



## City of Richmond

## Report to Committee

**To:** Finance Select Committee  
**From:** Jim Bruce  
General Manager,  
Finance and Corporate Services

Jeff Day, P. Eng.  
General Manager,  
Engineering & Public Works

**Re:** **2004 Utility Budgets**

To Finance select - Oct 29, 2003

**Date:** October 22, 2003

**File:** 0970-01

### Staff Recommendation

1. That the 2004 Utility Expenditure Budgets (as presented in the staff report dated October 22, 2003 from the Managers of Water, Sewer & Environmental Programs) be approved as the basis for establishing the 2004 Utility Rates.
2. That staff be directed to bring forward the following:
  - (a) Bylaws to impose fees for water, sewer and solid waste/recycling services as presented in the staff report dated October 22, 2003 from the Managers of Water, Sewer & Environmental Programs, and
  - (b) Bylaw amendments to implement the Water Metering Strategy, approved by Council on February 24, 2003, R03/4-19.

Jim Bruce  
General Manager,  
Finance and Corporate Services

Jeff Day, P. Eng.  
General Manager,  
Engineering & Public Works

## Staff Report

### Origin

This report presents the 2004 utility budgets and rate bylaws for Water, Sewer, Drainage and Solid Waste & Recycling. The utility rates must be established by December 31, 2003 to enable billing in 2004.

### Analysis

The total 2004 utility billing is detailed in the following table, which shows the total utility rates by customer class for 2004, and provides a comparison to 2003 rates.

<i>Customer Class</i>	<i>2003 Actual</i>	<i>2004 – Recommended Rates</i>	<i>\$ Difference over 2003</i>
Single-Occupant (Single-Family Dwelling)	\$591.44	\$641.95	\$50.51
Single-Family Dwelling	\$671.49	\$728.54	\$57.05
Larger Homes (4 or more bathrooms)	\$944.61	\$1,023.99	\$79.38
Single-Occupant Townhouse (on City garbage service)	\$553.04	\$602.55	\$49.51
Townhouse (on City garbage service)	\$577.82	\$628.57	\$50.75
Single-Occupant Townhouse (not on City garbage service)	\$457.25	\$503.31	\$46.06
Townhouse (not on City garbage service)	\$482.03	\$529.33	\$47.30
Single-Occupant (Apartment)	\$355.27	\$393.23	\$37.96
Apartment	\$347.47	\$385.19	\$37.72
Business: Water (\$/m <sup>3</sup> )	\$0.5398	\$0.6112	\$0.0714
Business: Sewer (\$/m <sup>3</sup> )	\$0.4783	\$0.4999	\$0.0216
Business: Garbage	\$16.87	\$20.08	\$3.21
Business: Drainage	\$11.21	\$22.30	\$11.21

The major cost drivers which are contributing to the increases in 2004 are:

- Increase in regional charges for water purchases, water filtration and sewer treatment.
- Increased infrastructure replacement needs, particularly in the water and dykes and drainage areas.

An explanation of the budget differences and significant issues within each of the utility areas follows.

## Water

The 2004 Water budget has increased \$1,866,000 over 2003:

Budget Items	2003	2004	\$ Difference
Operating Expenditures	\$5,541,800	\$5,873,400	\$331,400
Rate Stabilization Contribution	\$858,600	\$1,491,000	\$632,400
GVRD Water Purchases	\$9,298,700	\$10,228,600	\$930,100
Capital Program	\$3,267,000	\$3,871,400	\$604,400
Other Fiscal	\$1,632,300	\$1,000,000	-\$632,300
<b>Total</b>	<b>\$20,598,400</b>	<b>\$22,464,400</b>	<b>\$1,866,000</b>

These amounts reflect an overall increase of 9% in 2004. The principal increases in the budget are in capital replacement costs and GVRD water purchase charges. GVRD water purchases have increased 13.5% in 2004. To lessen the impact of this increase on the water user rates, a portion of the City's water levelling fund has been applied to offset the rate increase by 3.5%. The remaining 10% increase is reflected in the water user rates. It is significant to note that this is the first time that the City's rate levelling strategy has been applied to avoid a more significant hike in the water rates.

GVRD rates are now projected to rise 65% over the next 5 years for the drinking water treatment program. These costs are rising faster than originally anticipated, which translates into a 12% increase in water rates over the next 5 years. The City's water levelling fund will continue to be applied to limit the impacts of these increases up to 21%. In light of these significant increases, the benefits of Council's foresight concerning the rate levelling strategy are now becoming very apparent.

The GVRD rate increases over the next 5 years are due to increased costs associated with the construction of a new water filtration plant, scheduled for completion in 2007. This facility is required in order to meet the new water quality treatment guidelines, which were introduced in 2001. Specifically, the new filtration plant will address turbidity (cloudy water) issues in order to reduce the number of occurrences of discoloured water, which must have additional treatment before it is suitable for drinking by elderly and very young individuals. As construction is completed for these projects, Richmond will start paying for the additional operation and maintenance costs for these new facilities.

