CITY OF NANAIMO
THE HARBOUR CITY
COUNCIL POLICY MANUAL

Section:	**Engineering and Public Works**	**11**
Subsection:	**Water Supply and Distribution**	**5600**
Title:	**Water Metering Policy**	**03**

POLICY

This policy is intended to formalize drinking water metering direction so that the vision and goals of the City, as articulated in the Official Community Plan (OCP), can be realized. This Policy is relevant to the City, as the owner and operator of the water supply, treatment and distribution system, and to residents and businesses as the consumers of water.

REASON FOR POLICY:

For the development of strategies, plans, and standards for water metering within the City of Nanaimo so that users, developers and staff have clear vision of metering requirements and drinking water infrastructure life cycle.

AUTHORITY TO ACT

The authority for this Policy is provided by "Waterworks Rate and Regulation Bylaw 2006 No. 7004". All aspects of water metering within the City shall be conducted in accordance with applicable legislation.

DEFINITIONS:

American Water Works Association (AWWA)	The American Water Works Association is the largest non-profit, scientific, and educational association dedicated to managing and treating water. They publish standards and best practices used throughout North America for the design, installation, and operations and maintenance of water systems. The BC Water and Waste Association (BCWWA) is the local chapter of the AWWA.
Infrastructure Leakage Index (ILI)	A commonly used benchmark that identifies the ratio between Real Losses and the theoretical lowest amount of losses based on current technologies. An ILI of 1.0 means that the community has reached the theoretical lowest level of losses based on technology available.
Real Losses	The annual volume of water lost through all types of leaks and breaks before the customers' water meters.
Water Audit	An examination of records to trace and account for the flows of water from the source of supply, through the distribution system, and into customer properties.

1 **RESPONSIBILTIES**

1.1 Council is responsible for:

1.1.1 Adopting this Water Metering Policy and future updates;

1.1.2 Allocation of resources to meet the objectives of this Policy;

1.1.3 Providing high level oversight of the delivery of the organization's Water Metering Strategy; and,

1.1.4 Ensuring that organizational resources are appropriately utilized to address the organization's strategic plans and priorities.

1.2 The Chief Administrative Officer has overall responsibility for:

1.2.1 Reporting to Council and updating the community regularly on the status, effectiveness, and performance of work related to the implementation of this Water Metering Policy; and,

1.2.2 Considering and incorporating responsible water use and conservation in all other corporate plans (e.g. Strategic Plans).

1.3 The Director of Engineering and Public Works is responsible for:

1.3.1 Initiating the development of water use and conservation strategies, plans and procedures in conjunction with the management team;

1.3.2 Reviewing the Water Metering Strategy and Water Audit;

1.3.3 Reviewing water use characteristics and updating the Water Metering Strategy and Water Audits;

1.3.4 Completing meter calibration and testing and replacement as necessary;

1.3.5 Communicating with the public regarding water use, leak detection, and disruptions from replacement or upgrades of water infrastructure;

1.3.6 Conducting ongoing reviews and implementing changes to realize efficiencies in operations and maintenance practices;

1.3.7 In concert with Finance, accurately recording water consumption by user classification, e.g., single family residential, commercial, and industrial; and,

1.3.8 In concert with Finance reviewing water rates to ensure that the City is following full cost recovery.

2 **OBJECTIVE**

To ensure adequate provision of potable water is made in line with the City's commitments for both today and future generations by:

2.1 Ensuring the City meets legislative requirements for water provision;

2.2 Maintaining assets in the most natural, energy-efficient, and reliable manner that cost the least to operate over the life cycle of the asset;

2.3 Ensuring that the City's services and infrastructure are provided in a sustainable manner to all users within the City;

2.4 Continuously working to reduce water consumption rates through education and other water conservation strategies;

2.5 Regularly tracking water use characteristics so that the effectiveness of water conservation initiatives can be measured and excess use can be identified and responses put into place to eliminate this excess use where practical;

2.6 Avoiding the need to oversize infrastructure based on water wastage or excessive water demands; and,

2.7 Minimizing the City's ecological footprint as measured by dependence on the South Nanaimo River Watershed and all its embedded energy costs to treat and convey this water.

2.8 Adopting a principle of continuous improvement in the City's water operations.

3 **POLICY**

3.1 Background

Council's vision and goal for the community which are outlined in the OCP include implementing wise water use and conservation practices.

3.2 Water Stewardship

3.2.1 Water usage will reflect industry best practices and place Nanaimo as a leader in water stewardship by:

3.2.1.1 Targeting a 10% reduction in per capita water use per decade;

3.2.1.2 Targeting a reduction in Real Losses by 10% by 2020 from 2013;

3.2.1.3 Maintaining a target Infrastructure Leakage Index of 2.5 or lower;

3.2.1.4 Completing an updated Water Audit at least once every 5-10 years; and,

3.2.1.5 Ensuring that water demand forecasting is tracked and allows for effective prediction of water needs.

3.2.2 Water rates are equitable to all customers by ensuring that:

3.2.2.1 100% of connected properties are metered;

3.2.2.2 Customers receiving City water are billed at equitable rates;

3.2.2.3 Rates are reviewed and updated at least once every 5 years;

3.2.2.4 Rates provide adequate funds for system operations as well as infrastructure renewal, replacement, and upgrading; and,

3.2.2.5 Growth pays its appropriate share of costs for capital system improvements.

3.2.3 The public within the City of Nanaimo are aware of the value of water, gauged by:

3.2.3.1 Responses to regular customer surveys completed by the City and demonstration of a high level of support for current water rates and a good knowledge of the City water system;

3.2.3.2 Customers demonstrating a voluntary willingness to conserve water; and,

3.2.3.3 The effectiveness of water consumption information and water bills used as a tool to communicate with customers.

3.3 Water Metering

3.3.1 Water meters economically capture the majority of water use:

3.3.1.1 Where practical, meters are located at property line;

3.3.1.2 Where practical, domestic and fire services are separated at property line so that meters most accurately capture low flows; and

3.3.1.3 Meters are sized using AWWA best practices to avoid oversizing meters.

3.3.2 Water metering and reading technology is chosen to support the City's goals for water efficiency in a cost effective manner:

3.3.2.1 A reading system is selected based on criteria outlined in the Water Metering Strategy and other best practice criteria as needed;

3.3.2.2 New meter technologies may be evaluated through a 2 year pilot program in order to demonstrate ability to meet performance criteria and compatibility requirements as outlined in the Water Metering Strategy; and,

3.3.2.3 Systems and processes are in place to effectively capture and use the data collected from the water meters in order to improve water efficiency.

4 **SCOPE**

This Policy applies to all City of Nanaimo activities related to water metering.

5 REVIEW DATE

This Policy should be reviewed every 5 years.

Date:	201X-XXX-XX	Approved by:	Council / In Camera Council
1. Amendment Date:		Approved by:	