



City of Richmond

Report to Committee

To: Public Works and Transportation Committee **Date:** June 26, 2017
From: John Irving, P.Eng. MPA **File:** 10-6650-02/2017-Vol 01
Director, Engineering
Re: **Multi-Family Water Meter Program**

Staff Recommendation

That the Advanced Volunteer Multi-Family Water Meter Program, as outlined in Option 2 in the staff report titled "Multi-Family Water Meter Program" from the Director of Engineering, dated June 26, 2017, be included in the 2018 to 2022 Capital Program for Council's Consideration.

John Irving, P.Eng. MPA
Director, Engineering
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REPORT CONCURRENCE		
ROUTED TO:	CONCURRENCE	CONCURRENCE OF GENERAL MANAGER
Finance Department Water Services	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	
REVIEWED BY STAFF REPORT / AGENDA REVIEW SUBCOMMITTEE	INITIALS: 	APPROVED BY CAO (Acting).

Staff Report

Origin

At the April 26, 2016 Regular Council Meeting, Council adopted the following motion:

That staff bring forward options and recommendations for mandatory Multi-Family water metering for consideration through the Capital budget process.

This report outlines the status of the multi-family water meter program and provides recommendations for an ongoing multi-family water meter program. It also identifies the inventory of touchpad meters in the City that cannot be read by the fixed base meter reading network and includes options for replacement of the touchpad meters.

Analysis

Water Metering Update

Water metering provides Richmond residents with an equitable way to pay for drinking water and supports the Official Community Plan (OCP) objective to pursue water demand management strategies and continue water conservation initiatives. The City currently universally meters the Industrial, Commercial and Institutional (ICI) sectors and will have completed universal metering of the single-family residential sector by the end of 2017 (this year). To date, 44% of the multi-family residential sector has been metered through a volunteer program for existing complexes and a mandatory program for new complexes.

A universal deployment of the fixed base network was endorsed by Council in the 2017 Capital budget process and will be deployed by the end of 2017. This project expands the fixed base network to cover the entire urban area in Richmond and will ultimately read 97% of Richmond's water meter inventory. The fixed base network will allow staff to gather real time consumption data, assist in helping customers in identifying causes of leaks and water consumption habits, and enhance revenue forecasting which will inform the utility budget process.

Multi-Family Water Metering

Table 1 is a tabulation of the multi-family residential inventory and their water metering status as of May 2017.

Table 1: Multi-Family Inventory

Type	Number of Complexes	Number of Units	Number of Complexes Metered	Number of Units Metered	% of Units Metered
Townhouse	490	20,030	155	5,045	25%
Apartment	296	27,806	154	16,051	58%
Total	786	47,836	309	21,096	44%

As of May 2017, 44% of the multi-family units in Richmond have been metered for water. 92% of metered multi-family complexes saved money, averaging a 36% savings compared to the flat rate.

The multi-family water meter program includes a mandatory water meter program for new complexes and a volunteer water meter program for existing complexes. Mandatory metering of new multi-family complexes began in 2005 and 165 complexes (11,847 dwelling units) have been metered under this program. Volunteer metering of existing multi-family complexes began in 2010 and 144 complexes (9,002 dwelling units) have been metered under this program. Interest in the volunteer multi-family water meter program has declined significantly. In 2016, only two complexes were metered through the volunteer program.

The City subsidizes the installation of water meters for existing multi-family complexes that volunteer for a water meter. The City provides up to the greater of \$1,200 per unit or \$100,000 per complex for the actual installation cost. If the installation cost exceeds the subsidy, the strata complex is required to pay the difference. *Table 2* identifies the City's cost to meter the remaining flat rate multi-family complexes using the current subsidy and for a fully funded program.

Table 2: Flat Rate Multi-family Complexes

Multi-family Complex Type	Number of Flat Rate Complexes	Number of Units	Cost to City with Current Subsidy	Full Cost of Water Meter Installations
Townhouse	335	14,985	\$28.3 M	\$37.4 M
Apartment	142	11,755	\$18.2 M	\$25.0 M
Total	477	26,740	\$46.5M	\$62.4 M

The flat rate multi-family sector is the last sector that is not metered for water and represents approximately 20% of the City's overall water consumption.