Another significant issue of note relates to the overall regional water supply. Given the water shortage issues of the past year, the GVRD is currently investigating alternative additional water sources. This includes negotiations with the province and B.C. Hydro to secure additional water rights for Coquitlam Lake and development of Pitt Lake as a new source. Should it be determined necessary to bring this additional water source into the supply system, this would be a significant driver in future rate increases for water.

The operating expenditure increases relate to staff contract salary increases, plant growth, increases in paving and fleet costs, and inflationary cost increases for supplier-provided services.

The capital program is increased to accommodate infrastructure replacement needs. Previous reports to Council highlighted the need to accelerate capital funding levels to more closely align with ageing infrastructure replacement needs. Similarly, demand replacement costs have increased due to failures of system components which have exceeded their life expectancy. The fiscal portion of the budget is reduced due to a pay-down of the City's debt. These funds have been reallocated to the rate stabilization account to help fund the capital cost of installing water meters, scheduled to commence in early 2004.

This results in the following 2004 Recommended Rates for the Water Utility. A comparison of the 2003 and 2004 water rates is also provided. The chart details the amount of the change by customer class.

<i>2003/2004 Water Rates Comparison</i>			
<i>Customer Class</i>	<i>2003 Actual Rates</i>	<i>2004 Recommended Rates</i>	<i>\$ Difference 2004/2003</i>
Single Occupant	\$227.20	\$253.30	\$26.10
Single Family Dwelling	\$273.64	\$304.85	\$31.21
Larger Homes (4 or more bathrooms)	\$432.09	\$480.74	\$48.65
Townhouse	\$229.93	\$256.33	\$26.40
Apartment	\$148.40	\$165.18	\$16.78
Metered Rate (\$/m <sup>3</sup> )	\$0.5398	\$0.6112	\$0.0714

Other factors contributing to the rate increases for the various customer classes relates to re-distribution of costs due to:

- a decrease in water consumption in the industrial and commercial sector,
- the agreement with the Vancouver Airport for a reduced water rate,
- an increase of water consumption in the non-metered sector.

These revenue reductions and cost increases are balanced across all the other customers to maintain the same amount of revenue recovery.

The Council approved voluntary water metering program is scheduled to begin consumption-based billing by January 1, 2004. The purpose of this program is to provide for more equitable distribution of costs on the basis of user pay. The control for savings is in the hands of the customer – if they use less than the average consumer, they will pay less for water consumption. The goal is to implement metering over a 3 year period, where the incentive to meter is increased gradually based on a comparison between flat rate and meter rate charges.

There are a number of changes required to the Water Utility Bylaw to facilitate the implementation of the residential metering program, as follows:

- Include applicable charges and rates as outlined in the above tables
- Change existing metered residential customers from a flat rate billing to the metered rate as outlined in the above table.
- Require all new residential construction to be metered with the cost of the meter and installation to be borne by the property owner.

- Require all water connection renewals, replacements or repairs to convert to a metered account from a flat rate account.
- If a property is a residential strata development, the City may permit single metered service and will bill the Strata Council for the water so provided.
- A grace period is provided for those consumers who volunteer to have a meter installed by the City under the residential water metering program. These customers may receive a one-time credit equal to the difference between the metered water charges for the first 12 months of consumption and the flat rate charge.
- Adjust the charges in Schedule F for user paid services to reflect actual costs.

There are approximately 2,500 single-family dwellings who will be impacted by the transition to metering. These are households which have water meters installed at the present time, but are currently paying the flat rate charge. Effective January 1, 2004, these households will be charged the metered rate. A letter will be sent to these affected households explaining the change in the water billing method once the rate bylaws are approved by Council.

## Sewer

The 2004 Sewer budget has increased \$865,300 over 2003:

Budget Items	2003	2004	\$ Difference
Operating Expenditures	\$3,209,900	\$3,374,400	\$164,500
GVS&DD O&M	\$7,566,400	\$8,117,100	\$550,700
GVS&DD DD Debt	\$6,001,500	\$6,184,400	\$182,900
Rate Stabilization Contribution	\$290,000	\$270,000	(\$20,000)
Capital Program	\$800,000	\$1,115,000	\$315,000
Other Fiscal	\$1,349,000	\$1,204,100	(\$144,900)
<b>Sub-Total</b>	<b>\$19,216,800</b>	<b>\$20,265,000</b>	<b>\$1,048,200</b>
Investment Income	(\$150,000)	(\$150,000)	\$0
Property Tax Levy for DD Debt	(\$6,001,500)	(\$6,184,400)	(\$182,900)
Rate Stabilization	\$0	\$0	\$0
<b>Sub Total</b>	<b>(\$6,151,500)</b>	<b>(\$6,334,400)</b>	
<b>Net Revenue Required from Rates</b>	<b>\$13,065,300</b>	<b>\$13,930,600</b>	<b>\$865,300</b>

These amounts reflect an overall increase of 6.6% in 2004.

The operating expenditure increases relate to staff contract salary increases, plant growth and inflationary costs for materials and city equipment rate increases.

