



City of Richmond

Report to Committee

To: Public Works and Transportation Committee

Date: April 5, 2013

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

File: 10-6650-02/2013-Vol
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Re: **Water Meter Program Update**

Staff Recommendation

That a universal water metering program, as outlined in Option 3 in the staff report titled Water Meter Program Update from the Director of Engineering, dated April 5, 2013, be implemented for single-family dwellings, starting in 2014, with a five-year completion target.

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REPORT CONCURRENCE			
ROUTED TO:	CONCURRENCE	CONCURRENCE OF GENERAL MANAGER	
Finance Division	<input checked="" type="checkbox"/>		
Water Services	<input checked="" type="checkbox"/>		
REVIEWED BY DIRECTORS	INITIALS:	REVIEWED BY CAO	INITIALS:
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Staff Report

Origin

The City has water metering programs for single-family and multi-family dwellings. The volunteer program for single-family dwellings has been available to Richmond residents since 2004.

At the November 26, 2012 Regular Council Meeting, Council adopted the following motion:

“That the existing agreement (dated September, 2010) with Neptune Technology be extended for one year, ending December 31, 2013, using the 2010 unit rates with an adjustment made for the HST to GST/PST conversion effective April 1, 2013.”

This report outlines the status of the residential water metering programs, as well as options for moving forward with single-family water metering.

Analysis

Water metering provides Richmond residents with a more equitable way of paying for their water use when compared to the flat rate, and supports the Official Community Plan (OCP) objective to pursue water demand management strategies and continue water conservation initiatives. These programs will become increasingly critical to improving equity and conservation, particularly as Metro Vancouver’s water rate continues to increase.

Metro Vancouver’s Water Rate

The Metro Vancouver wholesale water rate is projected to increase by 34% over the next four years. Table 1 below outlines Metro Vancouver’s water rate projections for 2014 to 2017.

Table 1. Metro Vancouver Projected Water Rate Increases

	2014	2015	2016	2017
Projected Rate	\$0.7000 (↑8.9%)	\$0.7720 (↑10.3%)	\$0.8220 (↑6.5%)	\$0.8600 (↑4.6%)

The expected increase in Metro Vancouver’s water rate is significant, and highlights the importance of water metering towards improving equity for Richmond residents. Richmond currently meters single-family and multi-family dwellings on both a mandatory and voluntary basis.

Single-Family Water Metering

Water meters have been installed for 70% (20,083) of single-family dwellings through the volunteer and mandatory programs. 87% of these customers saved money with a metered service when compared to the flat rate.

Water meters are mandatory for single-family dwellings where:

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

In 2013, Richmond continued its Volunteer Single-Family Water Meter Program; however, the rate of participation is declining. The current agreement with Neptune Technology for the volunteer program expires at the end of 2013, which provides an opportune time to explore options for proceeding with a revised single-family metering program.

The following options for moving forward with single-family water metering are presented for Council's consideration:

Option 1: End the Single-Family Volunteer Program

Under this option, metering of single-family dwellings would continue under the existing mandatory program; however, the volunteer program would be discontinued. All single-family dwellings would eventually be metered; however, it would take many decades.

Option 2: Continue the Single-Family Volunteer Program

The volunteer program could be continued beyond 2013. In 2012, 680 meters were installed under this program, which is significantly lower than the annual average of 1,352 meters. If the program is extended beyond 2013, this downward trend is expected to continue, ultimately attenuating to zero.

Option 3: Universal Water Metering for Single-Family (Recommended)

Under this option, water meters become mandatory for all single-family dwellings. Metering the remaining 30% (8,684) of single-family dwellings could be largely accomplished over five years, starting in 2014.

This option would be beneficial to water conservation as single-family dwellings have the highest discretionary water use. Metering the remaining single family dwellings would also improve equitability for all Richmond residents.

