



The Corporation of the City of Courtenay

Briefing Note

To: Council

File No.: 5600-03

From: Director of Operational Services

Date: February 25, 2026

Subject: Water Metering Business Case Study – Executive Summary

PURPOSE:

To provide Council with a consolidated overview of the findings of the Water Metering Business Case and Rate Modelling Study, and the implementation pathways to support informed consideration of options for advancing water metering in the City of Courtenay.

BACKGROUND:

The City's water system is experiencing increasing seasonal stress driven primarily by residential water use. Peak summer demand has grown significantly faster than population growth, indicating that discretionary outdoor watering and behavioural use patterns are major contributors. While institutional, commercial, industrial (ICI), and multi-residential customers are largely metered, no single-residential properties currently have water meters. As a result, the City's largest customer class is entirely unmeasured, limiting any visibility into consumption, constraining leak detection on private property, and preventing the use of consumption-based pricing as a conservation and demand management tool.

The reliance on flat-rate billing for single-residential properties has also created substantive equity and governance challenges. The financial modelling undertaken for the business case demonstrates that, under the current structure, residential customers collectively pay less than the value of the water they are estimated to consume when compared to if they were accurately metered. This results in a modelled cross-subsidy of approximately \$1.7 million annually from metered to unmetered accounts, raising fairness concerns and weakening the long-term financial sustainability of the utility.

Council directed staff to evaluate the feasibility, costs, benefits, and implications of universal water metering. The resulting work comprises of a three-part analysis: a comprehensive business case, a financial strategy focused on long-term sustainability, and a set of implementation pathways that consider operational readiness, customer impacts, and regional coordination.

Given the scale and long-term implications of universal water metering, this work has been structured to support deliberate, staged decision-making by Council rather than a single, binary decision. As such, a three-part series of reports are intended to support informed consideration of options for advancing water metering in the City and to clearly describe the decision framework through which Council may determine its preferred direction for a universal water metering program.

DISCUSSION:

The business case confirms that residential demand is the largest single contributor to peak water use and that universal metering offers the most significant conservation and equity benefits. Metering provides visibility into consumption, supports leak detection, and enables residents to better manage their water use. Evidence from comparable municipalities indicates that residential consumption typically decreases following implementation, particularly during summer months, when the water system is under the greatest strain.

Several metering scenarios were evaluated, ranging from maintaining the status quo to a full five-year universal rollout. The analysis concludes that business-as-usual offers no conservation benefits and leaves rate inequities unresolved. New-construction-only metering has minimal impact because existing homes drive the majority of the demand. A voluntary program can generate early savings but risks slow uptake and limited reductions in peak use, particularly if high-use households do not participate.

Universal metering demonstrates the strongest long-term performance and aligns best with the City's policy objectives; however, it also presents the highest short-term delivery and financial risk if undertaken all at once. For this reason, a phased, balanced approach is recommended. This hybrid model recommends the phased installation of meters across the residential customer class, starting with approximately 2,500 meter-ready homes, introducing a conservation-based rate structure, and building a Water Metering Reserve from early savings and incremental revenues. This reserve could then be used to support future installation years, enabling the City to expand to universal metering over time without overextending capital or administrative capacity.

The Implementation Pathways report outlines multi-year timelines for each scenario and identifies sequencing considerations, including Advanced Metering Infrastructure (AMI) system setup, integration with billing, customer communications, and procurement. Regardless of the chosen pathway, the move toward metering is portrayed as both an operational modernization and a strategic environmental measure that strengthens resilience and supports more accurate long-term asset planning.

Decision Framework and Implementation Pathways:

To support informed and transparent governance, the Water Metering Business Case and Rate Modelling Study, with their associated recommendations, are structured around a three-report Council decision framework. This framework is intended to provide Council with clear control points and to separate questions of policy direction, financial readiness, and implementation authority.

Report 1 – Strategic Direction focuses on confirming Council's long-term policy intent with respect to residential water metering. At this stage, Council is asked to consider the results of the business case analysis and to indicate whether, and in what form, universal metering should be advanced as a strategic direction.

Report 2 – Financial Strategy establishes the framework required to support the selected direction. This includes rate design principles, lifecycle cost recovery, reserve strategies, and, where applicable, debt financing considerations. This step ensures affordability, equity, and long-term financial sustainability are addressed before implementation authority is granted.

Report 3 – Implementation Pathway seeks the approvals and authorities necessary to move from planning into delivery. This includes confirmation of the implementation approach and direction to develop bylaw amendments, establishment of reserves or financing mechanisms, and authorization to proceed with procurement and program delivery.

Within this framework, three implementation pathways are presented to Council, each reflecting a different balance of flexibility, pace, and financial exposure:

- **PATHWAY 1: A phased and balanced water metering program**, which prioritizes meter-ready properties, provides a voluntary and capped pathway for non-meter-ready homes, and establishes defined triggers that could support a transition toward universal metering over time.

- **PATHWAY 2: A universal water metering program, delivered as a defined,** multi-year capital initiative supported by a comprehensive financing strategy.
- **PATHWAY 3: An incremental approach focused on new construction and voluntary participation,** offering the lowest upfront capital exposure but slower system-wide outcomes.

Each pathway aligns with the overarching goals of conservation, equity, and sustainability, while providing Council with differing levels of certainty, flexibility, and risk management.