GVRD operating and debt charges are increased associated primarily with the future upgrades and expansion of the Lulu Island Sewage Treatment Plant. The Capital Program is increased in order to carry out approved capital construction projects.

A comparison of the 2003 and 2004 sewer rates is provided below.

<b>2003/2004 Sewer Rates Comparison</b>			
<b>Customer Class</b>	<b>2003 Actual Rates</b>	<b>2004 Recommended Rates</b>	<b>\$ Difference 2004/2003</b>
Single Occupant	\$156.11	\$162.65	\$6.54
Single Family Dwelling	\$189.72	\$197.69	\$7.97
Larger Homes (4 or more bathrooms)	\$304.39	\$317.25	\$12.86
Townhouse	\$178.16	\$185.64	\$7.48
Apartment	\$148.31	\$154.61	\$6.30
Metered Rate (\$/m <sup>3</sup> )	\$0.4783	\$0.4999	\$0.0216

The chart below provides a breakdown of the rate increase by customer class for each of Richmond's and GVRD cost increases.

<b>Percentage Breakdown of 2004 Sewer Rates Change from 2003 Rates</b>				
<b>Customer Class</b>	<b>2004 Rate Increase</b>	<b>Proportion of Rate Increase from Richmond Costs</b>	<b>Proportion of Rate Increase from GVRD Costs</b>	<b>Proportion of Rate Increase from Equity Adjustment/ Offset from Load Growth</b>
Single Occupant	+4%	+2%	+4%	-2%
Single Family Dwelling	+4%	+2%	+4%	-2%
Larger Homes (1" connection)	+4%	+2%	+4%	-2%
Townhouse	+4%	+2%	+4%	-2%
Apartment	+4%	+2%	+4%	-2%
Metered Rate (\$/m <sup>3</sup> )	+4%	+2%	+4%	-2%

To complement the voluntary water metering program being introduced in January, 2004, the charges for sewer rates will correspond directly to water consumption for single-family residential customers. This means that in 2004, the metered sewer rate will be charged to those customers with water meters. The sewer rate will be charged based on a percentage of water used, based on the water meter readings. This approach is based on the methodology that the amount of water discharged is approximately 80% of the amount of water consumed.

The following table shows an estimated comparison of costs for residential metered customers versus customers who pay the flat rate charge. Both water and sewer charges are included in this comparison. These rates will be reviewed on an annual basis and adjusted to meet revenue requirements as more customers make the transition to consumption-based water rates.

<b>Customer Class</b>	<b>Estimated Combined Water &amp; Sewer Annual Metered Charge</b>	<b>2004 Residential Recommended Flat Rates for Combined Water &amp; Sewer</b>	<b>Residential \$ Difference Metered Versus Flat Rate</b>
Single Occupant	\$401.11	\$415.95	-\$14.84
Single Family Dwelling	\$495.55	\$502.54	-\$6.99
Larger Homes (4 or more bathrooms)	\$795.55	\$797.99	-\$2.44
Townhouse	\$406.66	\$441.97	-\$35.31
Apartment	\$282.66	\$319.79	-\$37.13

## Drainage

In 2003, the new Sewerage & Drainage Rates Bylaw 7551 was introduced to begin developing a reserve fund for drainage infrastructure replacements costs. As identified in a staff report to General Purposes on July 16, 2001, the first significant increase in replacement costs to the drainage system will occur around 2020. This is the result of rapidly deteriorating asbestos cement pipe. The largest cost for the drainage infrastructure occurs in 2085-2100 when the box culverts are expected to fail. A predicted average annual expenditure of \$4.85 million is required to replace the infrastructure in the first 30 years and \$4.25 million for the remainder of the analysis period.

Bylaw 7551 created a drainage utility to begin developing a reserve fund, with the objective of building the reserve to the anticipated amounts noted above. In 2003, this rate, which appears as a separate line item on the utility bill, was \$11.15 per property. The intent is to add an additional \$11.15 each year to this rate until such time as the \$4.85 million annual reserve requirement is reached -- expected to take approximately 8 years. Therefore, in 2004, staff are recommending the rate be increased to \$22.30. This rate is expected to top out at \$90.00 - \$100.00 per property, at which time the annual requirement for drainage infrastructure replacement will be reached. The required reserve amount and associated rates may vary subject to ongoing review of the drainage infrastructure replacement requirements.

Drainage operating and maintenance costs will remain on the tax requisition in 2004. This is because it was determined not viable to shift these costs to a utility due to the difficulty in establishing a fair indicator for measuring the amount of drainage from properties, and the significant impact this transition would have had on many land owners. Staff will continue to evaluate these issues and concerns, with the objective of transferring this cost to the utility in the future.

The Sanitary Sewer System and Drainage System amendment bylaw presented with this report also identifies user fees for inspection chamber and manhole installations relating to the drainage system. These are charges which are currently being assessed, and are included in the amendment bylaw as a matter of procedure.

