

DATE: June 10, 2021

FILE: 5600-01/CVWS

TO: Chair and Directors
Comox Valley Water Committee

FROM: Russell Dyson
Chief Administrative Officer

Supported by Russell Dyson
Chief Administrative Officer

R. Dyson

RE: Water Metering in the Comox Valley Water System

Purpose

This report provides the history and current status of water metering in the Comox Valley Water System (CVWS).

Recommendation from the Chief Administrative Officer:

For information purposes only.

Executive Summary

At the May 12, 2020 Comox Valley Water Committee meeting, the committee passed the following motion:

THAT staff provide a report summarizing the history and current state of residential and commercial water metering within the Comox Valley.

The CVWS water treatment and transmission system is owned and operated by the Comox Valley Regional District (CVRD). Treated water is distributed to five service participants, with each managing water distribution within their jurisdictions.

Water metering is known as an industry best practice for reducing water consumption by incentivizing water conservation through volumetric pricing structures. In total approximately 36 per cent of system connections are metered, as summarized in Table No.1 below.

Table No.1: Water Metering within the CVWS – 2020

Participant	Total Number of Connections*	Number of Metered Connections*	Percent Metered
City of Courtenay	9,455	692	8%
Town of Comox	5,707	3,057	54%
K'ómoks First Nation	125	0	<1%
Comox Valley Water Local Service Area	2,598	2,598	100%
Comox Valley Water Pollution Control Center	1	1	100%
Total for CVWS	17,866	6,349	36%

*Total connections, rather than dwelling units, including residential and institutional, commercial, and industrial (ICI)

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Government Partners and Stakeholder Distribution (Upon Agenda Publication)

None.	✓
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Background/Current Situation

Water metering is an effective tool to promote water efficiencies and conservation within a system and, in conjunction with implementation of a consumption based rate structure, have been shown to reduce water consumption by 20 to 50 per cent.

The CVWS is owned and operated by the CVRD; the CVWS includes treatment of raw water and transmission of treated water to five service participants, being the City of Courtenay, Town of Comox, K’ómoks First Nation, the Comox Valley Water Pollution Control Center and the Comox Valley water local service area.

Each service participant is responsible for distribution of water within their service boundaries, including the installation of water meters. The status of water metering in each of the participants’ boundaries varies and is summarized in the report below.

City of Courtenay

The City of Courtney includes approximately 9,455 connections and on average consumes 5,000,000 cubic meters of water per year, equating to approximately 59 per cent of the total water consumption of the CVWS. In 2019, the City of Courtenay completed a [Water Smart Action Plan](#), which speaks to water metering in the City, a summary of which is below:

- As of 2017, there were 646 metered accounts or eight per cent of connections, consisting primarily of multifamily and non-residential connections.
- Metered consumption accounted for 30 per cent of the total water consumed in the City.
- 73 per cent of institutional residents are metered.
- 69 per cent of commercial, industrial and institutional properties are metered.
- 72 per cent multi-family dwelling units are metered.
- From the [City of Courtenay 2019 annual report](#), 2,385 meter setters are installed (meter ready services). Every new service within the City is required to install a meter setter and meter box, to easily install a meter in the future. In addition operations staff install a setter and meter box on the majority of existing services when required to complete work on the service.

Although discussed and recommended, not included within the Water Smart Action plan was the cost of universal water metering in the City of Courtenay. Further study work on this item was noted to be required.

Town of Comox

The Town of Comox includes approximately 5,707 connections and on average consumes 2,230,000 cubic meters of water per year, equating to approximately 28 per cent of the total water consumption of the CVWS. From the summary of metered water billing in 2020, the status of water meters in the Town is as follows:

- Within the [2020 meter summary report](#) from the Town, 2,772 connections were metered or 49 per cent of connections and accounted for approximately 35 per cent of the total water consumed in the Town (774,507m³). Residents with meters have the option to pay a volumetric rate or a flat rate.
- All commercial, industrial and institutional connections are metered and charged on a volumetric pricing structure.

In 2019, correspondence with the Town noted a large push on the installation of meters with the intent to close the gap on the properties that are currently unmetered.

Comox Valley Water Local Service Area (CVWLSA)

The CVWLSA is a CVRD owned and operated distribution service which receives bulk water from the CVWS. The service area includes approximately 2,319 connections, primarily residential, and on average consumes 830,000 cubic meters of water, equating to approximately 10 per cent of the total water consumption of the CVWS. As of December 2013, all residential and commercial properties were metered and charged on a volumetric pricing structure.

K'ómoks First Nation (KFN)

The KFN includes 125 connections and on average consumes 100,000 cubic meters of water, equating to approximately one per cent of the total water consumption of the CVWS. None of the connections are metered.

Comox Valley Water Pollution Control Center (CVWPCC)

The CVWPCC is located on Brent Road and is owned and operated by the CVRD. The plant has a single metered connection and on average consumes 51,000 cubic meters of water annually, equating to less than one per cent of the total annual consumption.

Water efficiency in the Comox Valley

The Comox Valley Water System Water Efficiency Plan, 2021 (Appendix A of the June 11, 2021 staff report titled “Comox Valley Water System Water Efficiency Plan – 2021”), highlights encouraging trends in water consumption over the last decade. Since 2009, total daily per capita water consumption has decreased by approximately 23 per cent from 569 litres/capita/person to 437 litres/capita/person. Total water consumption over the same period has decreased by approximately 6.1 per cent despite an increase in population of approximately 14 per cent.

It should be noted that while the current trends in reduced water consumption in areas served by the CVWS are encouraging, CVWS fell 7 per cent short of a 30 per cent reduction target for 2020 in the CVRD Regional Growth Strategy. CVRD would expect that per capita water consumption in the CVWS will continue moving toward the target of a 40 per cent decrease in per capita water consumption by 2030 from the 2008 baseline, as stated in the CVRD Regional Growth Strategy, if efforts to carry on with water meter installation are continued by the municipalities.

The Union Bay Improvement District water system, which will transition to management by the CVRD as of July 1, serves as a local example of water meter installation leading to a significant reduction in water consumption. Following implementation of universal metering in 2004, leaks were detected at approximately 1 out of every 10 residential connection. Resolution of these leaks along with significant reductions in daily consumption per connection led to a decrease in annual water consumption of approximately 50 per cent.

Policy Analysis

At the May 12, 2020 Comox Valley Water Committee meeting, the committee passed the following motion in response to a letter from Director Arbour:

THAT staff provide a report summarizing the history and current state of residential and commercial water metering within the Comox Valley.

Objective 5-A of the Regional Growth Strategy is to promote water conservation and efficiency throughout the Comox Valley. This includes a per capita consumption reduction target of 30 per cent by 2020 and 40 per cent by 2030. In addition to this RGS objective, the water efficiency plan (WEP) for the CVWS highlights a number of water efficiency measures to reduce consumption. As noted within the WEP, it is well established that universal water metering is the most effective way of reducing demand.

Options

This report is for information purposes only.

Financial Factors

There is a significant financial impact to complete the installation of meters on all connections. The typical cost for the installation of a meter and appurtenances is in the range of \$1200 to \$3500 per connection, depending on size of connection and sector.

Legal Factors

Installation of water meters is the decision of each service participant.

Intergovernmental Factors

The Comox Valley Water Committee is comprised of representatives from the Town of Comox, City of Courtenay and CVRD Baynes Sound – Denman/Hornby Islands (Electoral Area A), Lazo North (Electoral Area B) and Puntledge – Black Creek (Electoral Area C).

Interdepartmental Involvement

The CVRD Engineering Services branch is leading this work.

Citizen/Public Relations

None.