

**TO:** MAYOR & COUNCILLORS  
**FROM:** GENERAL MANAGER ENGINEERING  
**SUBJECT:** **UNIVERSAL WATER METERING STRATEGY**  
**PURPOSE:** To provide recommendations for transitioning to a universal water metering program.

## **RECOMMENDATION**

**THAT** the recommendations for universal water metering, as described in the report titled “Universal Water Metering Strategy” dated December 02, 2024, be approved.

## **EXECUTIVE SUMMARY**

This report is to provide recommendations for transitioning to a universal water metering program.

### **1.0 POLICY SECTION**

Water metering supports the Corporate Strategic Plan, and the Environmental Sustainability Strategy adopted by Council. Water metering also aligns with the report titled 'Residential Water Metering in Metro Vancouver: Best Practices Guide for Local Governments,' as endorsed by the Greater Vancouver Water District (GVWD) Board.

### **2.0 BACKGROUND**

Water is a critical and finite resource, and as climate change continues to affect global water availability, it is imperative that water usage is managed responsibly. Universal water metering is a strategic step towards more sustainable water management in our community not only from an environmental perspective but also from an equity perspective in that residents and businesses pay for what they use.

#### **2.1 Provincial Housing Statutes - Bill 44**

On November 30, 2023, the Provincial Government provided royal assent to Bill 44 - Housing Statutes (Residential Development) Amendment Act, 2023 ("Bill 44").

Bill 44 mandated zoning relaxations across British Columbia to increase permitted density in areas currently zoned for single-family homes or duplexes. In most areas of Burnaby, this legislation allows for up to four housing units on each single-family lot, depending on the lot size, while larger lots near public transit may permit as many as six units.

The introduction of Small-Scale Multi-Unit Housing (SSMUH) will create unforeseen demands on the City’s local water distribution network and exacerbate billing inequities across this expanded zoning. To address these challenges, City Council endorsed bylaw changes on March 25, 2024, requiring the installation of water meters in all new developments.

**3.0 GENERAL INFORMATION**

Water metering is supported by Metro Vancouver as part of best management practices and encourages local governments to move towards universal metering. **Table 1** shows data provided by Metro Vancouver on water demand reduction for select cities.

Table 1: Residential Per Capita Demand For Select Member Jurisdictions (2021)*					
JURISDICTION	PERCENTAGE OF METERED CONNECTIONS (2021)		RESIDENTIAL DEMAND (LCD)		DEMAND REDUCTION
	SINGLE FAMILY	MULTI-FAMILY	HIGHEST SINCE 1995	2021	
<b>LESS METERING PROGRESS</b>					
City of Burnaby	0%	0%	337	289	14%
City of Vancouver	13%	100%	339	268	21%
<b>MORE METERING PROGRESS</b>					
City of Surrey	80%	59%	340	231	32%
City of Richmond	100%	63%	341	221	35%
<b>UNIVERSAL METERING</b>					
City of Langley	100%	100%	271	220	19%
District of West Vancouver	100%	100%	586	327	44%

\*Source - Metro Vancouver

The metering of water is also recognized as a best practice by the BC Water and Waste Association, the Federation of Canadian Municipalities, the American Water Works Association, and the Canadian Water and Wastewater Association.

**3.1 Benefits**

**3.1.1 Environmental Benefits**

Water metering encourages conservation by providing residents with direct feedback on their consumption, leading to a significant reduction in overall water demand. Early leak detection and timely repairs also significantly reduce wastage in the water system. These conservation efforts not only help to preserve our local water resources but also contribute to reducing the carbon footprint associated with water treatment and distribution, supporting our climate action goals.

**3.1.2 Operational Benefits**

Metering provides accurate data on water usage patterns, which can enhance the operational efficiency of the water system. Real-time consumption data allows for better demand forecasting, leak detection, and overall system

optimization, reducing operational costs and minimizing water loss. Additionally, accurate consumption data is essential for making informed decisions regarding infrastructure investments.

**3.1.3 Regional Facility Optimization**

By reducing overall water demand universal metering can postpone the need for costly upgrades to regional water and wastewater facilities. Metering helps to optimize the size and scope of these investments, ensuring that infrastructure projects are appropriately scaled to meet actual demand rather than projected demand under a flat-rate system.

**3.1.4 Billing Equity**

Universal water metering promotes fairness by aligning water usage with costs. The current flat-rate system does not incentivize conservation and effectively subsidizes high consumption. It also fails to ensure that flat rates are appropriately set to align with the volume of water consumed. By shifting to a user-pay model, residents will pay for the water they use, fostering a sense of ownership and responsibility towards water conservation.

**3.1.5 Administrative Benefits for Secondary Suites**

Introducing universal water metering will eliminate the City’s manual process for secondary suite declarations, which currently involves about 7,400 properties and requires the City to send out over 30,000 letters annually to residents for the purpose of declaring any changes to their secondary suite status.