## Solid Waste & Recycling

The 2004 Solid Waste & Recycling budget has increased \$186,600 over 2003:

Budget Items	2003	2004	\$ Difference
Operating Expenditures	\$427,500	\$428,600	\$1,100
Rate Stabilization	\$767,300	\$742,400	-\$24,900
Collection Contracts	\$2,852,400	\$2,947,400	\$95,000
Disposal Costs	\$1,988,500	\$2,001,000	\$12,500
Program Costs	\$983,000	\$998,400	\$15,400
Environmental Programs	\$317,700	\$405,200	\$87,500
<b>Total</b>	<b>\$7,336,400</b>	<b>\$7,523,000</b>	<b>\$186,600</b>

These amounts reflect an overall increase of 2.5% in 2004.

The collection contracts increases are due to inflationary increases, as stipulated in the contract documents. Disposal costs are increased slightly due to an increased in the amount of waste disposed per household. It should be noted that this budget reflects no change in the regional disposal rate for 2004, as an increase is not anticipated. The increases in program costs are due to salary increases associated with litter collection and the Recycling Depot. Environmental programs is increased as a result of anticipated expenditures in 2004 associated with additional mosquito treatment to combat the spread of West Nile virus.

This results in the following rates for 2004. A summary of the rates by customer class is presented in the following table. The 2003 rates are also provided for comparison purposes.

<i>2004/2003 Solid Waste &amp; Recycling Rates Comparison</i>			
<i>Customer Class</i>	<i>2003 Actual Rates</i>	<i>2004 Recommended Rates</i>	<i>\$ Difference 2004/2003</i>
Single Occupant	\$196.98	\$203.70	\$6.72
Single Family Dwelling	\$196.98	\$203.70	\$6.72
Larger Homes (4 or more bathrooms)	\$196.98	\$203.70	\$6.72
Townhouse	\$158.58	\$164.30	\$5.72
Apartment	\$39.61	\$43.10	\$3.49
Business Rate	\$16.87	\$20.08	\$3.21

The main costs which are expected to impact the Solid Waste and Recycling budget in future years are the annual rate of inflation, due to this being the identified cost escalation factor in our solid waste and recycling contracts. Costs could also increase in the event additional materials are received for disposal, i.e. garbage/yard waste volumes, etc. In the event the GVRD disposal rate is increased in future years, there would be a direct corresponding impact on our budgets and rates.

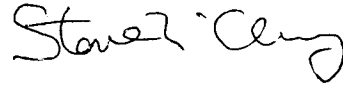
### Financial Impact

The 2004 utility budgets and the rates outlined in this report, represent full cost recovery for each respective area. These rates maintain the existing practices of reserve funding and rate stabilization. The utility rate bylaws reflect the rates as outlined in this report.

### Conclusion

The 2004 utility rates and associated bylaws are presented with this report. The strategy in developing these rates represents a sound approach to addressing significant pending increases in regional charges for water purchases, water filtration and sewer treatment in future years. In addition, they reflect a move toward gradually increasing the amounts that will be required to maintain an ageing City infrastructure. This corresponds with the direction to develop a comprehensive plan for infrastructure replacement over the longer term.

  
Suzanne Bycraft  
Manager, Environmental Programs

  
Steve McClurg  
Manager, Water Services



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**Solid Waste & Recycling Regulation Bylaw No. 6803, Amendment  
Bylaw No. 7614**

The Council of the City of Richmond enacts as follows:

1. Bylaw No. 6803 is amended by deleting Schedules A through D and substituting the attached Schedules A through D.
2. This Bylaw comes into force and effect on January 1, 2004.
3. This Bylaw is cited as **"Solid Waste & Recycling Regulation Bylaw No. 6803, Amendment Bylaw No. 7614"**.

FIRST READING

SECOND READING

THIRD READING


ADOPTED

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MAYOR

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CITY CLERK

CITY OF RICHMOND
APPROVED for content by originating dept. 
APPROVED for legality by Solicitor 

**SCHEDULE A to BYLAW NO. 7614**

<b>FEES FOR CITY GARBAGE COLLECTION SERVICE</b>	
Annual City garbage collection service fee for each <b>single-family dwelling</b> , each unit in a <b>duplex dwelling</b> , and each unit in a <b>townhouse development</b>	\$98.57
Fee for each excess <b>garbage container</b> tag	\$2.00

**SCHEDULE B to BYLAW NO. 7614**

<b>FEES FOR CITY RECYCLING SERVICE</b>	
Annual City recycling service fee:	
(a) for <b>residential properties</b> , which receive blue box service (per unit);	\$47.17
(b) for <b>multi-family dwellings</b> or <b>townhouse developments</b> which receive centralized collection service (per unit)	\$25.20
Annual City recycling service fee for <b>yard and garden trimmings</b> from <b>single-family dwellings</b> and from each unit in a <b>duplex dwelling</b>	\$40.07
City recycling service fee for the Recycling Depot:	
(a) (i) for <b>yard and garden trimmings</b> from <b>residential properties</b>	\$15.00 per cubic yard for the second and each subsequent cubic yard
(ii) for <b>recyclable material</b> from <b>residential properties</b>	\$0
(b) for <b>yard and garden trimmings</b> from <b>non-residential properties</b>	\$15.00 per cubic yard
(c) for <b>recycling materials</b> from <b>non-residential properties</b>	\$0
Annual City recycling service fee for <b>non-residential properties</b>	\$2.19

