



To: Public Works and Transportation Committee

Date: March 8, 2012

From: John Irving, P.Eng. MPA  
Director, Engineering

File: 10-6650-02/2012-Vol  
01

Re: Residential Water Meter Program Update

Staff Recommendation

That options for alternate water utility rate structures that enhance water conservation and equity be brought forward for consideration in 2012 prior to the annual utility rates report.

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

FOR ORIGINATING DEPARTMENT USE ONLY			
ROUTED TO:	CONCURRENCE		CONCURRENCE OF GENERAL MANAGER
Water Services	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>		
REVIEWED BY TAG	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>	REVIEWED BY CAO
			YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>

**Staff Report**

**Origin**

The City has mandatory and volunteer water meter programs for both single-family and multi-family dwellings. This report documents the current status of these residential water meter programs for Council’s information.

**Analysis**

*Single-Family Water Metering*

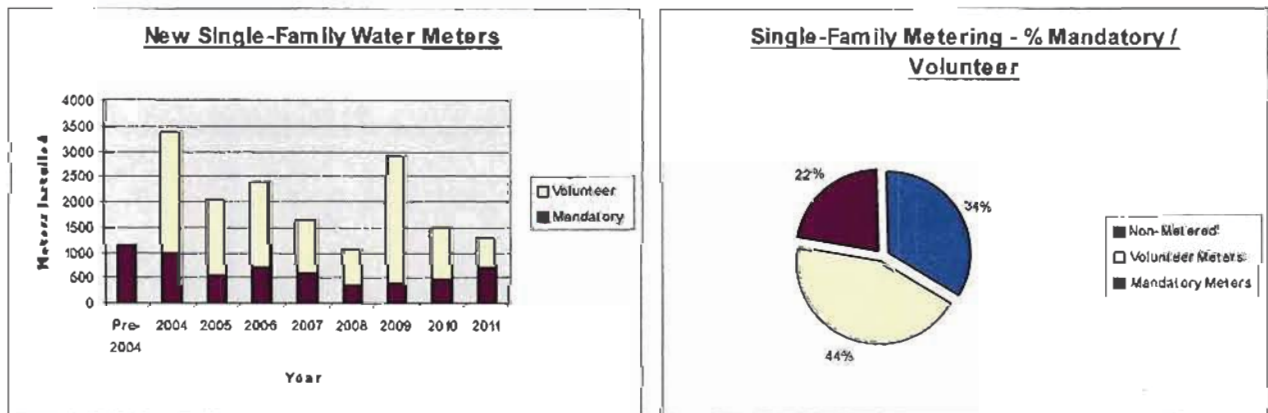
Mandatory water meters for single-family dwellings are required where:

- A building permit application has been submitted for works valued at more than \$75,000;
- The property requires water service maintenance or renewal; and
- The fronting watermain is being upgraded or replaced.

Volunteer single-family water meters are available to any property owner that requests one. The City contracted Neptune Technology Group to manage the Volunteer Single-Family Water Meter Program, which includes program promotion as well as installation, maintenance and reading of water meters. The current three-year contract with Neptune Technology Group concludes at the end of this year. Staff will bring forward a separate report in 2012 identifying options to move forward with volunteer single-family water metering after 2012 for Council’s consideration.

Water meters have been installed for 66% of single-family and duplex dwellings (44% through the volunteer program and 22% through the mandatory program). The breakdown of installed volunteer and mandatory single-family water meters is identified in Figure 1. In 2011, approximately 87% of these customers saved money compared to the flat rate, on average saving 31%.

Figure 1: Single-Family Water Metering by Program



*Multi-Family Water Metering*

Water meters have been mandatory for all new multi-family dwellings since 2005. To date, there have been 55 mandatory water meters installed in multi-family complexes, comprising 2,533 units.