Multi-Family Water Meter Program Options

The water meter program has typically received annual capital funding of \$1.9 million. Over the last four years, this funding has been largely utilized for the universal single-family water meter program. The universal single-family water meter program will be completed by the end of 2017, and the water metering capital funding could be utilized for other metering purposes with no impact to the utility rates.

Over the last five years, Metro Vancouver's water rate has increased by 12%. Staff expects this trend to continue. Increasing bulk water purchase cost is a primary driver for the City's water utility rates, as Metro Vancouver's water costs are approximately 56% of the City's water rate.

By the end of 2017, 80% of the City's water consumption will be metered. Staff will continue to pursue options to improve water usage data collection, including the universal deployment of the

fixed base network, to determine the aggregate water usage by unmetered multi-family complexes. This will allow the City to adjust the flat and metered rates more equitably.

Option 1: Status Quo

Under this option, staff will continue the volunteer multi-family water meter program. In its current form, volunteer complexes contact City staff to start the water meter installation process. Interest in the volunteer multi-family meter program has declined significantly with only two volunteer multi-family water meter installs in 2016. Staff does not believe volunteer installation numbers will improve without additional incentives.

Option 2: Advanced Volunteer Multi-Family Water Meter Program

Under this option, City staff will actively identify and approach multi-family complexes that will benefit from the water meter program. Presentation to strata councils will include: the City's current subsidy level – the greater of \$1,200 per unit or \$100,000; the potential financial benefits for installing a water meter and; an overview of the City's water conservation programs such as the toilet rebate program and the clothes washer rebate program.

Currently, multi-family complexes that install a water meter enjoy a two-year guarantee; i.e. if metered water charges exceed the flat rate in the first two years of the meter install, the complex is only responsible for the flat rate charge. Under this option, the two-year guarantee will be extended to a five-year guarantee. This guarantee allows residents five years to adjust water use habits without financial risk.

Option 2 can be achieved through current funding levels with approximately 15 multi-family complex water meter installations per year.

Option 3: Universal Multi-Family Water Meter Program with Touch Pad Replacement Program

Under this option, the City would meter the existing multi-family complexes on a mandatory basis and the cost of the water meter installation will be fully subsidized. As a part of this option, the two year guarantee will extend to five years but there will be no trial period.

The Universal Multi-Family Water Meter program would require an estimated \$62.4 million in capital funding. At current funding levels, the program would take approximately 36 years to complete. With an increase of 1% and 2% in water utility rates, it would take approximately 30 and 25 years respectively to meter all multi-family complexes.

Recommendation

Staff recommends the City proceed with Option 2: Advanced Volunteer Multi-Family Water Meter Program as it provides additional incentives that may advance the volunteer multi-family water meter program without increasing water rates. With staff actively pursuing multi-family complexes, five-year guarantee, current installation subsidy, and conservation programs, the interest for voluntary water meter installations may rise once again.

Option 2 will not preclude the City from implementing a universal multi-family water meter program in the future. Should Council endorse the Advanced Volunteer Multi-Family Water

Meter Program, staff will report the results to Council in a future report. Proceeding with this option will allow the City to identify and reduce leakage and still provide water meters to multi-family complexes that can benefit from the program.

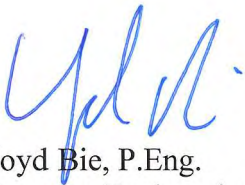
Financial Impact

None.

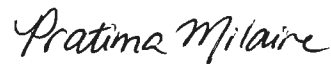
Conclusion

By the end of 2017, Richmond will have successfully metered approximately 80% of water use in the City. The ICI sector is universally metered and the single-family residential sector will be universally metered by the end of this year. 44% of multi-family units are currently metered and all new multi-family complexes are metered on a mandatory basis. The remaining 56% of the multi-family units on flat rate can participate in the existing volunteer multi-family meter program at their discretion; however, current uptake on this program is low.

Staff recommends Option 2: Advanced Volunteer Multi-Family Meter Program and the results of the proposed program will be presented to Council in a future report.



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