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SERVICES AND SOLUTIONS FOR A LIVABLE REGION

To: Water Committee

From: Thomas Wu, Lead Senior Engineer, Water Services
Joel Melanson, Director, Engineering, Design & Construction, Water Services

Date: March 30, 2026 Meeting Date: April 8, 2026

Subject: **Proximal Works Reviews to Protect GVWD Infrastructure**

RECOMMENDATION

THAT the Water Committee receive for information the report dated March 30, 2026 titled "Proximal Works Reviews to Protect GVWD Infrastructure".

EXECUTIVE SUMMARY

Construction work in proximity to regional drinking water infrastructure has the potential to cause damage or disruption to the regional drinking water supply system. To mitigate risks, Metro Vancouver staff review and provide consent to over 300 proximal work submissions each year and arrange inspection services as required.

Smaller-scale, less complex submissions from contractors, consultants and municipal project managers are categorized as external 'standard' projects, while large-scale regional infrastructure projects with multi-year construction schedules are classified as external 'interagency projects'. The program also supports projects from internal Metro Vancouver groups that require proximal review.

By providing timely review and technical input, typically during the design process, the proximal works program ensures the long-term resilience of the regional drinking water system while reducing costs and risks to major regional infrastructure projects.

PURPOSE

This report is to inform the Water Committee about the proximal works program that ensures protection of the regional drinking water supply infrastructure.

BACKGROUND

Protection of Metro Vancouver's water infrastructure is crucial to ensuring the continued and uninterrupted supply of drinking water for the residents of the region. Projects with work proximal to Metro Vancouver infrastructure (Proximal Work) must ensure that their work meets Metro Vancouver's requirements to protect the regional water supply system.

Through review of proximal work, the Water Services Engineering, Design and Construction Infrastructure group (ECI) helps prevent damage to existing Metro Vancouver water infrastructure from physical strikes, pipe movements, and excessive loading. Working together with Metro Vancouver Real Estate Services, ECI also uphold Water Services property rights. It is critical that work near Metro Vancouver water infrastructure is reviewed and consent provided in writing prior to the start of work.

A proximal works review is initiated when construction work is planned within 30m of water infrastructure. If the work is planned within 10m, Metro Vancouver provides written consent to the proponent and may require the presence of an inspector during construction, depending on risk and complexity of the work.

Proximal works are classified into three categories: External Standard Projects, External Interagency Projects, and Internal Metro Vancouver projects.

External Standard Projects
Metro Vancouver handles coordination and reviews of submittals from project managers, consultants, contractors, and even members of the public for construction works proximal to Water Service infrastructure. Examples include:

- Road construction and paving
- Water main, sanitary and storm maintenance and renewal programs
- Gas main connections and abandonments
- Overhead as well as underground electrical duct installations
- Fiber optic and communications conduits
- Foundation excavation and shoring as well as site servicing

ECI works extensively with member jurisdictions, FortisBC, BC Hydro, Telus, Rogers as well as numerous developers, providing proximal construction input and requirements on the above projects.

External Interagency Projects
Metro Vancouver also works collaboratively with external organizations such as the Ministry of Transportation and Transit (MOTT), TransLink, BC Hydro, and FortisBC to review proximal work impacts from proposed infrastructure projects. These larger-scale projects are often high-profile with increased visibility to the public. Examples include:

- Broadway Subway project
- Fraser River Tunnel project
- TransMountain Pipeline Expansion project
- Pattullo Bridge Replacement project
- Surrey Langley Skytrain project

These typically include an accommodation agreement between Metro Vancouver and the project proponent. A relocation agreement will be added if existing Metro Vancouver utilities need to be moved to accommodate the new infrastructure.

The impacts on Metro Vancouver are similar to the standard proximal works, but are typically larger in scope, scale, and complexity with multi-year construction activities. For these projects, the Water Service Interagency Projects and Quality Control group (IPQC) handles the coordination between Metro Vancouver and the project proponent, while ECI handles the proximal work technical reviews.

Internal Metro Vancouver Projects
ECI assists Water Services and other Metro Vancouver groups, such as Liquid Waste Services, Project Delivery, Solid Waste, Parks, Housing and Real Estate Services on proximal reviews of their capital and operational projects that are being undertaken near water utility infrastructure. These internal projects can vary in scale and complexity. Examples include:

- Coquitlam Main No.4
- Jervis Pump Station Backup Power project
- Stanley Park and Second Narrows Water Supply Tunnels
- Tree cutting and trail maintenance

Proximal Work by the Numbers
Water Services receives and reviews an average of 300 external standard proximal work requests annually and IPQC manages technical review of dozens of interagency projects over the course of these multi-year projects. These reviews typically take place during the project design phase and are completed within a two week time period to ensure that project timelines are maintained and that required mitigations measures are incorporated early in the planning process.

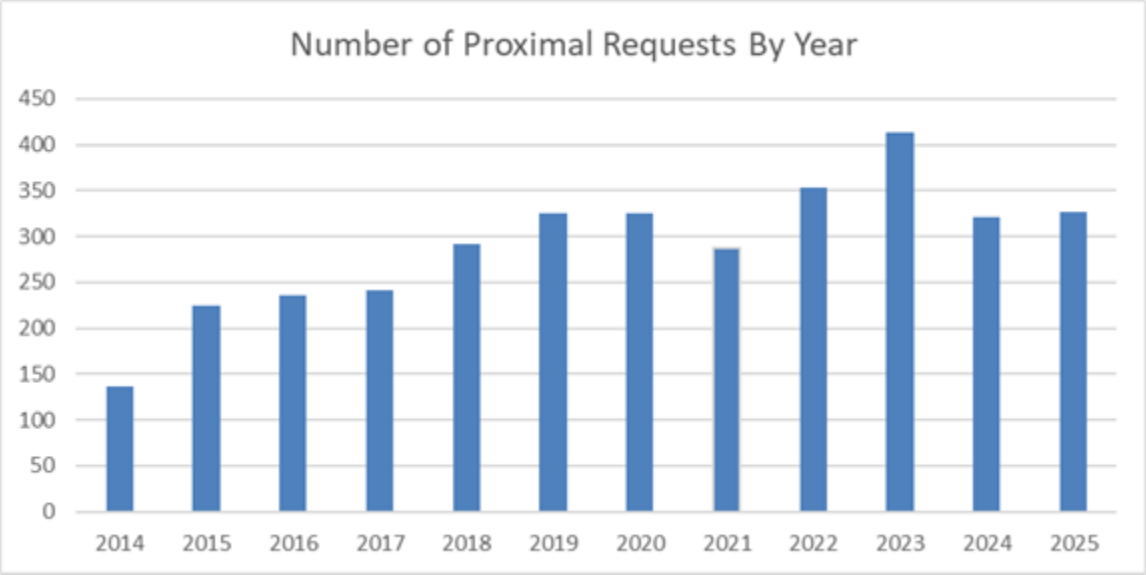

Table 1. External standard proximal works requests by year.

Operational Considerations
While ECI staff handle coordination and technical reviews for proximal works, Water Services Operations and Maintenance also reviews the work to ensure continued and uninterrupted water supply to the region. Projects classified with a medium or high-risk profile require additional approvals from Water Services Operations and Maintenance. Operational risk reviews, system modeling and development of contingency plans are carried out to further mitigate risks. Potential conflicts with other scheduled work are also reviewed and coordinated to ensure risks to the overall water supply system from proposed concurrent activities are acceptable.

ALTERNATIVES
This is an information report. No alternatives are presented.

FINANCIAL IMPLICATIONS

Technical reviews of proximal works by staff and site inspections are covered within ECI's annual budget. For External Interagency Projects, the agreement between Metro Vancouver and the project proponent typically allows Metro Vancouver to recover all costs such as internal technical reviews, external consultant reviews, and on-site inspection services.

OTHER IMPLICATIONS

The proximal works program aligns with resilient infrastructure objectives while supporting regional growth. It proactively addresses utility conflicts, safeguards Metro Vancouver water assets from potential damage, and minimizes delays, cost overruns, and risks to large-scale regional infrastructure projects. As a significant portion of Water Services infrastructure are in dense urban areas, mitigating potential damage also reduces risk of injuries as well as ensures safety for staff and the public.

CONCLUSION

The proximal works program is essential to protect the integrity and reliability of the regional water supply system from third-party impact. Annually several hundred external and internal proximal work requests undergo timely technical review. Comprehensive engineering oversight and a robust inspection program reduce the likelihood of costly, disruptive repairs to Metro Vancouver's water transmission system and enhances staff and public safety.

ATTACHMENT

1. Presentation re: Proximal Work Reviews.

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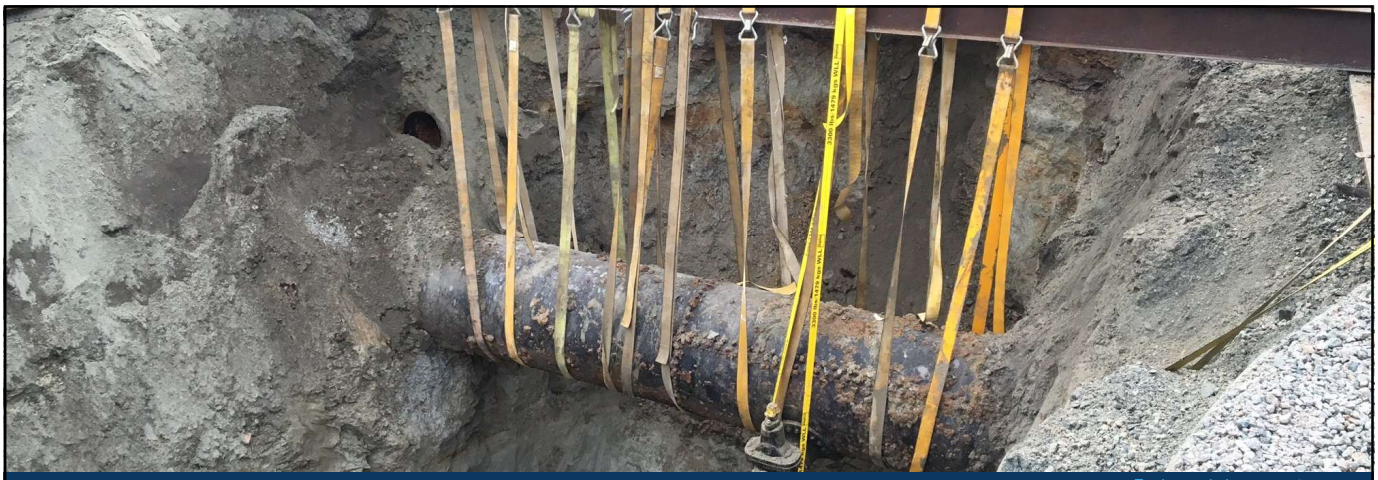