**SCHEDULE C to BYLAW NO. 7614**

<b>FEES FOR CITY LITTER COLLECTION SERVICE</b>	
Annual City litter collection service fee for both <b>residential properties</b> and <b>non-residential properties</b>	\$17.90





**Sanitary Sewer System and Drainage System Bylaw No. 7551,  
Amendment Bylaw No. 7615**

The Council of the City of Richmond enacts as follows:

1. Bylaw No. 7551 is amended by deleting the figure \$11.15 in clause (b) of subsection 2.1.1 and substituting \$22.30.
2. Schedule B of Bylaw No. 7551 is amended by adding the following as clauses (m), (n), and (o):
  - (m) Installation of 450 or 600 mm diameter inspection chamber and:

(i) connection to lateral	\$ 2,300
(ii) connection to storm sewer up to 2 metres deep	\$ 3,200
(iii) connection to storm sewer between 2 and 3 metres deep	\$ 5,800
(iv) connection to storm sewer more than 3 metres deep	\$ 9,300
(v) complete with inside backdrop to manhole	\$ 3,800
  - (n) Installation of manhole up to 1200 mm diameter:

(i) up to 2 metres deep	\$ 4,700
(ii) more than 2 metres deep	\$ 13,000
  - (o) Installation of manhole greater than 1200 mm diameter: By estimate
3. Bylaw No. 7551 is amended by deleting Schedule C and substituting the attached Schedule C.
4. This Bylaw comes into force and effect on January 1, 2004.
5. This Bylaw is cited as "**Sanitary Sewer System And Drainage System Bylaw No. 7551, Amendment Bylaw No. 7615**".

FIRST READING

SECOND READING

THIRD READING

ADOPTED

\_\_\_\_\_  
MAYOR

\_\_\_\_\_  
CITY CLERK



**SCHEDULE C**  
**SANITARY SEWER USER FEES**

**1. FLAT RATES FOR NON-METERED PROPERTIES**

(a) Residential Dwellings	Annual Fee Per Unit
(i) Single owner-occupier dwelling unit with ¾-inch, or 1-inch or greater, water service	\$ 162.65
(ii) One-Family Dwelling or Two-Family Dwelling with ¾-inch water service	\$ 197.69
(iii) One-Family Dwelling or Two-Family Dwelling with 1-inch or greater water service	\$ 317.25
(iv) Multiple-Family Dwellings of less than 4 storeys in height	\$ 185.64
(v) Multiple-Family Dwellings 4 or more storeys in height	\$ 154.61
(b) Public School (per classroom)	\$ 197.69
(c) Shops and Offices	\$ 162.65

**2. RATES FOR METERED PROPERTIES**

Rate per cubic metre of water delivered to the property: \$ 0.4999

Minimum charge in any quarter of a year: \$ 41.32

**3. CONSTRUCTION PERIOD SANITARY SEWER USER FEES – PER DWELLING UNIT**

Month (2004)	One-Family or Two-Family Dwelling  Rate per unit	Year Regular Billing Starts	Multiple-Family Dwelling (less than 4 storeys in height)  Rate per unit	Year Regular Billing Starts	Multiple-Family Dwelling (4 or more storeys in height)  Rate per unit	Year Regular Billing Starts
January	\$89	2005	\$0	2005	\$70	2006
February	\$74	2005	\$154	2006	\$58	2006
March	\$59	2005	\$140	2006	\$47	2006
April	\$44	2005	\$126	2006	\$35	2006
May	\$30	2005	\$112	2006	\$23	2006
June	\$15	2005	\$98	2006	\$12	2006
July	\$0	2005	\$84	2006	\$0	2006
August	\$164	2006	\$70	2006	\$131	2007
September	\$149	2006	\$56	2006	\$119	2007
October	\$134	2006	\$42	2006	\$107	2007
November	\$119	2006	\$28	2006	\$95	2007
December	\$104	2006	\$14	2006	\$83	2007



**Waterworks and Water Rates Bylaw No. 5637,  
Amendment Bylaw No. 7620**

The Council of the City of Richmond enacts as follows:

1. Bylaw No. 5637 is amended by:
  - a. deleting all references to "Corporation" and substituting "City"; and
  - b. deleting all references to "Engineer" and substituting "General Manager, Engineering & Public Works".
2. Section 1 of Bylaw No. 5637 is amended by deleting the definition of "Dwelling Unit" and adding the following definitions in alphabetical order:

**BACKFLOW PREVENTER** means a device or a method which prevents backflow in a water system and which prevents a potable water cross connection.

**BUILDING PERMIT** means permission or authorization in writing by the building inspector under this bylaw to perform construction regulated by the current Building Regulation of the **City**.

**DWELLING UNIT** means a room or suite of two or more rooms designed for or occupied by one family only as a single housekeeping unit providing cooking, sanitary and sleeping facilities.

