



# City of Richmond

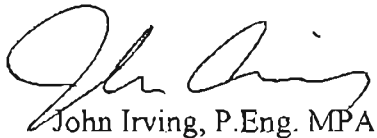
## Report to Committee

to PWT - JAN. 23, 2013

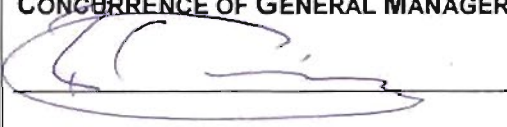


**To:** Public Works and Transportation Committee      **Date:** January 3, 2013  
**From:** John Irving, P.Eng. MPA      **File:** 10-6060-00/Vol 01  
           Director, Engineering  
**Re:** **Waterworks and Water Rates Bylaw Amendment**

### Staff Recommendation

That Waterworks and Water Rates Bylaw No. 5637, Amendment Bylaw No. 8909 be introduced and given first, second and third readings.



John Irving, P.Eng. MPA  
 Director, Engineering  
 (604-276-4140)  
 Att. 3

REPORT CONCURRENCE			
<b>ROUTED TO:</b>	<b>CONCURRENCE</b>	<b>CONCURRENCE OF GENERAL MANAGER</b>	
Water Services	<input checked="" type="checkbox"/>		
Law	<input checked="" type="checkbox"/>		
Building Approvals	<input checked="" type="checkbox"/>		
<b>REVIEWED BY SMT SUBCOMMITTEE</b>	<b>INITIALS:</b> 	<b>REVIEWED BY CAO</b>	<b>INITIALS:</b> 

## **Staff Report**

### **Origin**

The Waterworks and Water Rates Bylaw No. 5637 (the "Existing Bylaw") governs use of and access to the City's water distribution system. Updates to the bylaw are required from time to time that adapt the bylaw to new or emerging issues.

### **Analysis**

The following is a description of the recommended changes to the Existing Bylaw as proposed with the Amendment Bylaw 8909 (Attachment 3).

### **Farm Definition**

The current definition of Farm is based on livestock and does not include crop based farms like cranberry farms and blueberry farms. The updated definition includes any property that has farm classification as determined by the Assessment Act.

### **Water Meters for Ornamental Water Features**

Ornamental water features have potential to use considerable amounts of water. This amendment to the bylaw requires properties with ornamental water features to be metered and pay for water on a per unit basis.

### **Extended Design Services**

The Engineering Department offers design services for small water connections for a fee. This service provides an appropriately priced alternative to hiring an engineering consultant to those developing single family lots. As this initiative has been well received by the development community, the amendment extends the design services offered to include all water services.

### **Exemption From Requiring a New Water Service Connection**

The City currently requires anyone performing over \$75,000 of improvements on a single family or two family dwelling where the existing water connection is smaller than 25 mm and the improvements increase the number of plumbing fixtures in the dwelling to have new service connection installed. In a small number of cases this clause requires replacement of relatively new services that are adequate despite being smaller than 25 mm in diameter. Generally, these exceptions are smaller homes with one bathroom. Proposed Bylaw 8909 allows an exemption from the requirement to install a new water connection in those cases where it can be demonstrated to the satisfaction of the General Manager, Engineering and Public Works that the existing service is adequately sized and that low flow water fixtures are utilized in the dwelling.

### **Backflow Preventers**

The current bylaw requires all single and two-family dwellings that are served by a metered connection to have a backflow preventer. In practice, older homes that were built before backflow preventers were required often have plumbing that cannot accommodate the thermal

expansion of water caused by hot water heaters. Proposed Bylaw 8909 allows older dwellings to maintain a water service connection that does not include a backflow preventer at the discretion of the General Manager, Engineering and Public Works.

### **Toilet Size for Toilet Rebate Program**

The proposed Bylaw 8909 updates the replacement toilet size that will be considered by the Toilet Rebate Program from “6 litre or less” to “4.8 litre or less or 4.1 litre/6 litre dual flush” to match current plumbing code requirements.