Engineered pipe support

Proximal Work Reviews

PROTECTING WATER SERVICES INFRASTRUCTURE

Danica Vulama
Acting Division Manager, EDC Infrastructure

David Tam
Supervisory Senior Project Engineer, EDC Infrastructure

Water Committee, April 8, 2026
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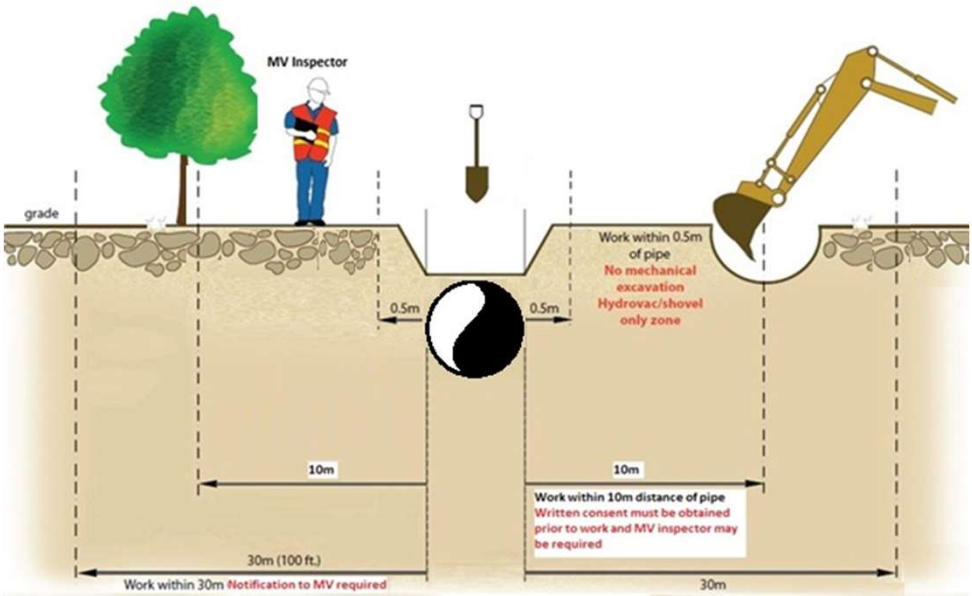
WHAT ARE PROXIMAL WORKS?



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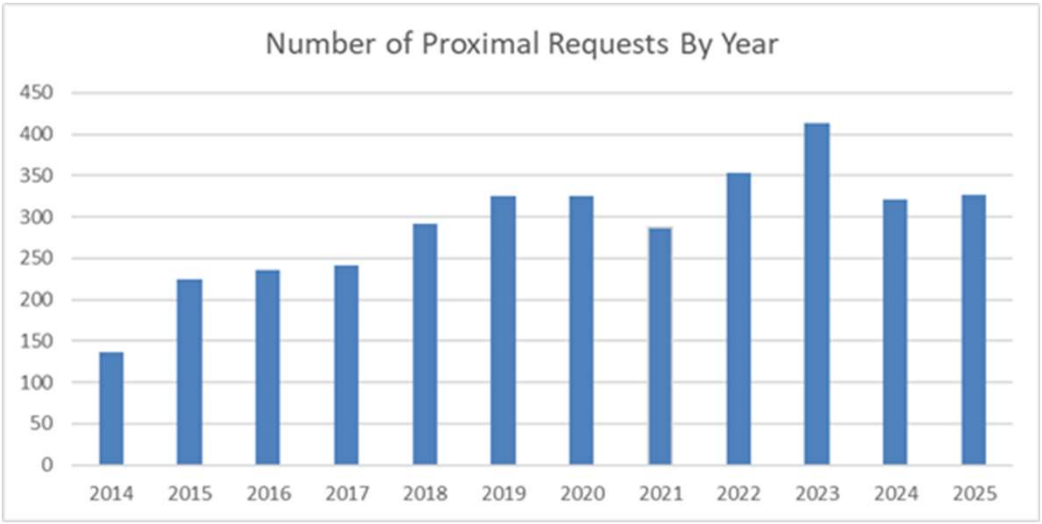
PROXIMAL WORKS BY THE NUMBERS



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BENEFITS OF PROXIMAL WORK PROGRAM

Pipe coating damage

Pipe rupture

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BENEFITS OF PROXIMAL WORK PROGRAM

Tilbury Main Rail Crossing

Settlement Monitoring Adjacent to Development

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BENEFITS OF PROXIMAL WORK PROGRAM

Ensure MV has continued access to existing infrastructure

Support Real Estate Services by specifying conditions for MV's Statutory Right of Ways

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EXAMPLES OF STANDARD PROJECTS

Utility Installation

Geotechnical Investigation

Preloading

Retaining Wall & Soil Anchors

7

EXAMPLES OF EXTERNAL INTERAGENCY PROJECTS

Broadway Subway

Fraser River Tunnel

Pattullo Bridge Replacement

Surrey Langley Skytrain

8

EXAMPLES OF INTERNAL METRO VANCOUVER PROJECTS

LWS – Jervis Pump Station Upgrade

Parks – Tree Cutting

PDE – Second Narrows Water Supply Tunnel

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PROXIMAL WORKS PROGRAM – KEY OUTCOMES

- Improve staff and public safety
- Protect regional water system assets
- Prevent costly and disruptive repairs
- Reduce risks and costs to large scale regional infrastructure projects

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Suspended Section of Capilano Main No.5 over Broadway Subway Construction

Questions and Discussion

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SERVICES AND SOLUTIONS FOR A LIVABLE REGION

To: Water Committee

From: Linda Parkinson, Director, Policy, Planning and Analysis, Water Services

Date: March 24, 2026 Meeting Date: April 8, 2026

Subject: GVWD 2025 Water Supply System Annual Update

RECOMMENDATION

THAT the Water Committee receive for information the report dated March 24, 2026, titled "GVWD 2025 Water Supply System Annual Update".

EXECUTIVE SUMMARY

The GVWD Water Supply System 2025 Annual Update, **Attachment 1**, summarizes key initiatives undertaken by the Greater Vancouver Water District, operating as Metro Vancouver, to continue providing an uninterrupted supply of high-quality drinking water to the region. The report aligns with the Ministry of Health's (Ministry) *Guide for Communicating with Water Users* and supports public awareness of the drinking water program, one of the six core elements of *Health Canada's Multi-Barrier Approach to Safe Drinking Water*.

Delivering high-quality drinking water to over three million residents and businesses requires significant planning, coordination, and investment. In 2025, Metro Vancouver maintained reliable delivery through advanced system risk mitigation, water conservation and communication initiatives, water quality monitoring, and major maintenance activities. Significant capital projects were also undertaken to maintain and upgrade infrastructure, strengthen system resiliency, and support regional growth.

PURPOSE

To provide the Water Committee with the GVWD 2025 Water Supply System Annual Update (report) that ensures Metro Vancouver remains aligned with provincial legislation.

BACKGROUND

The Ministry's *Guide for Communicating with Water Users* establishes a standardized approach for meeting legislated communication requirements. By completing this report, Metro Vancouver aligns with the Ministry's direction and provides transparent and proactive communication with water users. It also promotes public awareness and involvement in the drinking water program, one of the six elements of *Health Canada's Multi-Barrier Approach to Safe Drinking Water*.

GVWD WATER SUPPLY 2025 ANNUAL UPDATE REPORT SUMMARY

System Overview

Metro Vancouver's drinking water comes from rainfall and snowmelt in three protected water supply areas – Capilano, Seymour, and Coquitlam – which together supply over three million residents in the region. The water is treated at either the Seymour Capilano Filtration Plant or the Coquitlam Water Treatment Plant and distributed, wholesale, to member jurisdictions within the region via 520 kilometers (km) of transmission mains, 19 pump stations, 28 in-system storage reservoirs, and eight rechlorination stations. Member jurisdictions then supply the water to residents and businesses via their local distribution systems. This water is tested throughout the transmission system to ensure that high-quality drinking water is consistently distributed to member jurisdictions. Metro Vancouver maintains, upgrades, and builds infrastructure to ensure the region's growing population continues to receive high-quality drinking water now and in the future.

2025 Highlights

Key initiatives undertaken by Metro Vancouver in 2025 included the following:

- Water Quality Sampling and Testing:
  - Conducted 169,274 drinking water tests through the Water Quality Monitoring and Reporting Plan for Metro Vancouver and member jurisdictions; the results of which can be found in the *Greater Vancouver Water District Water Quality 2025 Annual Report*
- Water Use and Conservation:
  - Monitored the peak day consumption and calculated the 2025 peak day as 1.49 billion litres which was recorded on Sunday, July 13, 2025
  - Promoted water conservation through the Water Conservation campaign and the Water Wagon program
  - Rolled out communication and education related to the *Drinking Water Conservation Plan*, which sets water use restrictions
  - Updated the "Reservoir Levels and Water Use" webpage to provide more accessible information on regional water supply conditions
- Water System Risk Mitigation:
  - Initiated a refresh of the Seismic Assessment Program that identifies and prioritizes potential resiliency measures for infrastructure deemed most at risk after a seismic event
- Water System Management:
  - Continued the update of the *Drinking Water Management Plan* to reflect regional priorities. Work in 2025 focused on developing the plan's goals, strategies and actions
  - Completed annual maintenance, including cleaning eight reservoirs, conducting 220 condition assessments, issuing over 5,500 preventive maintenance work orders, and completing thousands of inspections and asset rehabilitation/replacement activities to maintain system performance
  - Completed the tunnel excavation portion of the Annacis Water Supply Tunnel. Steel pipe installation and the construction of the valve chambers were started
  - Completed the construction of the Second Narrows Water Supply Tunnel and connected the first of three conduits to the existing water system. The remaining two conduits will be connected over the next few years
  - Completed the seismic upgrade of the Pebble Hill Reservoir Units 1 and 2 to withstand and remain in operation following a major earthquake
  - Completed construction of the Fleetwood Reservoir. The facility is now complete and in service, and connects to the Fleetwood Water Main and the City of Surrey's Fleetwood Pump Station

- Emergency Response:
  - Completed repairs on 21 leaks across the system without interruption to the supply of drinking water
- Financial Planning:
  - Delivered $394 million in total water sales, with seasonal bulk water rates intended to incentivize members to reduce water use in the high demand season
  - Advanced GVWD Board direction to implement a Water Development Cost Change framework to fund growth driven water infrastructure for future developments

ALTERNATIVES
This is an information report. No alternatives are presented.

FINANCIAL IMPLICATIONS
There are no financial implications associated with the report. The cost for all programs and projects are recovered through annual budgets.

CONCLUSION
By completing the GVWD 2025 Water Supply System Annual Update, Metro Vancouver remains aligned with the Ministry of Health's direction and initiatives concerning public communication. This report provides transparent and proactive communication with water users. It also promotes public involvement and awareness of the drinking water program, one of the six elements of *Health Canada's Multi-Barrier Approach to Safe Drinking Water*.