**GENERAL MANAGER,  
ENGINEERING &  
PUBLIC WORKS** means the person appointed to the position of General Manager, Engineering & Public Works, and includes a person designated as an alternate.

**MULTIPLE-FAMILY DWELLING** means a detached, multi-floor building containing three or more residential **dwelling units**.

**ONE-FAMILY DWELLING** means a detached building used exclusively for residential purposes, containing one **dwelling unit** only.

**PLUMBING CODE** means the current edition of Part 7 of the British Columbia Building Code established by regulation under the *Local Government Act*.

**THERMAL EXPANSION**

means the expansion of water when heated within a closed system.

**TWO-FAMILY DWELLING**

means a detached building used exclusively for residential purposes containing two **dwelling units** only, which building is not readily convertible into additional **dwelling units** and the plans for which have been filed with the Building Inspector showing all areas of the building finished, and the design of the building showing each **dwelling unit** consisting of:

- (a) one storey only, not set upon another storey or upon a basement; or
- (b) two storeys only, the upper storey not containing a kitchen; not set upon another storey or upon a basement; or
- (c) a split level arrangement of two storeys only, the upper storey not containing a kitchen; not set upon another storey or upon a basement.

**WATER HAMMER**

means the effect caused by a rapid change of velocity of water in a pipe.

**WATER METER**

means a device supplied by the **City** which measures the quantity of water delivered to a property.

3. Bylaw No. 5637 is amended by deleting section 2 and substituting the following:

- 2. a) Every property owner wishing to connect a property to the **City** water system must, prior to making such a connection:
  - i) apply to the **City** to make a water connection;
  - ii) pay the water connection charge specified in Schedule D;
  - iii) except where exempted under clause (a) of Section 22A, pay the **water meter** charge specified in Schedule D;
  - iv) submit drawings of each proposed connection, including existing services, proposed services, and the location of buildings, driveways, and sidewalks, such drawings to be prepared by a professional engineer where so requested by the **General Manager, Engineering & Public Works**.

- b) Notwithstanding clause (a) of Section 2, where:
  - i) the type of connection to be used is not specified in Schedule D; or
  - ii) the property is not adjacent to **City** property or right-of-way in which the **service pipe** is located;

the property owner must pay the actual cost of connecting to the **City** water service, as determined by the **General Manager, Engineering & Public Works**; and prior to commencing construction, must pay a deposit in an amount equal to the estimate for connection and installation of the **water meter** provided by the **City**, with any balance owing to be paid upon completion of the installation and connection work.

- c) A connection to the **City** water system will not be made until all required connection charges and any other related costs have been paid in full.

4. Bylaw No. 5637 is amended by adding the following as Sections 3A and 3B:

**3A. Requirement to Install Water Meter**

- a) Where an application for a **building permit** has been made for works valued at more than \$50,000, a **water meter** must be installed at the subject property and the property owner must pay the connection charge and **water meter** charge specified in Schedule D.
- b) For all **water meter** installations under this bylaw, the **City** will install the **water meter** except where there exists a site servicing agreement with respect to the property in which case the property owner is responsible for installing the **water meter**.

**3B. Construction Period Water Charges**

- a) Where a property owner applies for a **building permit** and a connection to the **City** water service is needed, such owner is required to pay the amount specified in Schedule E for water consumption for the applicable construction period set out in clause (b) of Section 3B.
- b) The construction period water consumption charges specified in clause (a) of Section 3B apply for the following periods of time:
  - (i) 6 months for **one-family dwellings** and **two-family dwellings**;
  - (ii) 12 months for **multiple-family dwellings** of less than 4 storeys in building height;
  - (iii) 18 months for **multiple-family dwellings** of 4 or more storeys in building height; and
  - (iv) 6 months for any other type of building not specified above.

5. Section 9 of Bylaw No. 5637 is deleted and substituted with the following:

**9. Metering of Strata Titled Properties**

- a) The owners of a strata property development may apply to the **City** for a single metered water service by:
  - i) submitting a resolution of the Strata Council authorizing changing to metered water service; and
  - ii) paying the connection charge and **water** meter charge specified in Schedule D.
- b) Where a strata property development has metered water service, the **City** will issue a single bill to the Strata Council which is responsible for collecting payment from the owners and submitting such payment to the **City**.
- c) The owners of a strata property development to whom metered water service has been provided are responsible for paying for water provided at the rates specified in Schedule B.

6. Section 11 of Bylaw No. 5637 is amended by adding the following:

**Loaning of Curb Stop Turn-Off Key**

- a) A property owner wishing to turn off the water supply to a property may borrow a **curb stop** turn-off key from the **City** for a period of one week by completing a key sign-out form.
- b) A property owner who fails to return a borrowed **curb stop** turn-off key within one week must pay \$100 within 60 days, failing which the \$100 fee will be added to the water bill for the property.

7. Section 13 of Bylaw No. 5637 is deleted and substituted with the following:

**13. Rates and Rents**

- a) Except where otherwise provided in this bylaw, every property owner must pay the applicable rates and rents for water service as specified in Schedules A through G of this bylaw.
- b) Every owner of property which does not have metered water service will be invoiced annually and must pay the rates specified in Schedule A on or before March 31<sup>st</sup> each calendar year.