Water meters will provide precise data, enabling efficient detection of higher usage consistent with active secondary suites, and reduce administrative efforts that rely on homeowners to self-report. The recommended strategy will prioritize having these properties metered first.

**3.2 Meter Deployment**

**3.2.1 Current Efforts**

The City has already made progress towards universal metering by implementing metering and billing for industrial, commercial, and institutional (ICI) customers. This initial step has provided valuable insights into water usage patterns across different sectors and laid the groundwork for a broader application.

In accordance with Section 15(3) and 15(4) of the Burnaby Waterworks Regulation Bylaw 1953, since July 1, 2024, all new commercial, multi-dwelling buildings and single- and two-family dwellings have been required to install a water meter prior to occupancy. This practice will continue for 2025 and beyond.

**3.2.2 Existing Meter-Ready Homes**

As a next step, staff recommend installing meters for homes that already have a water service connection that can fit a meter. There are approximately 5,500 such connections currently in place. As part of the City’s watermain replacement

program, standardizing the size of the utility box for utility service connections provides operational and maintenance consistency and cost-efficiency. As such, these boxes allow for the appropriate space in which to fit a meter in, resulting in significant cost savings and disruption to private properties.

**3.2.3 Existing Secondary Suite Homes**

Staff also recommend prioritizing meter installation on existing homes with secondary suites. Depending on each property, there may be civil works and restoration required as water services must be located and exposed to properly install the meter.

These next steps are proposed to be carried out using City forces, and it is anticipated that the work will take approximately 3 years to complete.

**3.2.4 Long-Term Plan**

Staff will continue to develop strategies and report back to Council on recommendations for implementing universal water metering on remaining properties.

**3.3 Billing Transition**

It is recommended that the existing flat rate system remains unchanged and as meters are deployed staff will leverage the data to design a revenue-neutral metered water rate structure. This new structure is expected to correspond with Metro Vancouver’s peak and off-peak periods and accommodate basic water needs. Staff will prepare to return to Council with a billing transition strategy to be adopted effective January 1, 2027.

**4.0 COMMUNICATION AND COMMUNITY ENGAGEMENT**

**4.1 Communication and Education**

Communication and education campaigns will be essential to inform residents of the benefits of metering and to encourage active participation in water conservation efforts. A communication strategy will be initiated upon approval of this report by Council.

**4.2 Access to Consumption data**

Although the flat rate system will remain, the City will leverage existing technology where possible (My Property Portal) to provide customers with access to consumption data, with the aim of encouraging customers to identify and repair leaks and alter their consumption usage where required.

**5.0 FINANCIAL CONSIDERATIONS**

It is proposed that the next steps of water meter deployment be supported through the following funding mechanism:

**5.1 Capital Funding**

Existing customer conversion - the City would pay for the purchase of meters and their installation. Funding would be allocated from existing water and sewer utility capital reserves. This funding would be used to cover the cost of the new meter purchase and installation.

Controlling the meter deployment would allow for more quality control over the model type of meter and how it is installed. It also provides the City control over timing and pace of meter installation and helps customers to eliminate the upfront costs associated with transitioning to water metering.

**5.2 Estimated Cost**

To install meters on meter-ready homes is approximately \$1,000 per meter installation. With about 5,500 properties in this category, the total estimated cost is \$5.5M. This next step will commence in 2025 and be performed by City forces.

To install meters on homes with rented secondary suites, this includes associated civil works and restoration. As such, it is estimated that the cost is approximately \$2,500 per meter installation. With about 7,400 properties in this category the total estimated cost is \$18.5M. This next step is to also commence in 2025 and be performed by City forces.

**5.3 Impact on Utility Rates**

Presently, utility reserves can accommodate an increase in capital spend for the initial meter ready homes, commencing in 2025. Depending on the rate of installation for properties with rented suites, an additional funding provision may be required from utility operating to capital reserves. At this time, initial models suggest only a minor uplift in utility rates (around 1% during impacted years) may be required to accommodate the additional funding. However, firmer details will be available once the city has embarked on the procurement process and has a clear timeline for meter deployment. It is noted that City estimates are likely on the high side and do not account for possible procurement / deployment expenditure savings or those realized through reduced consumer consumption, which may lower overall costs and rates.

Respectfully submitted,

May Phang, P.Eng., General Manager Engineering

**ATTACHMENTS**

Attachment 1 – Financial Management Committee Report, Universal Water Metering, July 14, 2021

Attachment 2 – Residential Water Metering in Metro Vancouver, Best Practices Guide for Local Governments, August 2019

**REPORT CONTRIBUTORS**

This report was prepared by Simone Rousseau, Senior Manager Infrastructure, and Richard Rowley, Director Finance Revenue Services.