ATTACHMENT
1. Greater Vancouver Water District 2025 Water Supply System Annual Update, dated March 2026.

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Greater Vancouver Water District

Water Supply System 2025 Annual Update

March 2026

About Metro Vancouver

Metro Vancouver is a diverse organization that plans for and delivers regional utility services, including water, sewers and wastewater treatment, and solid waste management. It also monitors and regulates air quality, plans for urban growth, manages a regional parks system, provides affordable rental housing, and serves as a regional federation. The organization is a federation of 21 municipalities, one electoral area, and one treaty First Nation located in the region of the same name. The organization is made up of four separate legal entities, each governed by its own Board of Directors. Board directors are elected officials from member jurisdictions.

Territorial Acknowledgement

Metro Vancouver acknowledges that the region's residents live, work, and learn on the shared territories of many Indigenous peoples, including 10 local First Nations: q̓i ć əy̓ (Katzie), q̓ʷɑ:ńƛ̓əń (Kwantlen), kʷikʷəƛ̓əm (Kwikwetlem), máthxwi (Matsqui), xʷməθkʷəy̓əm (Musqueam), qiqéyt (Qayqayt), Semiahmoo, Sḵwx̱wú7mesh Úxwumixw (Squamish), scəẇaθən məsteyəxʷ (Tsawwassen), and səlilwətaɬ (Tsleil-Waututh).

Metro Vancouver respects the diverse and distinct histories, languages, and cultures of First Nations, Métis, and Inuit, which collectively enrich our lives and the region.

4515 Central Boulevard, Burnaby, BC, V5H 0C6
metrovancouver.org
March 2025

COVER: FLEETWOOD RESERVOIR

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Executive Summary

The *Greater Vancouver Water District Water Supply System 2025 Annual Update* report summarizes Metro Vancouver's key initiatives in 2025 to maintain a high-quality, reliable drinking water service for the region. Throughout the year, Metro Vancouver advanced system risk mitigation, water conservation and communication efforts, water quality monitoring, and major maintenance activities. Significant capital projects were also delivered to maintain and upgrade infrastructure, strengthen system resiliency, and support regional growth.

This report was prepared following the Ministry of Health's *Guide for Communicating with Water Users* to ensure transparent, proactive communication with member jurisdictions and the public. It also supports Health Canada's Multi-Barrier Approach to Safe Drinking Water by promoting awareness and understanding of the regional drinking water system.

System Overview

Metro Vancouver's drinking water comes from rainfall and snowmelt in three protected water supply areas – Capilano, Seymour, and Coquitlam – which together supply over three million residents in the region. The water is treated at either the Seymour Capilano Filtration Plant or the Coquitlam Water Treatment Plant and distributed, wholesale, to member jurisdictions within the region via 520 kilometers (km) of transmission mains, 19 pump stations, 28 in-system storage reservoirs, and eight rechlorination stations. Member jurisdictions then supply the water to residents and businesses via their local distribution systems. This water is tested throughout the transmission system to ensure that high-quality drinking water is distributed to member jurisdictions. Metro Vancouver maintains, upgrades, and builds infrastructure to ensure its ability to continue providing high-quality drinking water to meet the current and future needs of the growing region.

2025 Highlights

Key initiatives undertaken by Metro Vancouver in 2025 included the following:

Water Quality Sampling and Testing:

- Conducted 169,274 tests of drinking water through the *Water Quality Monitoring and Reporting Plan* for Metro Vancouver and Member Jurisdictions; the results of which can be found in the Greater Vancouver Water District 2025 Water Quality Annual Report

Water Use and Conservation:

- Monitored the peak day consumption and calculated the 2025 peak day as 1.49 billion litres which was recorded on Sunday, July 13, 2025
- Promoted water conservation through the Water Conservation campaign and the Water Wagon program
- Rolled out communication and education related to the *Drinking Water Conservation Plan*, which sets water use restrictions
- Updated the "Reservoir Levels and Water Use" webpage in 2025 to provide more accessible information on regional water supply conditions

Water System Risk Mitigation:

- Initiated a refresh of the Seismic Assessment Program in 2025 that identifies and prioritizes potential resiliency measures for infrastructure deemed most at risk after a seismic event

Water System Management:

- Continued the update of the *Drinking Water Management Plan* to reflect regional priorities. Work in 2025 focused on developing the plan's goals, strategies, and actions
- Completed annual maintenance, including cleaning eight reservoirs, conducting 220 condition assessments, issuing over 5,500 preventive maintenance work orders, and completing thousands of inspections and asset rehabilitation/replacement activities to maintain system performance
- Completed the tunnel excavation portion of the Annacis Water Supply Tunnel. Steel pipe installation and the construction of the valve chambers were started
- Completed the construction of the Second Narrows Water Supply Tunnel and connected the first of three conduits to the existing water system. The remaining two conduits will be connected over the next few years
- Completed the seismic upgrade of the Pebble Hill Reservoir Units 1 and 2 to withstand and remain in operation following a major earthquake
- Completed construction of the Fleetwood Reservoir. The facility is now complete and in service, and connects to the Fleetwood Water Main and the City of Surrey's Fleetwood Pump Station

Emergency Response:

- Completed repairs on 21 leaks across the system without interuption to the supply of drinking water

Financial Planning:

- Delivered total water sales of $394 million with seasonal bulk water rates intended to incentivize members to reduce water use in the high demand season
- Advanced GVWD Board Direction to implement a Development Cost Charge framework to fund growth driven water infrastructure for future developments

Acronyms

BC	British Columbia
BL	Billion Litres
CIPS	Close Interval Potential Surveys
CWTP	Coquitlam Water Treatment Plant
DCC	Development Cost Charge
DCVG	Direct Current Voltage surveys
DWCP	Drinking Water Conservation Plan
DWMP	Drinking Water Management Plan
ERP	Emergency Response Plan
GVWD	Greater Vancouver Water District
ha	Hectares
km	Kilometres
LSCR	Lower Seymour Conservation Reserve
m	Metres
ML	Million Litres
MLD	Million Litres per Day
PMs	Preventative maintenances
QMSDW	Quality Management System for Drinking Water
SCFP	Seymour Capilano Filtration Plant
UOCG	Utility Operational Coordination Guide
UV	Ultraviolet
WSEMP	Water Services Emergency Management Plan

1. Introduction

1.1 Purpose

This report provides an annual update on the region's drinking water system and aims to provide clear information about water quality, system performance, risks, and infrastructure investments.

As a water supplier regulated under BC's *Drinking Water Protection Act and Drinking Water Protection Regulation*, Metro Vancouver is required to communicate with water users on various topics defined in the legislation. This report was prepared following guidance from the Ministry of Health's *Guide for Communicating with Water Users*.

Through this report, Metro Vancouver seeks to promote public awareness of the drinking water program, which has been identified as one of the components of the *Multi-Barrier Approach to Safe Drinking Water* by Health Canada.

1.2 Greater Vancouver Water District

The *Greater Vancouver Water District* (GVWD), operating as Metro Vancouver, was created and constituted under the provincial statute, the *Greater Vancouver Water District Act*, to supply drinking water to member jurisdictions. The GVWD is governed by an administration board (the Board) consisting of representatives from the member jurisdictions of the GVWD. The Board appoints a commissioner who oversees activities of the GVWD.

The GVWD membership consists of 18 municipalities, one Electoral Area, and one Treaty First Nation. The GVWD, working together with its members, plans for and delivers regional-scale drinking water services to over 3 million people. Table 1 shows the list of member jurisdictions that are supplied water by the GVWD.

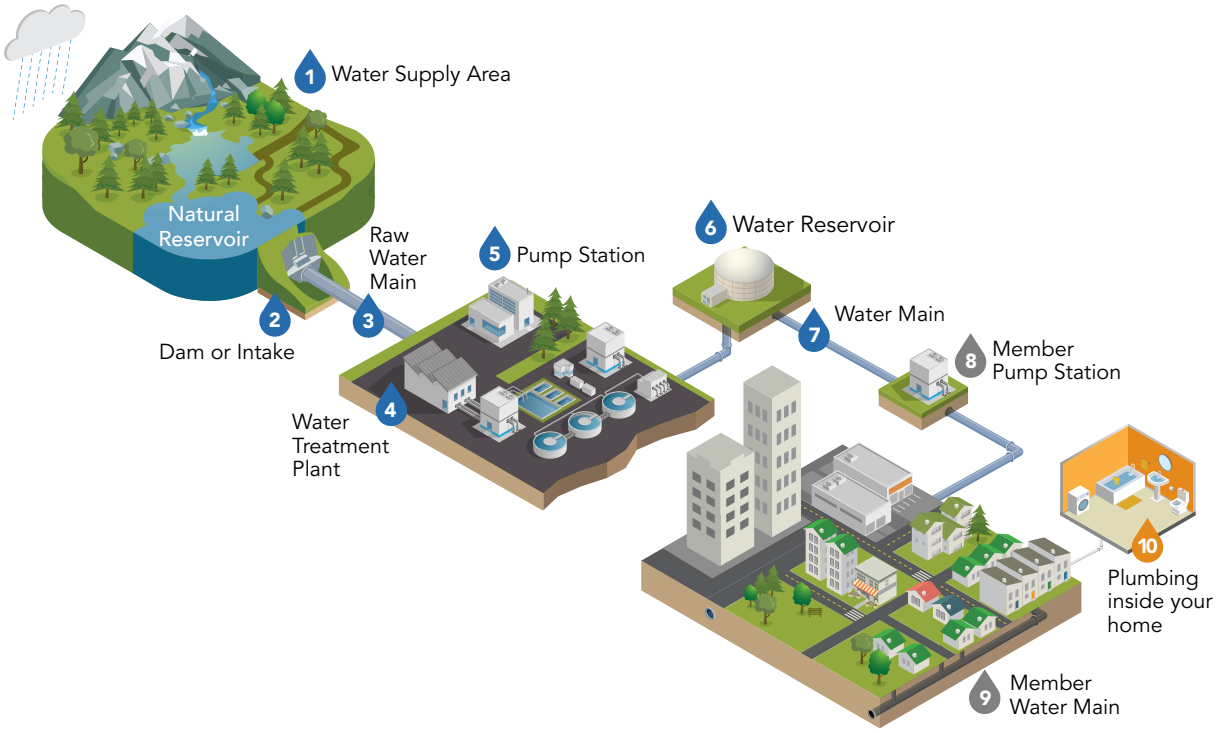
Table 1: Greater Vancouver Water District Member Jurisdictions

Village of Anmore
Village of Belcarra
City of Burnaby
City of Coquitlam
City of Delta
Electoral Area A
City of Langley
Township of Langley
City of Maple Ridge
City of New Westminster
City of North Vancouver
District of North Vancouver
City of Pitt Meadows
City of Port Coquitlam
City of Port Moody
City of Richmond
City of Surrey
scəwaθən məsteyəxʷ (Tsawwassen First Nation)
City of Vancouver
District of West Vancouver

Metro Vancouver is responsible for:

- Protecting the water supply areas
- Storing, treating, and ensuring the quality of the water
- Supplying drinking water to member jurisdictions
- Upgrading, maintaining, and expanding the system
- Promoting drinking water conservation
- Planning for the future to meet the drinking water needs of the growing population
- Ensuring the region's resilience in the face of unpredictable annual impacts of climate change

Figure 1: Metro Vancouver Drinking Water System Overview



2. Drinking Water System Overview

Metro Vancouver's drinking water comes from rainfall and snowmelt stored in three protected reservoirs:

- Capilano Reservoir
- Seymour Reservoir
- Coquitlam Reservoir

Three alpine lakes, Loch Lomond, Burwell Lake, and Palisade Lake, provide additional storage.