- c) Every owner of a property which has metered water service:
    - i) must pay for water consumption at the rates specified in Schedule B and pay the **water meter** rental rates specified in Schedule B;
    - ii) will be invoiced for water service every three months; and
    - iii) must pay invoices for water service on or before the twenty-fifth (25<sup>th</sup>) day of the month following the month in which the invoice was issued.
  - d) All invoices for water service which are paid in full prior to the invoice due date will be discounted by 10%.
8. Clause (b) of Section 22 of Bylaw No. 5637 is deleted and substituted with the following:
- b) Where a person is required by this bylaw to install a **water meter**, such person must:
    - i) use a **water meter** supplied by the **City**;
    - ii) pay, prior to installation, the connection charge and new **water meter** charge specified in Schedule D;
    - iii) following installation, pay for water consumption at the rates specified in Schedule B and pay the **water meter** rental charge specified in Schedule B.
9. Bylaw No. 5637 is amended by adding the following as Section 22A:

**22A. Voluntary Water Metering**

- a) Where an owner of an existing **one-family dwelling** requests to have a **water meter** installed and connected to the **City** water service, the **City** will supply and install the **water meter** at no charge and the new **water meter** charge specified in Schedule D will not apply.
- b) Owners of **one-family dwellings** who have a **water meter** installed under clause (a) of section 22A will receive a credit to be applied to future water charges equal to the difference between the metered charges for the first 12 months of consumption subsequent to meter installation and the amount that would have been payable on a flat rate basis, provided:
  - i) the metered charges exceed the flat rate by more than \$10;
  - ii) the property owner submits a request for the credit to the **City** in writing within 15 months of installation of the meter; and
  - iii) there has been no change in ownership of the property.

10. Bylaw No. 5637 is amended by adding the following as Section 32A:

**32A. Repair of Water Meters**

- a) Subject to clause (b), the **City** will undertake all necessary repairs on all **water meters** connected to the **City** water service at no cost to the property owner.
  - b) Where a **water meter** is damaged as a result of an act or omission of the owner or occupant of the property, the **City** will repair the **water meter**, but the cost of repair or replacement must be paid by the owner of the property and if unpaid on or before December 31<sup>st</sup> in the year in which the charges are incurred, will form part of the water bill payable on such property.
11. Section 29 of Bylaw No. 5637 is amended by inserting the following as clauses (b) and (c) and re-numbering the remainder of the section accordingly:
- b) All metered water service connections must be equipped with a **backflow preventer**.
  - c) Every owner of a property with a metered water service connection must ensure that the plumbing on the property complies with the **Plumbing Code** and is equipped to mitigate **thermal expansion** and **water hammer**.
12. Bylaw No. 5637 is amended by deleting Schedules A through F and substituting the attached Schedules A through F.
13. This Bylaw comes into force and effect on January 1, 2004.
14. This Bylaw is cited as "**Waterworks and Water Rates Bylaw No. 5637, Amendment Bylaw No. 7620**".

FIRST READING

SECOND READING

THIRD READING

ADOPTED

\_\_\_\_\_  
MAYOR

\_\_\_\_\_  
CITY CLERK

CITY OF RICHMOND
APPROVED for content by originating dept. <i>SH</i>
APPROVED for legality by Solicitor <i>JD</i>

**SCHEDULE A****BYLAW YEAR - 2004****FLAT RATES FOR RESIDENTIAL, AGRICULTURAL, AND  
INSTITUTIONAL PURPOSES ONLY**

A.	Residential Dwellings per unit	
	Single occupant with 20mm (¾") water service	\$253.30
	Dwellings with 20 mm (¾") water service	\$304.85
	Dwellings with 25 mm (1") water service	\$480.74
	Dwellings with water service greater than 25 mm (1") See Metered Rates – Schedule B	
	Townhouse	\$256.33
	Apartment	\$165.18
B.	Stable or Barn per unit	\$71.18
C.	Field Supply – each trough or water receptacle or tap	\$44.49
D.	Public Schools for each pupil based on registration	
	January 1 <sup>st</sup>	\$4.60

**SCHEDULE B****BYLAW YEAR – 2004****METERED RATES**

Page 1 of 2

**METERED COMMERCIAL AND INDUSTRIAL PROPERTIES  
AND MULTIPLE-FAMILY AND STRATA TITLED PROPERTIES****1. RATES**

All consumption per cubic metre:	\$0.6112
Minimum charge in any 3-month period:	\$66.08

**2. RENTS FOR EACH METER**Rent per **water meter** for each 3-month period:

For a 16mm (5/8") meter	\$11.00
For a 20mm (3/4") meter	\$14.00
For a 25mm (1") meter	\$15.50
For a 32mm (1 1/4") meter	\$27.00
For a 40mm (1 1/2") meter	\$27.00
For a 50mm (2") meter	\$30.50