### **Proposed Water Meter Base Rate Structure**

Beyond the unit rate for water paid by metered customers, they are also required to pay a fixed rate for the rental of the water meter and a minimum water usage charge. The existing water utility rate structure has a large number of meter classes that can be simplified with marginal financial impact to the customer and the City while greatly improving clarity and administration. The following addresses the structure of the meter rental charge and the minimum water usage charge.

The metered industrial, commercial and institutional (ICI) rate structure includes 18 different meter rental classes. Several of these classes apply to very small numbers of customers and have very little impact on the overall equity of the rate system. Staff proposes collapsing the current 18 meter rental categories into the 6 base rate classes represented Table 1 (Attachment 1). Farms will be charged based on the ICI base rate system.

The proposed residential metered rate structure is collapsed in a manner similar to the ICI structure and most of the base rates will be similar to the ICI structure. The proposed residential base rate structure is presented in Table 2 (Attachment 2).

The ICI rate structure will continue to include a minimum charge due to the high level of variability in ICI water use and the larger infrastructure required to support the higher fire flows required by ICI zone properties. The minimum charges for all residential and farm uses will be removed from the rate structure.

### **Financial Impact**

None.

### **Conclusion**

Proposed Bylaw 8909 is an amendment bylaw for the Waterworks and Water Rates Bylaw No. 5637. Adopting Bylaw 8909 will allow staff flexibility with respect to requirements for new single family service connections and back flow prevention for existing dwellings. Adoption would also promote water conservation by requiring water metering for properties that have ornamental water features. It also updates the size of replacement toilets that will be considered in the toilet rebate program to match the current plumbing code. Lastly, the amendments extend the design services offered by the City.

The water rate structure for metered water customers has a large number of categories, some of which have very few customers and very little impact to the water utility bottom line. The large number of categories can be confusing to the customer and generates additional work for staff. Bylaw 8909 updates the base rate structure as per Tables 1 and 2 (Attachments 1 and 2), simplifying the base rate charges for meters with marginal impact to customers. The Bylaw also eliminates the minimum water use charges for both farms and residential customers.



Lloyd Bie  
Manager, Engineering Planning  
(604-276-4075)

LB:lb

Table 1 – Existing and Proposed Quarterly ICI Meter Base Rates

Meter Size	Existing Meter Rent	Number of Customers	Proposed Base Rate
16 mm Positive Displacement	\$11.50	356	\$15
20 mm Positive Displacement	\$14.65	716	
25 mm Positive Displacement	\$16.20	831	
32 mm Positive Displacement	\$28.25	0	\$30
40 mm Positive Displacement	\$28.25	529	
50 mm Positive Displacement	\$32.00	765	
50 mm Turbine	\$63.50	0	
75 mm Compound	\$108.00	195	\$110
75 mm Turbine	\$81.50	40	\$150
100 mm Compound	\$165.00	50	
100 mm Turbine	\$118.00	34	
100 mm Fire Line	\$283.75	0	\$300
150 mm Compound	\$275.00	11	
150 mm Turbine	\$225.50	10	
150 mm Fire Line	\$383.00	2	\$500
200 mm Turbine	\$293.00	2	
200 mm Fire Line	\$497.25	13	
250 mm Fire Line	\$662.00	5	