Metro Vancouver operates and maintains the Cleveland Dam, Seymour Falls Dam, and the alpine lake dams. BC Hydro owns and operates the Coquitlam Dam. Metro Vancouver works with BC Hydro to manage water levels and secure drinking water supply.

Water is collected, stored, treated, and delivered to member jurisdictions through dams, water treatment plants, transmission mains, pump stations, and in-system reservoirs. The entire system, including the water supply areas, covers approximately 2,860 square km. Figure 2 provides an overview of the Metro Vancouver water supply system.

Figure 2: Metro Vancouver Drinking Water System Map

2.1 Source Water

Metro Vancouver's water supply areas together with the Lower Seymour Conservation Reserve total approximately 65,000 hectares (ha) of protected lands north of the metropolitan area. The three water supply areas are, in order from west to east:

- Capilano (19,535 ha)
- Seymour (12,375 ha)
- Coquitlam (20,461 ha)

Public access is restricted under *Metro Vancouver's Watershed Access Policy* to protect water quality. Limiting access is a key part of Health Canada's *Multi-Barrier Approach to Safe Drinking Water*.

The Capilano water supply area is the most western of Metro Vancouver's water supply areas. The Cleveland Dam and Capilano Reservoir created behind it are located on the Capilano River. The Cleveland Dam is a concrete dam built in 1954 and has a normal operating volume of 43.4 billion litres (BL). The Capilano water supply area has one additional storage reservoir, Palisade Lake, with an annually usable storage capacity of 10 billion litres (BL).

The Seymour Falls Dam and the Seymour Reservoir created behind it are located on the Seymour River and are at the highest elevation of the three water system supply sources. The Seymour Falls Dam was built in 1961 to replace the original dam that was built in 1927 and has a normal operating volume of 23.5 BL. Also within the Seymour water supply area are two dammed alpine lakes, Burwell Lake and Loch Lomond, which have storage capacities of 12 BL and 7 BL, respectively. Water from the alpine lakes is typically used only during high-demand periods in the summer.

Metro Vancouver's most eastern water supply is the Coquitlam Reservoir. The water in Coquitlam Reservoir is allocated through provincial water licenses to BC Hydro for power generation and Metro Vancouver for drinking water. BC Hydro owns and operates the Coquitlam Dam and is responsible for releasing environmental flows into the Coquitlam River for fish and wildlife. Metro Vancouver has agreements with BC Hydro to access additional water supply from the reservoir by buying a portion of the stored water currently allocated to power generation. The province licenses Metro Vancouver to use 451 BL of water per year. Every year, additional water is purchased from BC Hydro by Metro Vancouver for drinking water. In 2025, Metro Vancouver purchased an additional 56.0 BL from BC Hydro to meet drinking water needs.

2.2 Water Treatment Facilities

Metro Vancouver's source water is treated at either the Seymour Capilano Filtration Plant or the Coquitlam Water Treatment Plant. The water must be treated, as required under the *Drinking Water Protection Act* to meet British Columbia's Drinking Water Treatment Objectives (Microbiological) for Surface Water Supplies.

In addition, Metro Vancouver's treated water meets the requirements for physical and chemical parameters listed in the federal *Guidelines for Canadian Drinking Water Quality*.

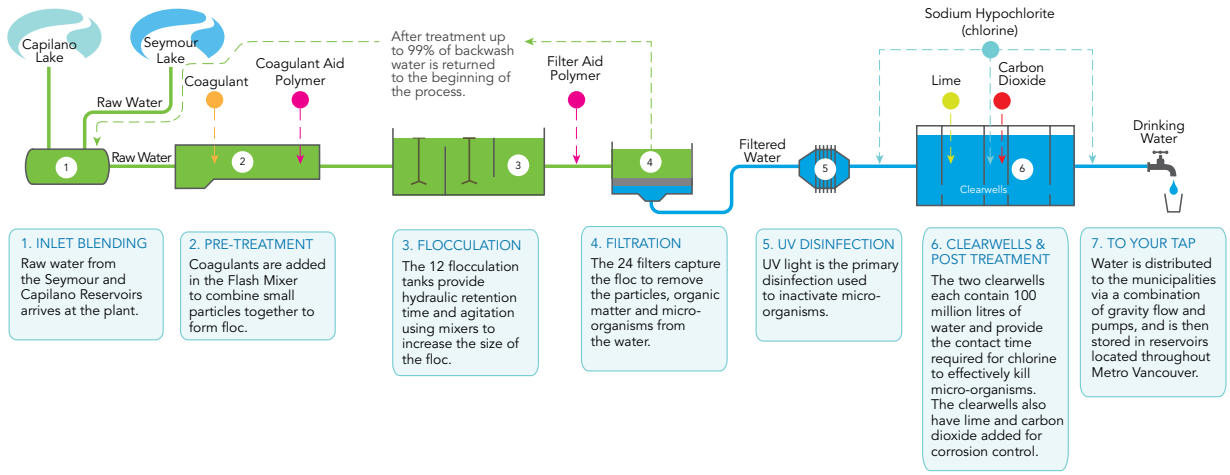
Seymour Capilano Filtration Plant

The Seymour Capilano Filtration Plant (SCFP) receives raw water from both the Seymour and Capilano Reservoirs. This provides the ability to blend or separately treat each source if raw water quality conditions require it. In 2025, SCFP treated an average of 718 million litres per day (MLD) and a maximum of 940 MLD; the plant is designed to treat up to 1,800 MLD.

Raw water is pumped from the Capilano Reservoir to SCFP for treatment via the Capilano Raw Water Pump Station (CRWPS) and a 7 km tunnel. Treated water flows by gravity back to the Capilano system via a 7 km tunnel. Since the SCFP is at a higher elevation than the Capilano Reservoir, excess pressure is available from the returning treated water, for which an energy recovery system is utilized. The recovered energy partially offsets the power requirements for the CRWPS.

The primary objective of the filtration plant is the removal of particulates, organic matter, and micro-organisms that are naturally present in the source water. The treatment processes at SCFP include coagulation and flocculation, followed by direct filtration using granular media (fine sand and anthracite). Ultraviolet (UV) light provides primary disinfection, and sodium hypochlorite (chlorine) is used for secondary disinfection. An added benefit of filtration is that it reduces the amount of chlorine required to maintain a residual in the transmission and distribution systems. The final treatment step is the addition of lime and carbon dioxide for corrosion control. The filters are backwashed regularly, and the backwash water is treated to separate out solids. Dewatered residuals – the final dry material from backwash water treatment – are transported to a cement plant for reuse in cement production or to a landfill when the cement plant is temporarily shut down for maintenance. Figure 3 describes the individual treatment processes. For more information visit: Seymour Capilano Filtration Plant brochure (metrovancouver.org).

Figure 3: Seymour Capilano Filtration Plant Process Overview



Coquitlam Water Treatment Plant

The Coquitlam Water Treatment Plant (CWTP) treats raw water from Coquitlam Reservoir. The CWTP is located within the city of Coquitlam. In 2025, CWTP treated an average of 382 MLD and a maximum of 784 MLD; the plant is designed to treat a maximum of 1,200 MLD.

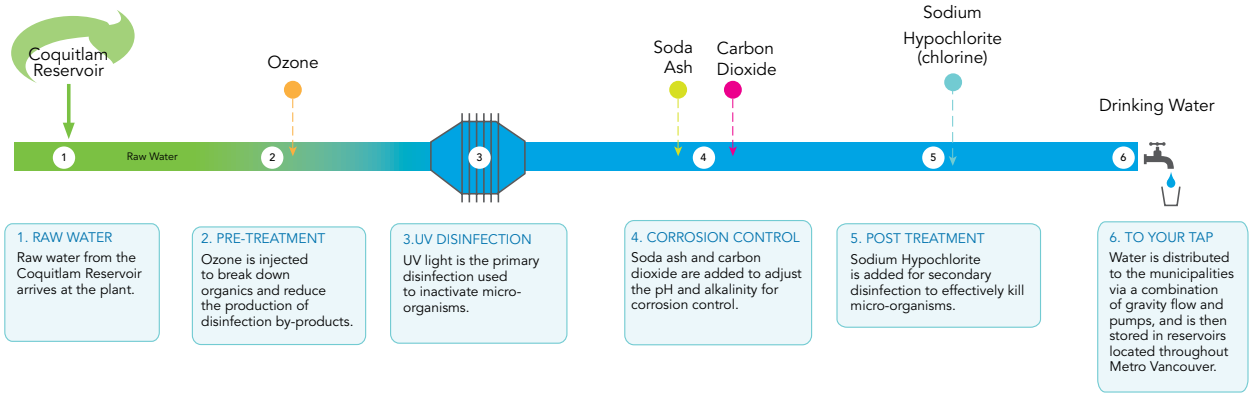
The Coquitlam water supply area has different geology than the Seymour and Capilano watersheds, resulting in consistently lower turbidity even during heavy rainfall. Because of this, the Coquitlam system uses a different treatment approach than the SCFP.

Water from the Coquitlam Reservoir is first treated with ozone before entering the Coquitlam UV Disinfection Facility. Ozone serves primarily to break down organic material and minimize the formation of disinfection by-products (DPBs) associated with chlorination and enhances water clarity, which increases the efficiency of the UV disinfection process and reduces energy demand.

After ozonation, the water flows through eight ultraviolet units, each equipped with 40 UV lamps housed in protective sleeves. As the water passes through, UV light inactivates microorganisms without requiring additional treatment chemicals. Chlorine is then added to protect against bacterial regrowth throughout the water supply system.

Before entering the transmission system, pH and alkalinity are adjusted using soda ash (sodium carbonate) and carbon dioxide. Figure 4 shows the CWTP process flow diagram. More information is available in the Coquitlam UV fact sheet (metrovancouver.org).