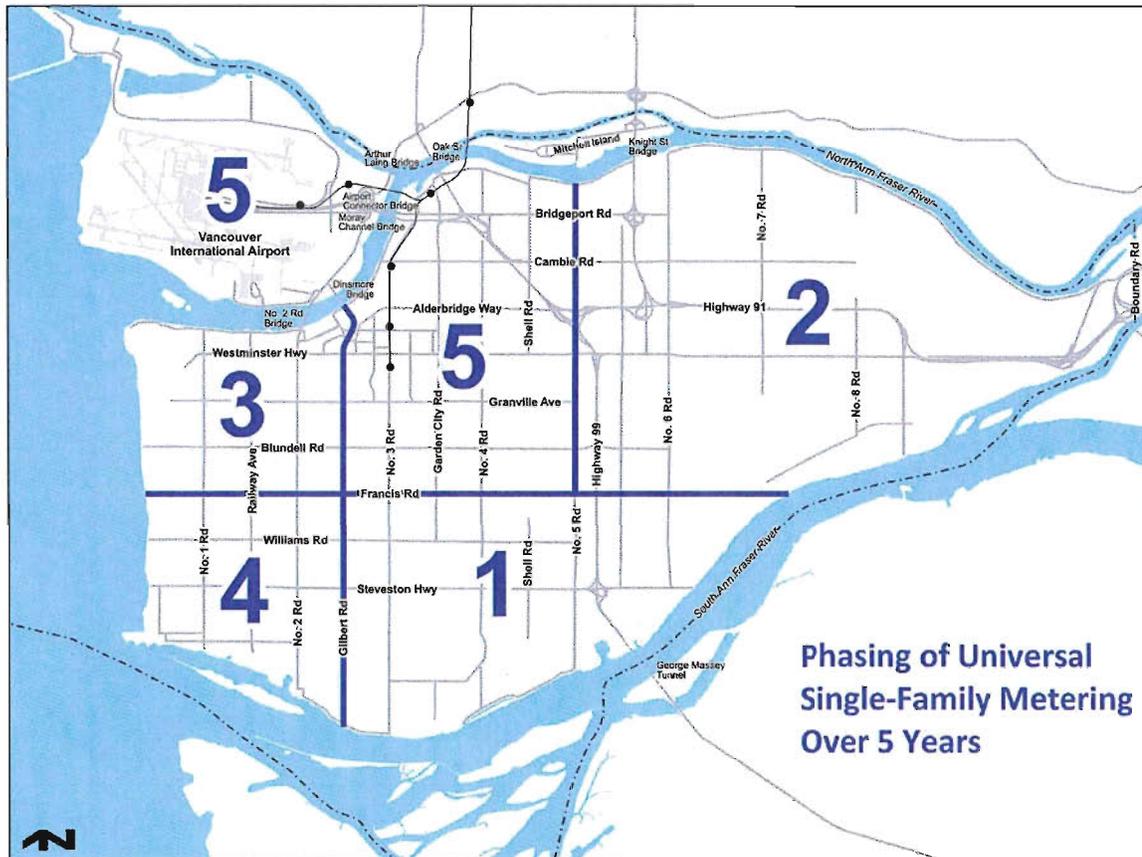
The capital component of this option would be funded through existing programs. The cost per meter installation is approximately \$1,000, with total program costs estimated at \$2 million per year, which can be accommodated with existing funding levels in the water utility budget.

Should Option 3 be supported, the next steps for program implementation would include the following:

- Capital Project Submission. A Capital project submission will be included as part of the 2014 Capital budget process.

- Formal Request for Proposals (RFP). The City would issue a formal RFP to solicit competitive pricing from the market for water meter installations, in accordance with Procurement Policy 3104.
- Communications. Unmetered single-family properties would receive mailed pamphlets in multiple languages to inform them of the impending water meter installation, as well as educational content on water meters and water conservation.
- Utility Rates. Utility budgets and rates will be developed for the upcoming year and brought forward to Council in the 4th quarter. Increases from Metro Vancouver’s wholesale water rate as well as the consumer price index (CPI) will result in increased costs to the water utility. As more dwellings become metered, small adjustments to the metered rate will be recommended in order to balance the budget.
- Implementation Strategy. Figure 1 below shows the City divided into five sections, approximately based on an equal number of unmetered single-family properties per section. One section will be implemented per year, starting with Section 1.

Figure 1. Phasing of Universal Metering Program Over 5 Years



Implementing the program by region increases the efficiency of meter installations as well as meter readings. The sequencing of the five regions is based on priority areas identified in the Water Loss Management Program.

Duplex Water Metering

Duplexes would not be included in the universal metering program, as most duplexes in Richmond share one water service. In order to meter duplex dwellings that share a service connection, a second service connection must be installed, and the homeowner is required to separate their private plumbing. Given the significant amount of work required on private property, Staff do not recommend making water meters mandatory for duplexes.

Multi-Family Water Metering

Water meters have been mandatory for new multi-family dwellings since 2005. To date, there have been 75 mandatory water meters installed in multi-family complexes, comprising 3,639 units.

The volunteer metering program for multi-family dwellings, which began in 2010, continues to receive significant interest. The City has received formal requests from 226 strata complexes to initiate the water metering implementation process, including 74 apartment, 145 townhouse, and 6 hybrid complexes, accounting for 15,164 multi-family dwelling units. 116 strata complexes have passed resolutions and provided final approval to the City for installation of water meters. Table 2 summarizes the statistics for the volunteer multi-family water meter applications.

Table 2: Multi-Family Water Meter Program Statistics

	Multi-Family Complexes	Dwelling Units
In Process / Under Consideration	92	6,476
Considered and Declined by Strata	18	1,209
Strata Approved	116	7,479
Total Applications Received	226	15,164
Volunteer Meters Installed	104	6,759

In 2012, 97% of metered multi-family complexes saved money, on average realizing a 47% savings compared to the flat rate. In particular, all of the volunteer multi-family complexes saved money, on average saving 45%.

The Volunteer Multi-Family Water Meter Program is still relatively new and, as the level of interest and participation remains high, Staff are not recommending any changes to the program at this time.

Toilet Rebate Program

The City currently offers a \$100 rebate for homeowners who replace older, less efficient toilets with new 4.8-litre or 4.1-litre/6-litre dual flush toilets. The Toilet Rebate Program started in January 2010, through which a total of 3,289 rebates have been issued to date.

Financial Impact

None.

Conclusion

70% (20,083) of single-family dwellings are metered in Richmond and, as a result, participation in the volunteer program is declining. Metering the remaining 30% (8,684) of single-family dwellings would enhance the City's Water Loss Management Program as well as improve equitability and conservation. Staff recommend that a five-year universal water metering program be implemented for single-family dwellings, starting in 2014. The program can be accommodated with existing funding levels in the water utility budget.



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