Table 2 – Existing and Proposed Quarterly Residential Meter Base Rates

Meter Size	Existing Meter Rent	Number of Customers	Proposed Base Rate
16 mm Single Family	\$10	6	\$12
16 mm Positive Displacement MF	\$11.50	0	
20 mm Single Family	\$10	15,385	
20 mm Positive Displacement MF	\$14.65	1	
25 mm Single Family	\$10	3,802	
25 mm Positive Displacement MF	\$16.20	21	
32 mm Positive Displacement MF	\$28.25	0	\$14
40 mm Single Family	\$10	14	
40 mm Positive Displacement MF	\$28.25	23	
50 mm Single Family	\$10	13	
50 mm Positive Displacement MF	\$32.00	50	
50 mm Turbine MF	\$63.50	0	
75 mm Compound MF	\$108.00	49	\$110
75 mm Turbine MF	\$81.50	0	\$150
100 mm Compound MF	\$165.00	37	
100 mm Turbine MF	\$118.00	0	
100 mm Fire Line MF	\$283.75	0	\$300
150 mm Compound MF	\$275.00	8	
150 mm Turbine MF	\$225.50	0	
150 mm Fire Line MF	\$383.00	15	\$500
200 mm Turbine MF	\$293.00	0	
200 mm Fire Line MF	\$497.25	19	
250 mm Fire Line MF	\$662.00	0	



**Waterworks and Water Rates Bylaw No. 5637  
Amendment Bylaw No. 8909**

The Council of the City of Richmond enacts as follows:

1. The **Waterworks and Water Rates Bylaw No. 5637**, as amended, is further amended:

(a) by deleting the definition of **FARM** in Section 1 and substituting the following:

*"FARM means any property classified as a farm under the Assessment Act."*

(b) by deleting subsection 2(d) and substituting the following:

*"(d) At the request of the property owner, a design plan or drawing referred to in subsection 2(a)(iii) may be prepared by the City for the fee specified in Section 2 of Schedule D."*

(c) by adding the following after subsection 4(b):

*"(c) Notwithstanding clause (b) of Section 4, the property owner may not be required to install a new water connection if the General Manager, Engineering & Public Works is satisfied that the number of fixtures in the dwelling are below the average number required for similar sized dwellings and that low flow fixtures have been utilized throughout the dwelling."*

(d) by amending each of Sections 7, 13(c)(i), 22(b)(iii), 25B(a), 25B(c), 37(c) and 37.1(c) with the following:

- a. deleting phrase "*Schedule B*"  
and replacing with phrase: "*Schedule B or C, as applicable*"

(e) by adding the following after Section 20:

*"20A. Services to Ornamental Fountains*

*Where any customer has installed an ornamental water fountain, the property owner must have a water meter installed, if one does not exist, for the purpose of determining the quantity of water delivered to such fountain, and pay the water meter installation fee set-out in Schedule "D".*

(f) by amending subsection 22B(a) with the following:

- a. deleting phrase: "*six litre or less*"  
and replacing with phrase: "*4.8 litre or less or 4.1 litre/6 litre dual flush*"
- b. deleting subsection (iii) and substituting the following:  
"*(iii) the replacement toilet is approved by the Canadian Standards Association (CSA), the Warnock Hersey (WH) Mark or the Canadian Uniform Plumbing Code; and*"

(g) by deleting subsection 25B(b) and substituting the following:

"(b) *If the amount recorded by the water meter for the billing period in which the leak was discovered is greater than the average amount, or if the amount recorded by the water meter for the previous billing period is greater than the average amount, the customer will pay, for both the billing period in which the leak was discovered and the previous billing period:*

- (i) *the regular rate per cubic metre (in Schedule B or C, as applicable) for all amounts recorded up to the average amount; and*
- (ii) *the undetected/underground leak rate per cubic metre (in Schedule B or C, as applicable) for all amounts recorded above the average amount."*

(h) by deleting subsection 29(b) and substituting the following:

"(b) *All metered water service connections must be equipped with a backflow preventer. Notwithstanding the foregoing, in the case of an existing one-family dwelling or two-family dwelling, the General Manager, Engineering & Public Works may, if satisfied that existing plumbing infrastructure for such dwelling may not permit the installation of a backflow preventer or that adequate provision is made to prevent backflow into the City's water system, permit the water service connection without a backflow preventer."*

(i) by deleting subsection 29(d)(ii) and substituting the following:

"(ii) *give notice to the customer to correct the fault within 96 hours, or a specified lesser period, and if the customer fails to comply with such notice, the General Manager, Engineering & Public Works shall proceed in accordance with Subsection (i) of this Section. Without prejudicing the aforesaid, the General Manager, Engineering & Public Works may allow cross-connection control devices to be installed on the service pipe on City property. The device and installation is to be approved by the General Manager, Engineering & Public Works and installed "at cost", in accordance with Section 38 hereof."*