Figure 4: Coquitlam Water Treatment Plant Process Overview



2.3 Transmission System

Metro Vancouver supplies, on average, approximately 1.1 billion liters of drinking water per day. This increases during the high demand season of 1 May - 15 October and during the summer months, demand can exceed 1.5 billion liters per day.

The transmission system includes:

- 19 pump stations
- 28 in-system reservoirs
- Eight secondary disinfection facilities
- More than 520 km of transmission water mains, ranging from 0.35 to 3 m in diameter.

Thousands of kilometres of additional local distribution mains deliver water directly to residents and businesses.

Water transmission from the Capilano and Seymour sources cross under Burrard Inlet via the First Narrows and Second Narrows marine crossings. The Coquitlam supply is conveyed south without immediately crossing major waterways. From these points, the conveyance of water is predominantly in a north-to-south direction, with interconnecting east-west transmission mains and pump stations.

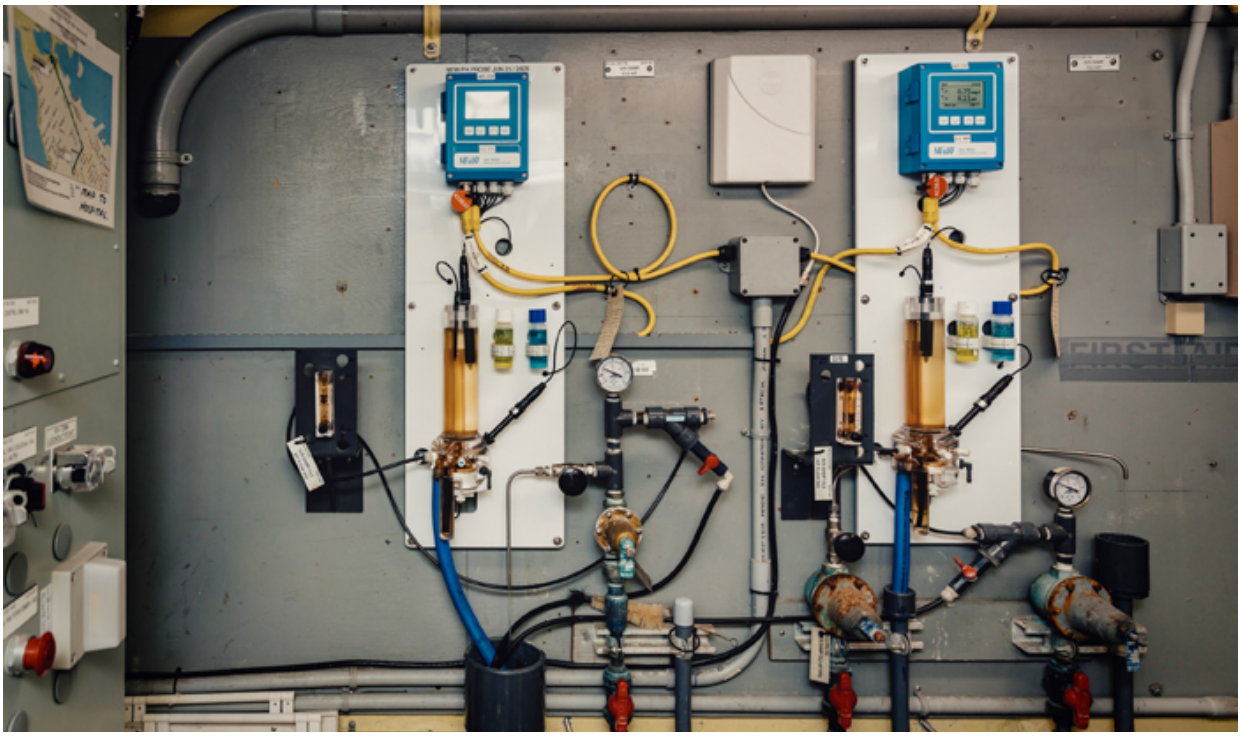
During periods of low water demand, water flows primarily by gravity from the high elevation water treatment plants down to much of the region. During peak demand, or when parts of the system are out of service for construction or maintenance, supplemental pumping is necessary.

3. Water Quality Sampling Program

Metro Vancouver conducts daily testing on source water, treated water, and water in the transmission system in accordance with the *Water Quality Monitoring and Reporting Plan for Metro Vancouver (GVWD) and Member Jurisdictions*. In 2025, Metro Vancouver conducted 169,274 water quality tests. Results are published annually in the *Water Quality Annual Reports* available on the Metro Vancouver website. The *Greater Vancouver Water District 2025 Water Quality Annual Report* will be available in late April 2026.

The *Water Quality Monitoring and Reporting Plan for Metro Vancouver (GVWD) and Member Jurisdictions* is currently being updated from its 2018 edition and will be completed in 2026.

Figure 5: Water monitoring at Chilco and Alberni Secondary Disinfection Station



4. Evolving Guidelines

Health Canada develops the *Guidelines for Canadian Drinking Water Quality*. BC's Ministry of Health adopts these guidelines as drinking water objectives in BC and publishes BC-specific guidance in the *Drinking Water Officers' Guide*.

Metro Vancouver monitors regulatory updates and assesses whether changes require upgrades to treatment processes or infrastructure. The system is designed to meet current standards and adapt to future requirements. In 2025, Health Canada consulted on several key contaminant guidelines, including proposed revisions for Trihalomethanes (chlorinated disinfection byproducts) and Arsenic, along with updated guidance on radiological parameters and corrosion control. Potential implications of proposed regulatory changes have been carefully considered with respect to Metro Vancouver's drinking water supply, treatment processes, monitoring, and reporting requirements.

5. Water System Risks and Mitigation

Metro Vancouver follows the *Quality Management System for Drinking Water (QMSDW) Operational Plan*, which includes risk assessment outcomes and implementation of critical control measures. Risk assessment is a fundamental part of the QMSDW Operational Plan process. It forms the foundation for building a set of specific prioritized actions to safeguard drinking water and aid in strategic decision making, planning, and resource allocation. The process involves identifying, assessing, controlling, and mitigating the risks of the hazardous events that may occur in Metro Vancouver's drinking water system.

5.1 Water Supply Area Risks and Mitigation

Metro Vancouver's water supply areas have restricted access to minimize human-caused pollution, environmental damage, and wildfires. Climate change presents long-term risks to water supply and water quality. Climate models predict more frequent and intense precipitation events through the winter and spring, and hotter, drier summers and falls. This shift in weather patterns may increase landslide and wildfire activity and increase turbidity events capable of overwhelming current treatment systems.

A warming climate is expected to reduce snowpack levels, resulting in lower spring and summer snowmelt inflows to the reservoirs and increasing wildfire risk at higher elevations. Metro Vancouver has accounted for higher turbidity levels and changing precipitation patterns – both of which may affect available water supply – in its long term infrastructure planning. This includes upgrades such as filtration pretreatment, adjustments to water intake locations, and updated treatment system designs.

Metro Vancouver is proposing to increase its capacity to withdraw water from Coquitlam Reservoir, the largest of the three drinking water sources, through the Coquitlam Lake Water Supply Project (CLWSP). Water conservation alone cannot continue to be relied upon to serve Metro Vancouver's future water demands, and the CLWSP will help Metro Vancouver to meet the drinking water needs of current and future generations and prepare for the effects of climate change, including unpredictable droughts and snowpack. The project will include a new water intake, a water supply tunnel, and water treatment facilities. By building this new infrastructure, Metro Vancouver will double its capacity to access, treat, and distribute high quality drinking water from Coquitlam Reservoir for the benefit of current and future generations.

Additional mitigation measures are underway, including improved snowpack monitoring and enhanced wildfire risk mitigation planning.

5.2 Treatment System Risks and Mitigation

The source water quality at the Coquitlam Reservoir and the treated water quality at CWTP currently meet federal and provincial objectives for filtration exemption. Based on this, CWTP was originally designed to use ozone, ultraviolet (UV), and chlorine disinfection. Although the reservoir's source water quality is high, turbidity events do occur at the existing intake location. These events are expected to become more frequent in the future due to climate change. As a result, filtration of Coquitlam Reservoir water is likely to be required to meet future regulatory requirements and to improve the resiliency of the treatment process in response to anticipated climate related impacts on source water quality. Metro Vancouver is currently in the planning stages for a new filtration plant for the Coquitlam source.

In addition to removing turbidity, future filtration of the Coquitlam source will also reduce levels of naturally occurring organic material. Lowering organics in the water provides several benefits, including reducing the amount of chlorination required to maintain adequate residual levels in the transmission and distribution systems. With fewer organics and lower chlorine use, levels of disinfection by products – parameters regulated under the federal *Guidelines for Canadian Drinking Water Quality* – are also reduced.

Filtration will strengthen the system's resiliency and help manage risks related to future regulatory changes and emerging contaminants. Similar considerations informed Metro Vancouver's past decisions to implement filtration for the Capilano and Seymour sources.

Metro Vancouver is also conducting studies at the SCFP to improve the plant's resilience to climate change. These studies are supporting process improvements that will allow continued operation during periods of high turbidity.

5.3 Transmission System Risks and Mitigation

The Metro Vancouver transmission system faces a number of risks including potential seismic events, power outages, aging infrastructure, and strain on the system during peak day demand.

Seismic

Metro Vancouver has completed a series of seismic upgrades over the past 30 years and has over $24.25 million worth of planned resiliency projects in the next 5 years. These projects include seismic upgrades to pump stations and reservoirs, marine crossing replacements, and water main renewals.

The results of the *Seismic Vulnerability Assessment Study* completed in 2021 are being used to guide the development of resiliency and emergency response plans for the water supply system, including strategies to ensure that basic service can be maintained across the region following a major seismic event. Building on this work, Metro Vancouver launched a Seismic Assessment Program in 2025, using selection criteria informed by the findings of the vulnerability assessment studies to prioritize assets for further evaluation. Further studies will be carried out to identify the infrastructure components that are most at risk of damage or failure during a seismic event. Resiliency measures for these assets will then be prioritized and incorporated into future capital projects.

Power Outages

Power outages can cause operational issues in the transmission system, especially at pump stations.

Most critical sites already have backup power to help maintain a reliable water supply. Additional backup power systems are being added to support continued operation of key water supply facilities during both planned and unplanned outages.

Aging Infrastructure

Aging infrastructure increases risk of leaks and service disruptions in the transmission system. Metro Vancouver's *Asset Management for Water Services Policy* requires ongoing condition assessments of system assets, which can result in repair or replacement projects. Further information on the Asset Management Program for the regional water utility is provided in Section 9.0.

Peak Day Demand

Peak day is the day each year when the region draws the largest volume of water from its three water supply sources, placing the greatest strain on the transmission system. Peak day demand is an important metric because peak day consumption drives the sizing and timing of transmission infrastructure. Peak demand is closely linked to summer weather conditions. Annual outdoor watering restrictions, along with strong public education and enforcement programs, help conserve water and reduce pressure on the system during this period.