**COMPOUND TYPE**

75mm (3")	\$103.00
100mm (4")	\$158.00
150mm (6")	\$262.00

**TURBINE TYPE**

50mm (2")	\$60.50
75mm (3")	\$78.00
100mm (4")	\$113.00
150mm (6")	\$215.50
200mm (8")	\$280.00

**FIRE LINE TYPE**

100mm (4")	\$271.00
150mm (6")	\$366.00
200mm (8")	\$475.00
250mm (10")	\$633.00

**SCHEDULE B**

**BYLAW YEAR – 2004**

**METERED RATES**

Page 2 of 2

**METERED RESIDENTIAL PROPERTIES**

**1. RATES**

All consumption per cubic metre:	\$0.6112
Minimum charge in any 3-month period:	\$10.00

**2. RENTS FOR EACH METER**

Rent for <b>water meter</b> with connection up to 25mm (1") for each 3-month period:	\$10.00*
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\*For residential properties with a connection greater than 25mm (1"), the commercial and industrial rates apply.

**SCHEDULE C****BYLAW YEAR - 2004****METERED RATES****FARMS****1. RATES**

All consumption per cubic metre: \$0.6112

Minimum charge per 3-month period\*:

For 1<sup>st</sup> quarter billing (January – March inclusive) for 90m<sup>3</sup> or less \$66.08

For 2<sup>nd</sup> quarter billing (April – June inclusive) for 95m<sup>3</sup> or less \$66.08

For 3<sup>rd</sup> quarter billing (July – September inclusive) for 140m<sup>3</sup> or less \$66.08

For 4<sup>th</sup> quarter billing (October - December inclusive) for 90m<sup>3</sup> or less \$66.08

\*No minimum charge applies where there is no dwelling on the property.

**2. RENTS**

Rent for meter up to 25mm (1”) for each 3-month period \$10.00\*

\*Applies only to properties with no dwelling.

**SCHEDULE D**  
**BYLAW YEAR - 2004**

**1. WATER CONNECTION CHARGE**

<b>Water Connection Size</b>	<b>Connection Charge</b>
20mm (3/4") diameter	\$2,000
25mm (1") diameter	\$2,500
40mm (1 1/2") diameter	\$3,000
50mm (2") diameter	\$3,900
100mm (4") diameter	\$6,500
150mm (6") diameter	\$8,500
200mm (8") diameter	\$11,000
larger than 200mm (8") diameter	actual cost**

**2. WATER METER CHARGE**

Charge for each **water meter** \$500

**SCHEDULE E****BYLAW YEAR - 2004****Page 1 of 2****CONSTRUCTION PERIOD WATER CONSUMPTION RATES –  
RESIDENTIAL**

<b>MONTH</b>	<b>REGULAR FAMILY DWELLING (rate per unit)</b>	<b>START BILL YEAR</b>	<b>MULTI-FAMILY APARTMENT LESS THAN 4 STOREYS (rate per unit)</b>	<b>START BILL YEAR</b>	<b>MULTI- FAMILY APARTMENT 4 STOREYS &amp; UP (rate per unit)</b>	<b>START BILL YEAR</b>
January 2004	\$274	2005	\$231	2005	\$301	2006
February 2004	\$252	2005	\$455	2006	\$289	2006
March 2004	\$229	2005	\$436	2006	\$277	2006
April 2004	\$206	2005	\$417	2006	\$264	2006
May 2004	\$183	2005	\$397	2006	\$252	2006
June 2004	\$160	2005	\$378	2006	\$240	2006
July 2004	\$137	2005	\$359	2006	\$227	2006
August 2004	\$402	2006	\$340	2006	\$215	2007
September 2004	\$378	2006	\$321	2006	\$202	2007
October 2004	\$354	2006	\$301	2006	\$190	2007
November 2004	\$330	2006	\$282	2006	\$178	2007
December 2004	\$305	2006	\$263	2006	\$165	2007

**CONSTRUCTION PERIOD WATER CONSUMPTION RATES –  
COMMERCIAL AND INDUSTRIAL**

<b>Water Connection Size</b>	<b>Consumption Charge</b>
20mm (3/4") diameter	\$120
25mm (1") diameter	\$240
40mm (1 1/2") diameter	\$600
50mm (2") diameter	\$1,510

**SCHEDULE F****BYLAW YEAR - 2004****MISCELLANEOUS CHARGES**

1.	For an inaccessible meter as set out in Section 7	\$25 per month
2.	For each turn on or turn off	\$35
3.	For each non-emergency service call outside regular hours	\$400
4.	Deposit for testing a meter as set out in Section 26	\$350
5.	Water Service Disconnections:	
	(a) when the service pipe is temporarily disconnected at the property line for later use as service to a new building	\$150
	(b) when the service pipe is not needed for a future development and must be permanently disconnected at the watermain, up to and including 50mm	\$1,000
	(c) if the service pipe is larger than 50mm	Actual Cost
6.	Trouble Shooting on Private Property	Actual Cost
7.	Fire flow tests of a watermain:	
	First test	\$250
	Subsequent test	\$100
8.	Locate or repair of curb stop service box	Actual Cost