
To: Water Committee

From: Lucas Pitts, Director, Policy, Planning and Analysis, Water Services
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Date: January 7, 2021 Meeting Date: Jan 21, 2021

Subject: **Water Meter Upgrade Program**

RECOMMENDATION

That the Water Committee receive for information the report dated January 7, 2021 titled “Water Meter Upgrade Program”.

EXECUTIVE SUMMARY

Metro Vancouver operates over 200 flow meters, located either at boundaries of GVWD members or at some individual connections, to measure the amount of drinking water utilized by the region. The region annually consumes around 385 billion liters of water per year and that translates to around \$285 million in revenue. Metro Vancouver continues to improve the collection and processing of data by the continued improvements made through the ‘Water Meter Upgrade Program’ (WMUP). This program allows Metro Vancouver to continually improve data collection, which in turn results in improved billing accuracy for our members. Accurate water consumption data also allows the region to focus on targeted water conservation initiatives.

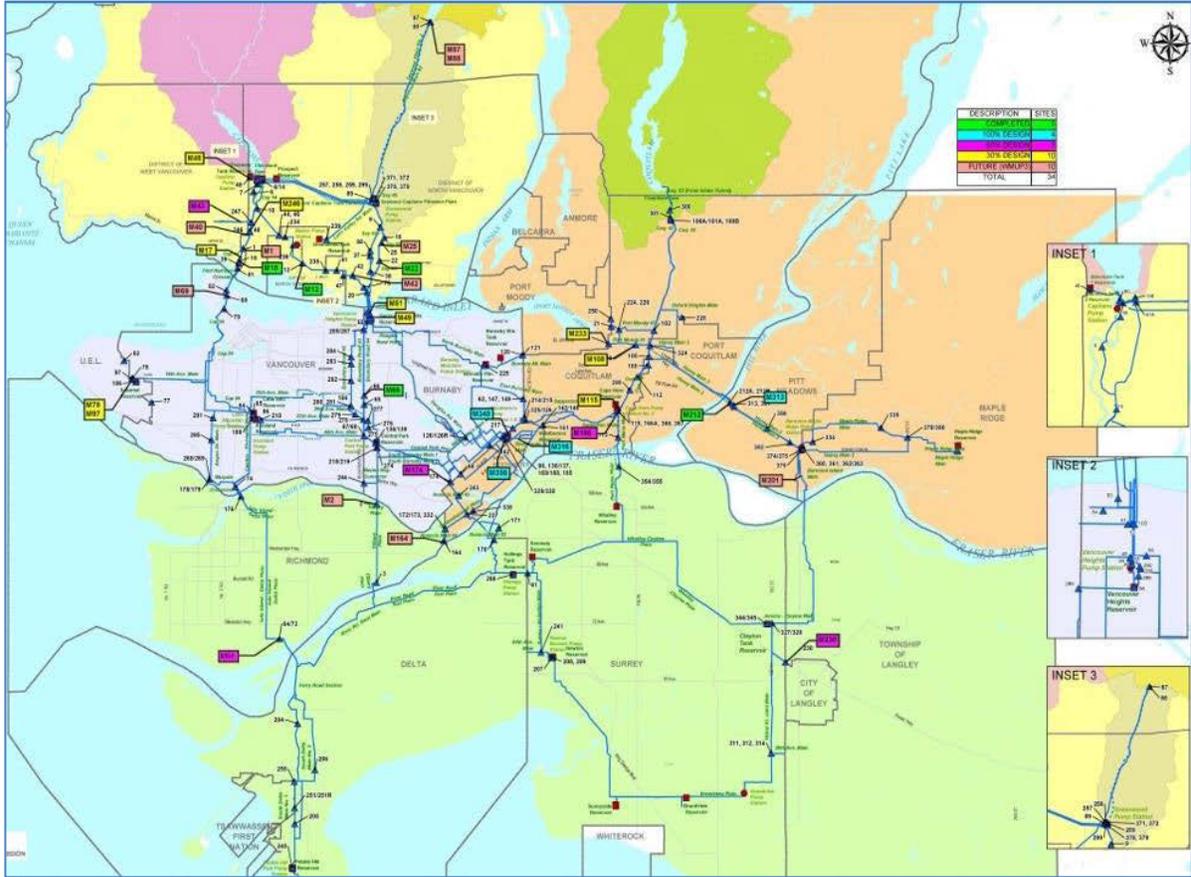
PURPOSE

That the Water Committee be informed of the nature and progress of the Water Meter Upgrade Program and associated water meter installation projects.

BACKGROUND

Drinking water consumed within member jurisdictions is measured via water flow meters located in key areas throughout the region. Metro Vancouver is continually upgrading the metering network in order to accurately measure the amount of water flowing throughout the water system and to replace meters as they reach the end of their service life. The data received from the water flow meters undergoes a quality control process and then is used to prepare the Monthly Water Consumption Report and to issue water billing invoices. Annual metered water consumption is in the range of 385 billion litres. This translates into revenue of around \$285 million.

As shown in the map below, over 200 water flow meters are utilized for operational, billing, and planning purposes. Meters are generally located at the boundaries between customers or on individual connections. This metering approach was established originally to minimize the overall number of meters and the associated costs. Meters are connected to the Metro Vancouver Supervisory Control and Data Acquisition (SCADA) system which is able to process the flow data on a near real-time basis and allows data to be shared with member jurisdictions.



Improvements

The main benefit of the WMUP is the continuous improvement to the accuracy of the overall network of GVWD water meters. WMUP also encourages the installation of water meters on new and existing connections, which aligns with Section 3.2.3 of the current Drinking Water Management Plan.

The WMUP includes 34 flow meter projects (7 new and 27 replacements), which were selected from a ranking analysis study, and will be implemented through three separate contracts, designated as ‘Sets’:

- Set 1 (WMUP1) includes 14 meters
- Set 2 (WMUP2) includes 10 meters
- Set 3 (WMUP3) includes 10 meters

Set	2018	2019	2020	2021	2022	2023	2024	LRP Budget
WMUP1								\$7.6M
WMUP2								\$7.8M
WMUP3								\$7.0M
							Total	\$22.4M

ALTERNATIVES

This is an information report. No alternatives are provided.

FINANCIAL IMPLICATIONS

Out of the original 34 water meter upgrade projects, 5 have been completed, 19 are in the design stage, and 10 have not yet started. As of December 2020, \$3.3 million has been spent. The WMUP is currently on budget and schedule.

CONCLUSION

The WMUP is designed to improve the data collection and processing of water consumption data. With the better data, Metro Vancouver is able to realize continuous improvement for the water meter billing process and share flow information with our member municipalities.

The program is on budget and schedule.