6. Water Use and Conservation

6.1 Water Availability and Use Trends

Metro Vancouver's reservoirs refill each winter and spring through rainfall and snowmelt. That water needs to last through the summer and into the fall. In 2025, an early snowfall but mild and dry winter conditions led to a below-average snowpack. March storms temporarily boosted snowpack to 83 per cent of normal, but warm, dry weather in April and May accelerated melt, reducing levels to 40 per cent of normal by June.

The source reservoirs were proactively managed through the spring and early summer to capture the incoming snowmelt, ensuring the Capilano and Seymour Reservoirs reached their full pool water levels, which happened on June 11. Through careful source management and periodic precipitation events, both reservoirs remained near full pool until early July.

Precipitation and temperature patterns from May 1 to October 15:

- Overall precipitation was below normal for the season.
- June: only 23 per cent of typical rainfall
- July: 47 per cent of typical rainfall
- August 15 storm: delivered an entire season's worth of rain in one day, resulting in August reaching 232 per cent of typical rainfall.
- September: remained dry until the final days, ending at 70 per cent of typical rainfall

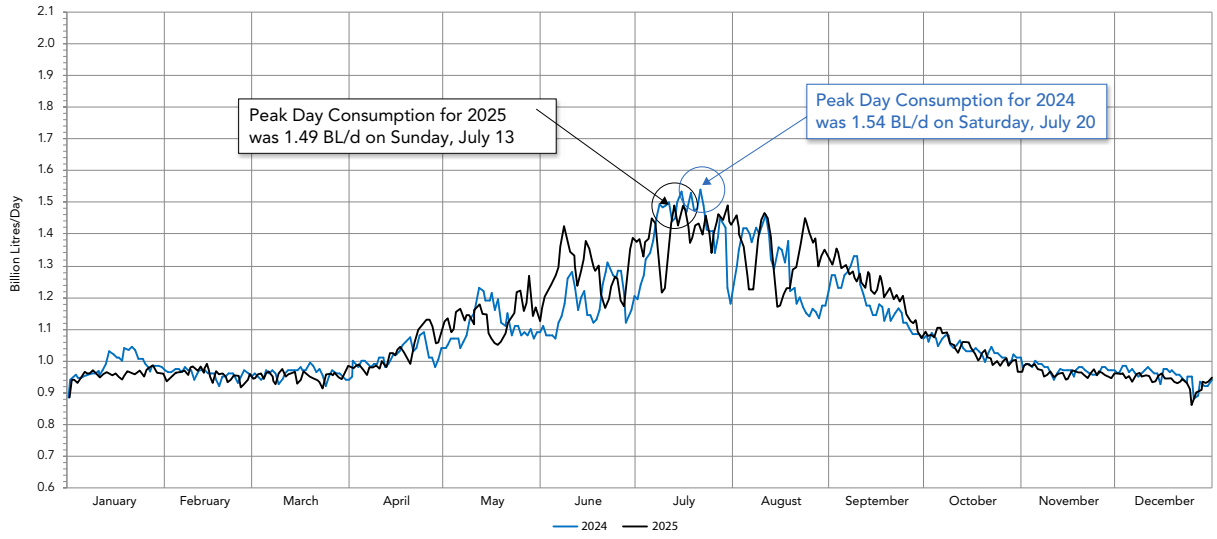
Summer temperatures were consistently warmer than average:

- June – August: about 1°C above normal
- September: 1.8°C above normal

Despite the challenges, Metro Vancouver's water supply system performed well during the high-demand season, with average daily and peak hourly water demands slightly less than 2024 levels.

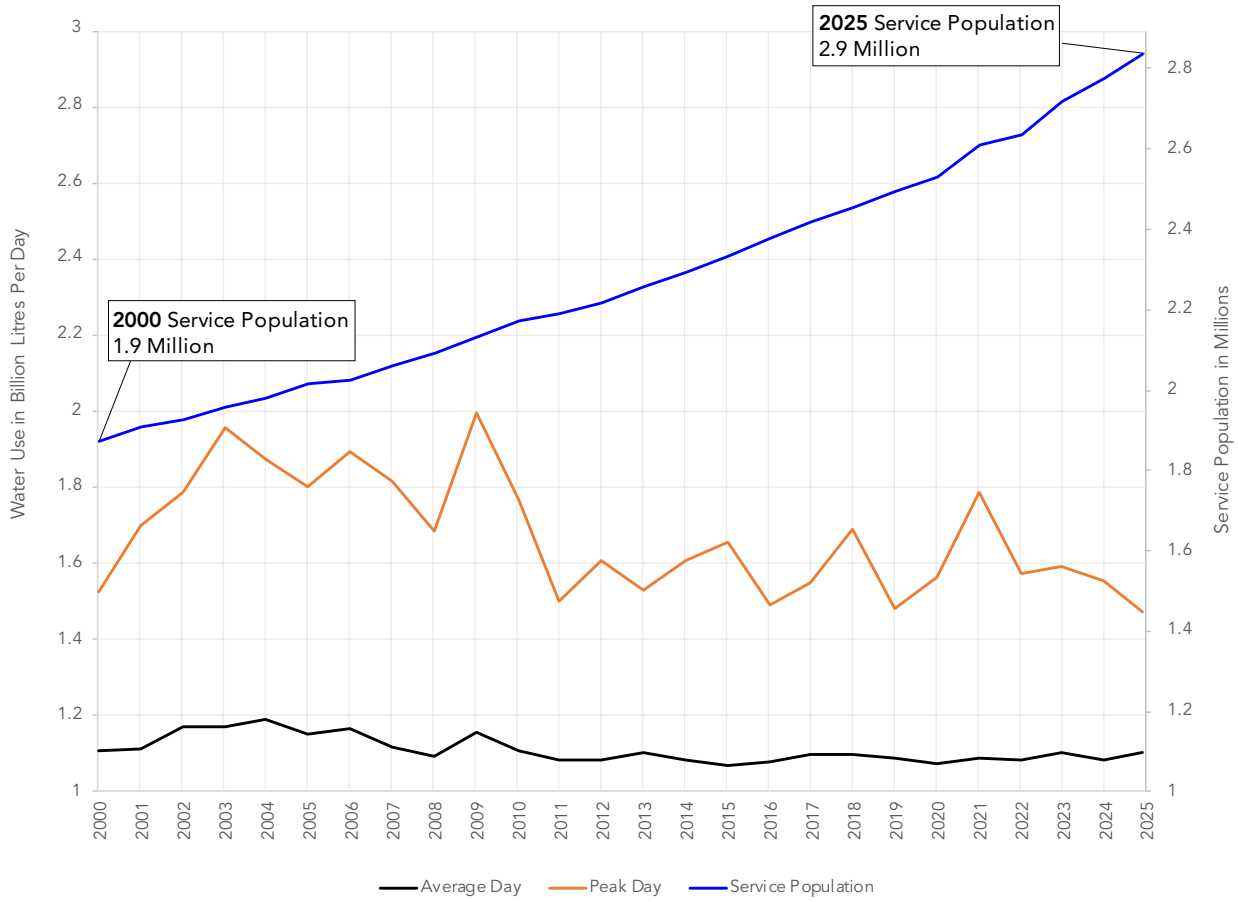
As shown in Figure 6, the peak day consumption in the summer of 2025 was 1.49 BL/d, recorded on Sunday, July 13. For comparison, the 2024 peak day consumption was 1.54 BL/d, which occurred on Saturday, July 20.

Figure 6: 2024 and 2025 Daily Water Consumption Comparison



Between 2000 and 2025, Metro Vancouver's population grew by 1,012,000 people, an average annual increase of about four per cent. Despite this growth, the region's average daily water demand has remained relatively stable over the past 25 years, as shown in Figure 7. As a result, per capita water use has decreased over the same period (Figure 8). This decline is generally linked to more efficient plumbing fixtures, increased urban densification, greater public awareness of water conservation, and stricter outdoor watering restrictions.

Figure 7: Regional Population and Water Use from 2000 to 2025



6.2 Water Conservation and Outreach

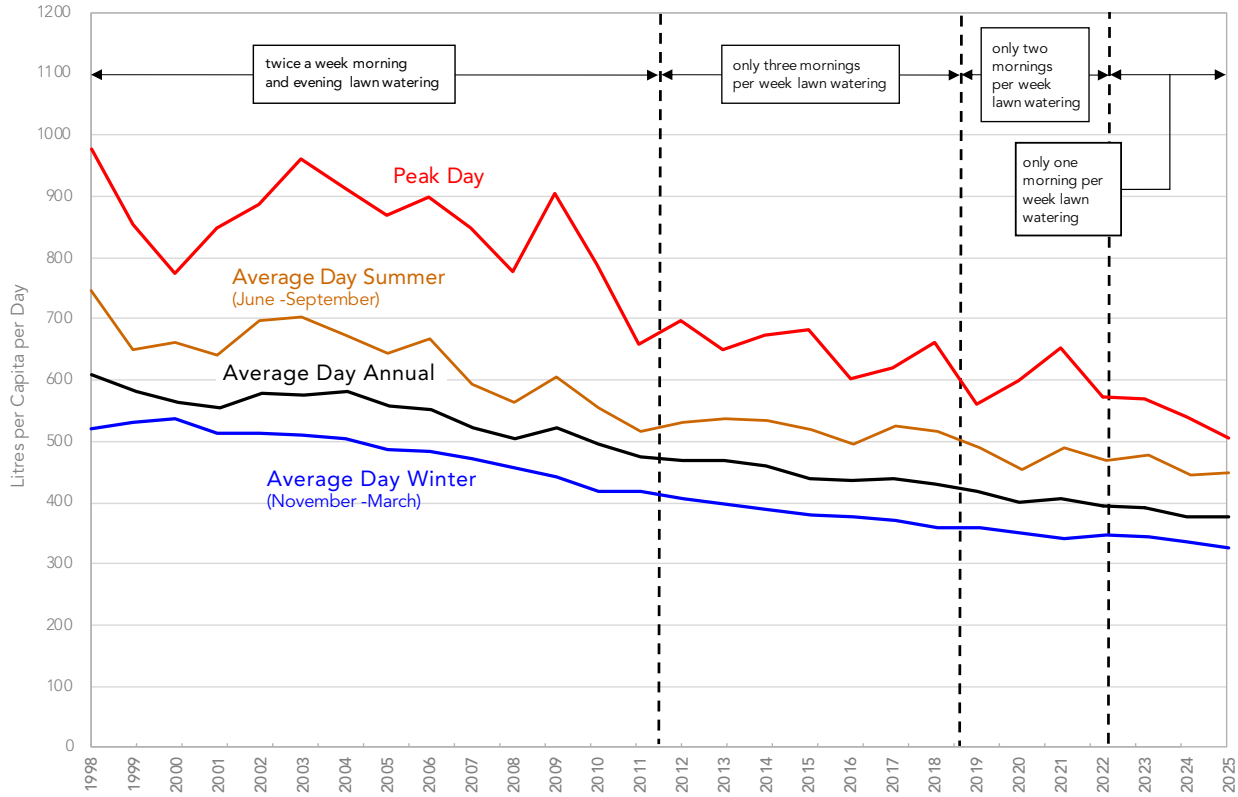
Metro Vancouver promotes water conservation through the following:

Drinking Water Conservation Plan

Metro Vancouver's *Drinking Water Conservation Plan* (DWCP) is a regional policy developed with local governments and other stakeholders to manage the use of drinking water during periods of high demand, mostly during late spring to early fall, and during periods of water shortages and emergencies.
The DWCP helps ensure our collective needs for drinking water are met affordably and sustainably now, and in the future.The DWCP is a regional policy that manages drinking water use during periods of high demand – from May 1 to October 15 – and during times of water shortages or emergencies.
Member jurisdictions have adopted the DWCP into their bylaws and are responsible for monitoring and enforcing the watering restrictions. Figure 8 presents regional per capita water use from 1998 to 2025, alongside key milestones in the development and implementation of the DWCP. For more information, see *Drinking Water Conservation Plan* (metrovancouver.org).