POLICY ANALYSIS:

Universal water metering directly advances Council's established priorities for water conservation, equity, and climate adaptation. Universal metering is identified as a best-practice for reducing per capita water consumption and achieving the Water Smart Action Plan target of a 43 percent reduction by 2050. It also supports the Water Master Plan by lowering peak-season demand, improving supply reliability, and deferring costly infrastructure upgrades.

From an equity perspective, universal metering ensures that all customers pay in proportion to the volume of water that they use, remedying long-standing cross-subsidies embedded in the flat-rate model. Conservation-oriented volumetric pricing fosters behavioural change, reduces discretionary summer usage, and promotes efficient irrigation. Regionally, lower peak demand reduces pressure on the Comox Valley Regional District system and supports coordinated drought management and long-range planning.

The balanced approach also aligns with regulatory expectations under the Community Charter regarding transparent fee structures, cost recovery, and responsible long-term utility management.

FINANCIAL IMPLICATIONS:

The financial analysis presents a lifecycle view of metering costs and revenues. Universal metering requires a capital investment of \$25 to \$27.5 million, with lifecycle obligations that continue over each 20-year meter life cycle. Annualized lifecycle costs for the five-year universal metering program are approximately \$2.9 million for the first cycle and \$ 1.4 million for the second cycle.

At the same time, consumption reductions expected from universal metering are forecast to lower bulk water purchases by roughly 985,000 cubic metres annually, resulting in approximately \$ 1 million dollars in savings each year. These savings form a critical part of the funding strategy by offsetting a portion of ongoing lifecycle obligations.

The transition to universal metering will require a revised rate structure that includes a minimum quarterly charge, tiered volumetric pricing, and a meter rental fee to support long-term cost recovery. The financial modeling shows that while a rate increase is required to meet full lifecycle funding needs, many single-residential households could experience lower annual bills in the long-term if they reduce consumption toward typical post-meter averages.

The establishment of a Water Metering Reserve is central to the financial model. This reserve would hold Tier 2 revenues and savings from reduced bulk water purchases and would be used to fund future meter installations, AMI renewals, and installation costs as the program expands. Over time, as consumption declines and the reserve grows, the City's reliance on borrowing is reduced, improving financial resilience.

ADMINISTRATIVE IMPLICATIONS:

Implementing a universal metering program requires coordinated work across Operational Service, Financial Services, Communications, and Information Systems. Staff resources will also be needed for procurement, installation scheduling, inspections, customer support, data management, and integration of AMI with the billing system.

A phased approach allows for manageable scaling of administrative effort. Early phases focus on establishing the AMI network, configuring billing systems, and supporting meter-ready installations. Subsequent phases introduce tiered billing, voluntary enrollment, and customer education materials such as billing simulators and consumption dashboards. The final phase transitions the City to full volumetric billing once the metering network and administrative systems are stable.

Sustained public engagement will be essential throughout implementation. Providing residents with clear information about billing changes, conservation benefits, leak alerts, and typical consumption patterns will support customer understanding and maintain public confidence during the transition.

STRATEGIC PRIORITIES REFERENCE:

Advancing universal water metering aligns directly with the City’s Official Community Plan by supporting long-term water conservation, climate resilience, and sustainable infrastructure management. Metering provides the data needed to encourage responsible water use, reduce peak-season demand, and plan future investments more effectively. A phased implementation approach ensures these goals are achieved in a financially responsible and transparent manner, while maintaining public trust and equity by ensuring customers pay in proportion to the water they use. This approach reinforces the OCP’s objectives for environmental stewardship, fiscal sustainability, and strong, accountable governance.

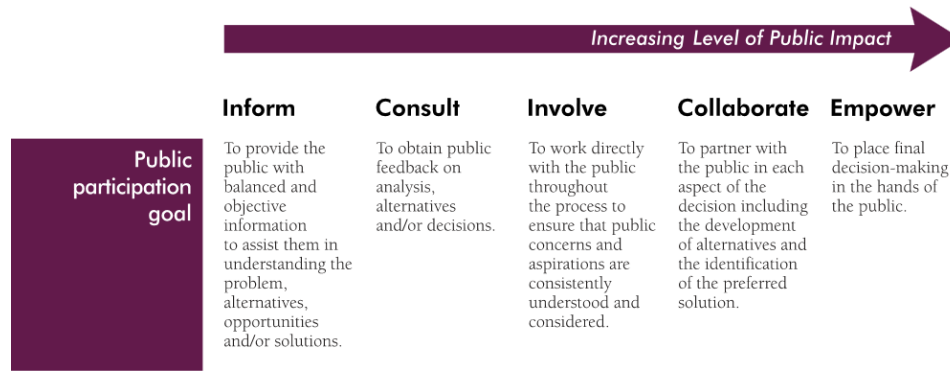
This initiative addresses the following strategic priorities:

- Municipal Infrastructure - Continue implementing water conservation measures; Review and update Watersmart Action Plan
- Organizational Well-Being and Sustainability - Ensure capacity to accommodate big change resulting from direct and indirect impacts to our community
- Financial Sustainability - Ensure capacity to accommodate big change

PUBLIC ENGAGEMENT:

Public engagement will be undertaken to inform residents and stakeholders about the proposed water metering program, explain its objectives and benefits, and gather feedback to support informed decision-making. Engagement activities will be designed to ensure transparency, respond to community questions, and help refine the program prior to implementation.

Staff would inform the public based on the IAP2 Spectrum of Public Participation:



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RECOMMENDATION: THAT Council receive the “Water Metering Business Case Study – Executive Summary” briefing note for information.

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