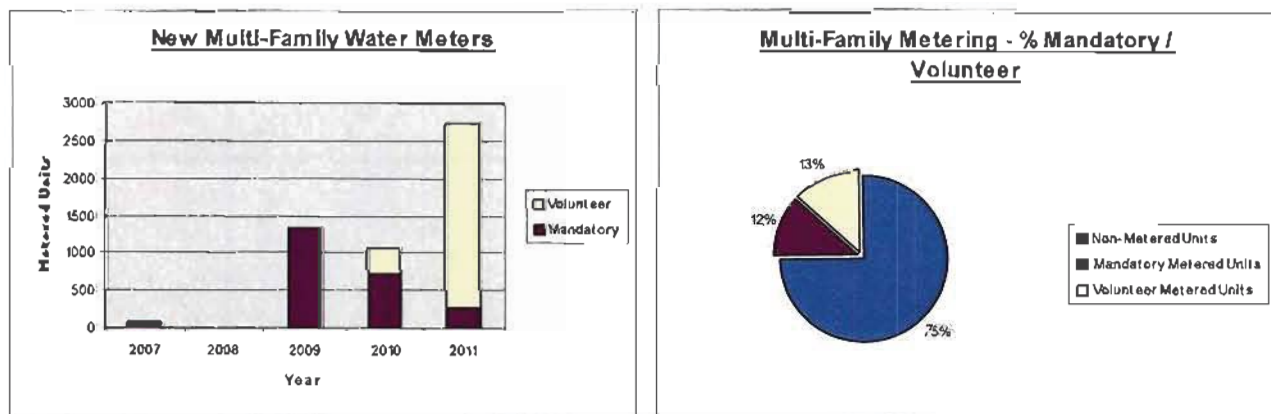
The volunteer metering program for multi-family dwellings, which began in 2010, has continued to receive significant interest. The City has received formal requests from 177 strata complexes to initiate the water metering implementation process, including 55 apartment, 118 townhouse, and 4 hybrid complexes, accounting for 11,803 multi-family dwelling units. 77 strata complexes have passed resolutions and provided final approval to the City for installation of water meters. Table 1 below summarizes the statistics for the volunteer multi-family water meter applications.

Table 1: Multi-Family Water Meter Program Statistics

	Multi-Family Complexes	Dwelling Units
In Process / Under Consideration	81	5,580
Strata Considered and Declined	19	1,291
Strata Approved	77	4,932
<b>Total Applications Received</b>	<b>177</b>	<b>11,803</b>
<b>Volunteer Meters Installed</b>	<b>58</b>	<b>3,679</b>

In total, 25% of multi-family dwellings are currently metered (13% through the volunteer program and 12% through the mandatory program). The breakdown of multi-family water meters is identified in Figure 2.

Figure 2: Multi-Family Water Metering by Program



In 2011, 96% of metered multi-family complexes saved money compared to the flat rate, on average saving 51%. In particular, all of the volunteer multi-family complexes saved money, on average saving 47%. The significant savings is partially attributed to new water-efficient

fixtures (low-flow toilets, washing machines, shower heads, etc.) that are now either required by the City for new construction or strongly encouraged for existing dwellings.

### **Impact on Water Rates**

As significant numbers of residential water customers (currently 49% of all multi-family and single-family residential units combined) move from the flat rate system to water meters, there is an opportunity for the City to additionally enhance water conservation efforts and equity through the water rate structure. Examples of alternate metered rate structures that support water conservation include inclined block rate and seasonal water pricing.

The assumption that average water use in the flat rate group is increasing as lower water consumers volunteer for water meters is supported by the "Water, Sanitary & Drainage Modelling for the Proposed 2041 OCP: Water Modelling" report completed by KWL Associates Ltd. in September 2011. The report indicates that flat rate single-family residential customers use roughly twice as much water for seasonal irrigation (largely lawn watering) compared to metered single-family residential customers. This may be a basis for increasing the flat rate more rapidly than the metered rate which would provide further incentive for flat rate customers to move to the more equitable metered system.

Staff are currently developing a medium term water rate options that considers rate-based water conservation incentives and flat rates that reflect water use in that user group. These options will be brought forward for Council's consideration in 2012 prior to the annual utility rates report.

### **Financial Impact**

None at this time.

### **Conclusion**

The residential water meter programs have continued to be successful, improving the City's sustainability while reducing costs for Richmond residents. Currently, 66% of single-family dwellings and 25% of multi-family dwellings are metered. The volunteer water meter programs have continued to attract significant interest and provide residents with an equitable and environmentally beneficial option for charging water use.



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