Seasonal Stage 1 lawn watering restrictions come into effect across the region each year on May 1. In 2025, the region remained in Stage 1 for the duration of the high demand season until Oct 15.

Figure 8: Regional Per Capita Water Use from 1998 to 2025



In 2025, Metro Vancouver updated the "Reservoir Levels and Water Use" webpage to provide additional and more accessible information on the region's water supply conditions. Alongside updated graphs showing total source storage and demand, new graphs were added to display air temperature, precipitation, and snowpack trends during the high-demand season. These additions help viewers understand the current source storage levels and the factors that affect them. For more information, please visit Reservoir Levels and Water Use (metrovancouver.org).

Water Communications and Public Outreach

Metro Vancouver's water conservation communications and public outreach support the DWCP through three educational initiatives:

- The outdoor water use restrictions promotion, which reminds and educates residents about the water restrictions and supports member jurisdictions' public education and enforcement programs (See Figure 9).
- The water conservation behaviour-change campaign, which encourages using treated drinking water outdoors mindfully, such as like letting lawns go dormant during the summer (See Figure 10).
- The Water Wagon mobile water dispenser program, which promotes the region's high-quality tap water, educates residents about the drinking water system, and shares water conservation tips at community events throughout the region.

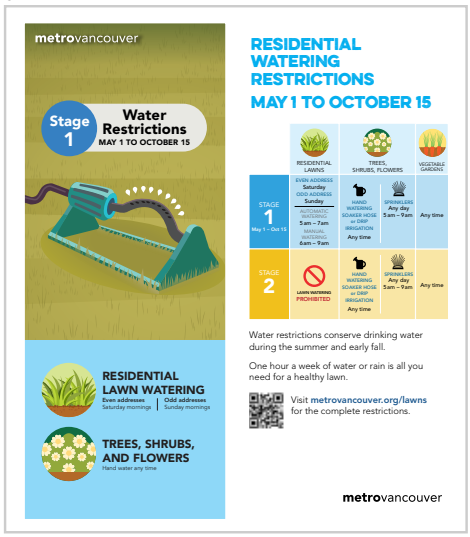
The water restrictions and water conservation communication strategies in 2025 used region wide digital and broadcast channels, including online video, digital ads, social media, television, radio, and digital billboards. This resulted in 70.1 million impressions and contributed to more than 50,000 website visits. Earned media coverage provided an additional 134 million impressions with an advertising value of $16 million.

The Water Wagon outreach program participated in 24 local events across the region in 2025. At these events, the Water Wagon provided 9,486 water bottle refills and fountain uses, and staff held 2,485 conversations with residents about drinking water conservation and water quality.

Figure 9: Examples of 2025 watering restrictions communication material (a) post card front and back, (b) rack card front and back (c) social media image

a

b



c

Figure 10: Example of 2025 water conservation social media campaign materials

7. Source Water Protection

Metro Vancouver's approach to source water protection is to protect the water supply areas for drinking water and to restrict public access.

Access to the water supply areas is managed and enforced by Metro Vancouver staff. Regular patrols are conducted to intercept trespassers and inspect approved work activities to assure compliance with the requirements of the *Watershed Regulations of GVWD*.

In addition, Metro Vancouver has its own dedicated wildfire crews, maintains a resource sharing agreement with the BC Wildfire Service, and partners with municipal fire departments to plan for and respond to wildfires in the water supply areas and adjacent lands.

In 2025, there were no wildfire incidents within the Water Supply Areas or the Lower Seymour Conservation Reserve (LSCR), and therefore no notable wildfire events to report for the year. Metro Vancouver's dedicated wildfire crews continued to maintain readiness, including through inter-agency deployments. In total, staff were deployed for 33 days with the BC Wildfire Service, supporting provincial wildfire response efforts.

Figure 11: Metro Vancouver's Wildfire Protection Crew

Figure 12: Metro Vancouver's Watershed Security

8. Emergency Response and Contingency Plan Summary

8.1 Water Services Emergency Management Plan Summary

The *Water Services Emergency Management Plan* (WSEMP) covers all aspects of the Water Services Emergency Management structure. The WSEMP comprises a suite of documents: an overarching *Emergency Management Plan* and ten *Emergency Response Plans* (ERPs) that cover the different components of the water supply system. These plans are updated on an annual basis. The last updated plan was issued in 2025.

Together with the Corporate Emergency Management Plan, the Emergency Management Standard, business continuity plans, and the *Emergency Response Plans* (ERPs), all activities related to emergencies that may affect the water supply are addressed. The WSEMP is designed to meet the requirements of the *Emergency and Disaster Management Act* and the *Drinking Water Protection Act and Regulation* for an Emergency Response and Contingency *Plan*. This summary of the WSEMP also fulfills Section 13(4) of the *Drinking Water Protection Regulation*, which requires water suppliers to make a public summary available to water users.

Water system operations and emergency management are shared responsibilities between Metro Vancouver and its member jurisdictions. The overall purpose of the WSEMP is to provide general guidance to Metro Vancouver in preparing for, responding to, and recovering from an emergency.

Emergencies can include earthquakes, floods, wildland and interface fires, and infrastructure failures, among others. The WSEMP outlines Water Services' roles and responsibilities during incidents, emergencies, and disasters.

A Utility Operational Coordination Guide (UOCG) guides the operational-level interactions between Metro Vancouver and local government partners when responding to an emergency. Overall guidance during a major emergency is provided by the regional and local government Emergency Operations Centres.

If significant damage occurs to Metro Vancouver's portion of the water supply system, Metro Vancouver will make drinking water available to the affected member jurisdictions at the nearest feasible supply point within the undamaged system. The member jurisdictions can then distribute this water using temporary lines, water trucks, or other methods identified in their own emergency plan.

Ultimately, Metro Vancouver's goal is to maintain continuous delivery of drinking water to member jurisdictions. In an emergency, Metro Vancouver's priorities for water supply are:

1. Deliver drinking water whenever possible to members for consumption and/or firefighting.
2. Protect the integrity of water in its system for public health.

In meeting these priorities, Metro Vancouver subscribes to the following response objectives, in this order of priority:

1. Ensure the safety and health of all responders and Metro Vancouver staff
2. Save lives
3. Reduce suffering
4. Protect the public
5. Protect critical infrastructure
6. Protect property
7. Protect the environment
8. Reduce social and economic losses

8.2 Emergency Repairs

Metro Vancouver was involved with 21 leak repairs in 2025, as summarized in Table 2.

Table 2: Summary of Water System Leaks

Facility	Location	Date of Leak	Estimated Max Flowrate of Discharge (L/min	Impact on Residents
Pitt River Rechlorination Sample Line	Pitt Meadows	8-Jan-25	340	No
Sapperton Main No. 1	New Westminster	13-Feb-25	40,000	Yes
Sasamat Reservoir Refurbishment Project	North Vancouver (District)	8-Apr-25	n/a	No
Port Moody Connector	Coquitlam	9-Apr-25	1,800	No
2nd Narrows Crossing No. 2	North Vancouver (District)	15-Apr-25	1,000	No
Vancouver Hts. - Capilano Main No. 7	Burnaby	28-Apr-25	3,785	No
Capilano Main No.4	Vancouver	29-Apr-25	2	No
Haney Main No. 3	Pitt Meadows	21-May-25	1,000	No
Capilano Main No. 7	Burnaby	21-May-25	1	No
Port Moody Main No. 2	Coquitlam	6-Jun-25	10	No
Port Moody Connector	Coquitlam	9-Jul-25	3,800	No
Haney Main No. 3	Pitt Meadows	19-Jul-25	1,300	No
2nd Narrows Crossing No. 3	North Vancouver (District)	27-Jul-25	1	No
North Burnaby Main	Burnaby	28-Jul-25	25	No
Annacis Main No. 2	Delta	11-Aug-25	4	No
Capilano Main No. 7	North Vancouver (District)	18-Aug-25	1,300	No
Capilano Main No. 4	Vancouver	27-Aug-25	1	No
Capilano Main No. 7	North Vancouver (District)	11-Sep-25	1,300	No
Sapperton Main No. 1	New Westminster	10-Oct-25	100	No
Central Park Main	Burnaby	3-Nov-25	150	No
Annacis Main No. 2	New Westminster	26-Nov-25	5	No

9. Water System Management

9.1 Drinking Water Management Plan

Metro Vancouver is updating the *Drinking Water Management Plan* (DWMP) to respond to increasing pressures on the drinking water system, including climate change, seismic risk, and population growth. The plan outlines long-term strategies for protecting, managing, and investing in the region's drinking water system over the next decade. For more information, see Drinking Water Management Plan Update (metrovancouver.org).

Metro Vancouver invited residents, communities, and organizations to help shape the future of the region's drinking water. Engagement took place across three phases.

- **Phase 1:** In 2024 seek values, interests, and priorities to help shape the plan.
- **Phase 2:** In 2024 and 2025 developed the plan's goals, strategies, and actions
- **Phase 3:** Planned for 2026, will collect final feedback on the complete draft Drinking Water Management Plan before it is presented for Board approval.

9.2 Asset Management Program

Metro Vancouver's asset management program ensures that assets are managed in a manner that minimizes asset failure risks and optimizes their life cycle to meet asset performance targets. In 2019, the Board approved the *Asset Management for Water Services Policy*. This policy establishes asset management principles and a framework to balance asset performance, risk, and cost to deliver Metro Vancouver water services. As part of the Asset Management Program, in 2022, Metro Vancouver produced and presented the *State of the Assets Report – Water Services* to the Board. An updated version of this document will be developed in 2026 and presented to the Board in 2027.

