | \$56    | \$57     |

**Schedule F Charges for Temporary Water Service During Construction**

| Building Size in Square Meters of Gross Floor Area | Present  | Proposed |
|--|--|----------|
|  | Rate in Dollars of Gross Floor Area per Building |          |
| Up to an including 500 sq.m                        | \$127  | \$135    |
| Over 500 but not exceeding 2,000                   | \$249  | \$265    |
| Over 2,000 but not exceeding 9,000                 | \$374  | \$398    |
| Over 9,000 but not exceeding 24,000                | \$628  | \$669    |
| Over 24,000 but not exceeding 45,000               | \$940  | \$1,001  |
| Over 45,000  | \$1,247  | \$1,328  |

**Schedule G Fees for Installation of Water Meters**

| Size of Standard Meter | Meter on City Property | Present  | Proposed Fee |
|------------------------|------------------------|----------|--------------|
| 20 mm (3/4")           |                        | \$2,066  | \$2,107      |
| 25 mm (1")             |                        | \$2,125  | \$2,168      |
| 40 mm (1 1/2")         |                        | \$2,196  | \$2,240      |
| 50 mm (2")             |                        | \$2,196  | \$2,240      |
| 75 mm (3")             |                        | \$7,824  | \$7,980      |
| 100 mm (4")            |                        | \$7,824  | \$7,980      |
| 150 mm (6")            |                        | \$27,001 | \$27,542     |
| 200 mm (8")            |                        | \$27,001 | \$27,542     |
| 250 mm (10")           |                        | \$32,393 | \$33,041     |
| 300 mm (12")           |                        | \$32,393 | \$33,041     |

| Size of Standard Meter | Meter on Private Property | Present | Proposed Fee |
|------------------------|---------------------------|---------|--------------|
| 20 mm (3/4")           |                           | \$261   | \$266        |
| 25 mm (1")             |                           | \$276   | \$282        |
| 40 mm (1 1/2")         |                           | \$276   | \$282        |
| 50 mm (2")             |                           | \$392   | \$400        |
| 75 mm (3")             |                           | \$606   | \$618        |
| 100 mm (4")            |                           | \$606   | \$618        |
| 150 mm (6")            |                           | \$677   | \$691        |
| 200 mm (8")            |                           | \$784   | \$800        |
| 250 mm (10")           |                           | \$1,021 | \$1,041      |
| 300 mm (12")           |                           | \$1,021 | \$1,041      |



| Schedule H | Miscellaneous Fees for Water Users |
|------------|------------------------------------|
|------------|------------------------------------|

|   | Present | Proposed |
|---|---------|----------|
| Cross Connection Control Administration Fees                                  |         |          |
| First Assembly  | \$20    | \$20     |
| Additional Assembly   | \$10    | \$10     |
| Charges when service pipes are shut off for more than ninety days (per month) |         |          |
| 15mm, 20mm or equivalent unmetered services                                   | \$2     | \$2      |

| Schedule I | Miscellaneous Charges |
|------------|-----------------------|
|------------|-----------------------|

|   | Present | Proposed |
|---|---------|----------|
| Charges for Returned Cheques                        | \$35    | \$35     |
| Residual Water Pressure Estimate Fee                |         |          |
| Original calculation                                | \$35    | \$35     |
| Additional copies for same location                 | \$10    | \$10     |
| Miscellaneous water information requests (per hour) | \$40    | \$40     |