(j) by amending section 33(a) with the following:



- a. deleting phrase: *"that no such a service shall be turned off"*  
and replacing with phrase: *"that no such service shall be turned off"*
- b. deleting phrase: *"shall be sent by certified mail to such person or persons in accordance with Section 466 of the Municipal Act."*  
and replacing with phrase: *"shall be sent by registered mail to such person or persons, or by a method of delivery that provides proof of delivery, to the person's actual or last known address."*

(k) by amending section 36 with the following:

- a. deleting the semi-colon punctuation at the end of subsection (iv) and replacing with a period.
- b. deleting subsection (v) including the punctuation.

(l) by adding the following at the end of subsection 37(a):

- a. *"The unauthorized use of a City fire hydrant is prohibited."*

(m) by adding the following at the end of subsection 37.1(a):

- a. *"The unauthorized use of a private fire hydrant is prohibited."*

(n) by amending section A of Schedule "A" with the following:

- a. deleting the phrase *"See Metered Rates - Schedule B"*  
and replacing with phrase: *"See Metered Rates - Schedule B or C, as applicable"*

(o) by deleting Schedule "B", Page 1 of 2 (Metered Rates - Metered Commercial, Industrial and Institutional Properties and Multiple-Family and Strata Titled Properties) and Page 2 of 2 (Metered Rates - Metered Residential Properties) and substituting Schedule "B" attached hereto;

(p) by deleting Schedule "C" (Metered Rates - Farms) and substituting Schedule "C" attached hereto:

(q) by deleting section 2 of Schedule "D" and substituting the following:

***"DESIGN PLAN PREPARED BY CITY***

*Design plan prepared by City for one-family dwelling or two-family dwelling each*      \$1000

*Design plan for all other buildings*      \$2,000"

- 2. This Bylaw is cited as "Waterworks and Water Rates Bylaw No. 5637, Amendment Bylaw No. 8909".

FIRST READING

\_\_\_\_\_

SECOND READING

\_\_\_\_\_

THIRD READING

\_\_\_\_\_

ADOPTED

\_\_\_\_\_

\_\_\_\_\_  
MAYOR

\_\_\_\_\_  
CORPORATE OFFICER

CITY OF RICHMOND
APPROVED for content by originating dept JS
APPROVED for legality by Solicitor P

**SCHEDULE "B" TO BYLAW NO. 5637  
BYLAW YEAR 2012  
METERED RATES**

**METERED COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL PROPERTIES  
METERED MULTIPLE-FAMILY AND STRATA TITLED PROPERTIES  
METERED FARMS**

**1. RATES**

All consumption per cubic metre:	\$1.1976
Minimum charge in any 3 month period (not applicable to Farms)	\$110.00
Undetected leak rate per cubic meter (per section 25B of this bylaw)	\$0.6727

**2. RATES FOR EACH METER**

Rent per **water meter** for each 3-month period:

Meter Size	Base Rate
16 mm to 25 mm (inclusive)	\$15
32 mm to 50 mm (inclusive)	\$30
75 mm	\$110
100 mm	\$150
150 mm	\$300
200 mm and larger	\$500

**SCHEDULE "C" TO BYLAW NO. 5637  
BYLAW YEAR 2012  
METERED RATES**

**METERED RESIDENTIAL PROPERTIES**

**1. RATES**

All consumption per cubic metre:	\$1.1976
Undetected leak rate per cubic meter (per section 25B of this bylaw)	\$0.6727

**2. RATES FOR EACH METER**

Rent per ~~w~~ater meter for each 3-month period:

<u>Meter Size</u>	<u>Base Rate</u>
16 mm to 25 mm (inclusive)	\$12
32 mm to 50 mm (inclusive)	\$14
75 mm	\$110
100 mm	\$150
150 mm	\$300
200 mm and larger	\$500