Condition Assessments

Condition assessments are carried out in accordance with the *Asset Management for Water Services Policy*. These assessments improve understanding of the overall condition of the water system and can result in repair or replacement projects. In 2025, Metro Vancouver completed condition assessments for 209 chambers, six sections of water mains, two pump stations, and three reservoirs

9.3 Operations and Maintenance Program

Repairs and upgrades to the drinking water system are identified through the Operation and Maintenance Program. These needs are addressed either through ongoing maintenance work or through replacement and upgrade projects. Annual maintenance is a key part of the asset management program, as it provides data to help determine when existing infrastructure must be replaced or refurbished to ensure it continues to operate effectively and meets service objectives.

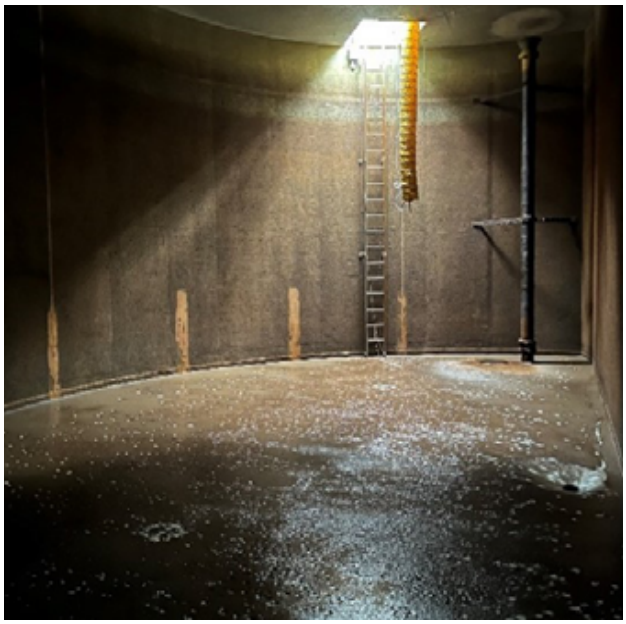
Metro Vancouver undertakes system maintenance daily through scheduled work orders performed by certified trades staff to ensure that existing equipment and facilities are kept in a good state of repair and to identify when additional maintenance or replacement is needed.

Reservoir Cleaning

Metro Vancouver periodically isolates and drains its in-system water storage reservoirs for interior cleaning, inspection, and any required repairs or upgrades. In 2025, eight reservoirs were isolated, drained, and cleaned using high-pressure water spray. Each reservoir was disinfected in accordance with AWWA C652-19 – *Disinfection of Water Storage Facilities* and tested before being returned to service.

Figure 13: a) Inside Glenmore Tank – prior to cleaning February 2025 b) Inside Glenmore Tank – post cleaning February 2025

a



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Valve Exercising Program

Metro Vancouver's water transmission system contains more than 7,000 valves that control and isolate water flow across the network. In 2022, a pilot program was launched to formalize the regular exercising of critical valves and to gather comprehensive data on valves and chambers. The program evaluates asset conditions and ensures proactive maintenance is performed to reduce reactive and emergency repairs resulting from valve failures.

The first phase of the pilot, completed in 2023, focused on understanding the scope of work and the time required to complete it. The second phase, carried out in 2024 and 2025, concentrated on collecting, verifying, and analyzing detailed asset data. In 2025, 43 valves were exercised, supported by tools such as the Enterprise Asset Management system, GIS, and engineering drawings.

The final phase will consolidate lessons learned from the two years of Phase 2 work, and establish a permanent program to ensure that all critical valves in the system are exercised on a regular basis.

Valve Replacement Program

Metro Vancouver continually reviews the water transmission system through condition assessments and isolation tests to ensure valves are functioning properly. These reviews have shown that a more formalized approach to valve maintenance, including valve replacement, is needed.

Metro Vancouver staff began developing a formal valve replacement program in 2022 and created a risk ranking matrix for critical valves in 2023. Two pilot phases were completed in 2023 and 2024, focusing on exercising critical water mains in alignment with line maintenance projects. In 2025, a multi-year capital program was established to initiate the replacement of aging and problematic reservoir filling valves.

Submerged Water Main Crossings

Metro Vancouver continues to inspect and protect submerged water main crossings that are subject to hydraulic scour. Staff conduct annual monitoring of all major submerged water main crossings to assess if maintenance of existing scour protection or additional scour protection is required. The 2025 survey results recommend continued regular and close monitoring of the crossings, with five crossings requiring hydrotechnical analyses to further assess the scour and erosion hazards. These analyses are currently underway for Barnston Island Main Fraser River Crossing, Haney Main No. 2 Pitt River Crossing, Haney Main No. 3 Pitt River Crossing, Queensborough Main North Arm Crossing, and Tilbury Main South Arm.

In 2025, Metro Vancouver conducted Close Interval Potential Surveys (CIPS) and Direct Current Voltage surveys (DCVG) on two water mains at water crossings to assess pipeline integrity. The pipelines include the Capilano Main No. 7 at Seymour River and Port Moody Main No. 1 at Pinnacle Pond. Feasibility studies to conduct CIPS and DCVG surveys were completed on two additional water mains: Port Moody Main No. 1 at Scott Creek and Mather's Avenue Main at Capilano River.

Aerial Water Main Crossings

Metro Vancouver continues to inspect and maintain aerial water main crossings that are suspended over water bodies. In 2025, staff completed the identified coating repairs on the East Burnaby Main at the crossing over Stoney Creek and North Road Main at the crossing over the BNSF Railway. A seismic assessment was also conducted for the East Burnaby Main Stoney Creek Crossing.

Mechanical, Instrumentation, and Electrical Maintenance

In 2025, Water Services performed over 5,500 preventative maintenance work orders (PMs). Examples of maintenance work includes 12 pump rebuilds at various water pump stations and treatment plants, seven high voltage electrical PMs completed at various pump stations and treatment plants, and critical instrumentation maintenance, including the replacement of Cleveland Dam drum gate level transmitters. In addition, several emergency repairs were completed, including a Variable Frequency Drive replacement at Westburnco 2 Pump Station and high voltage transformer replacement at the Lake City Operations Centre.

9.4 Capital Program

The 2026 – 2030 Water Services capital budget included $449.7 million for capital projects in 2025 and a total of $3.1 billion over five years. There are 171 projects on the five-year capital plan. These projects are driven by system expansion requirements to meet the needs of a growing population, upgrades to improve system resiliency, and maintenance project to replace the aging infrastructure. Capital investments to support population growth are the largest component of the budget, representing approximately 49 per cent of infrastructure investment spending over next five years.

In 2025, many major projects reached significant milestones, including the following key projects:

Annacis Water Supply Tunnel

A 2.3 km long, 4.5-m diameter water supply tunnel is required under the Fraser River between the City of New Westminster and the City of Surrey to meet growing water demand south of the Fraser River.

Construction began in early 2022. The tunnel and the two shafts on either side of the river have now been completed. Installation of the steel pipe and construction of the valve chambers are currently underway. The new tunnel is expected to be completed and in service by 2028. For more information, see Annacis Water Supply Tunnel (metrovancouver.org).

Figure 14: Annacis Water Supply Tunnel - Tunnel boring machine removal from north shaft

Capilano Raw Water Backup Power Project

A new backup power system is being built for the Capilano Raw Water Pump Station to ensure continued water delivery to the Seymour Capilano Filtration Plant during a power outage.

The backup power system includes an underground fuel vault and a new powerhouse. Construction is currently underway and is expected to be complete in 2026. For more information, see Capilano Water Supply Area Infrastructure Upgrades (metrovancouver.org).

Cambie-Richmond Water Supply Tunnel (Preliminary Design)

This is a 1.1 kilometer long, 4.5-meter diameter crossing under the Fraser River from the City of Vancouver to the City of Richmond. The project consists of a tunnel and deep vertical shafts located on each side of the river to facilitate the installation of a 2.1-meter diameter welded steel water main. Each shaft site will also include the construction of underground valve chambers to facilitate water control functions. The preliminary design phase began in September 2024. Construction is set to start in 2029 and is expected to take about five years to complete. For more information, see Cambie-Richmond Water Supply Tunnel (metrovancouver.org).

Coquitlam Lake Water Supply Project

A new water supply intake, tunnel, and treatment plant is proposed to increase the capacity to treat and deliver drinking water from the Coquitlam source to meet the demand of the growing Metro Vancouver region. The project is currently in the permitting and regulatory phase, focusing on engagement with First Nations, the City of Coquitlam, regulators, and stakeholders. Procurement of design consultants for the intake, tunnel, and treatment plant is underway. Construction of the treatment pilot testing facilities is underway and is anticipated to be completed by the second quarter of 2026. The project is anticipated to be completed by the late 2030s. For more information, see Coquitlam Lake Water Supply Project (metrovancouver.org).

Coquitlam Water Main No. 4

This 12 km long steel water main will increase the transmission capacity from the Coquitlam source to the Cape Horn Pump Station and Reservoir in the City of Coquitlam. This project will optimize the capacity of the existing Coquitlam supply system and also provide additional capacity for the future Coquitlam Lake Water Supply Project. The watermain is being delivered in four sections. Construction of the first section, Robson to Guildford, continues with 1.25km of 3.2 m diameter steel pipe installed and is scheduled to be completed in late 2026 or early 2027. The remaining three sections are in detailed design. The water main is anticipated to be complete by the mid-2030s. For more information, see Coquitlam Water Main (metrovancouver.org).

Fleetwood Reservoir and Water Main

The reservoir project is connected to the Fleetwood Water Main, which was constructed between summer 2021 and summer 2023. Metro Vancouver is also building a new underground valve chamber for the Fleetwood Water Main at 153A Street and 95 Avenue in the City of Surrey. Construction of the Fleetwood Reservoir is now complete. Current work includes connecting the new reservoir to the municipal water system and installing signage in front of the mural. Fencing will remain in place to protect newly replanted areas until they are fully established. The project is expected to be completed, and the park fully reopened, in spring 2026. This essential project will help increase the delivery of high quality drinking water to growing communities south of the Fraser River. For more information, see Fleetwood Reservoir and Water Main (metrovancouver.org).

Figure 15: Kennedy Newton Water Main – Installation of Piping and Valves within the Large Underground Valve Chamber

Kennedy Newton Water Main

This 1.8 m diameter and 8 km long water main will connect the Newton Reservoir to the Kennedy Reservoir in the City of Surrey and is being built to meet growing water demand south of the Fraser River. The work includes the construction of line valve chambers, cross-over chambers, air release valves, and blow down valves. Construction of the first two of three phases is complete. The final phase of the project commenced in 2022 and is expected to be complete in late 2026. For more information, see Kennedy Newton Water Main (metrovancouver.org).

Figure 16: Kennedy Newton Water Main - Installation of 1.8m Diameter Water Main

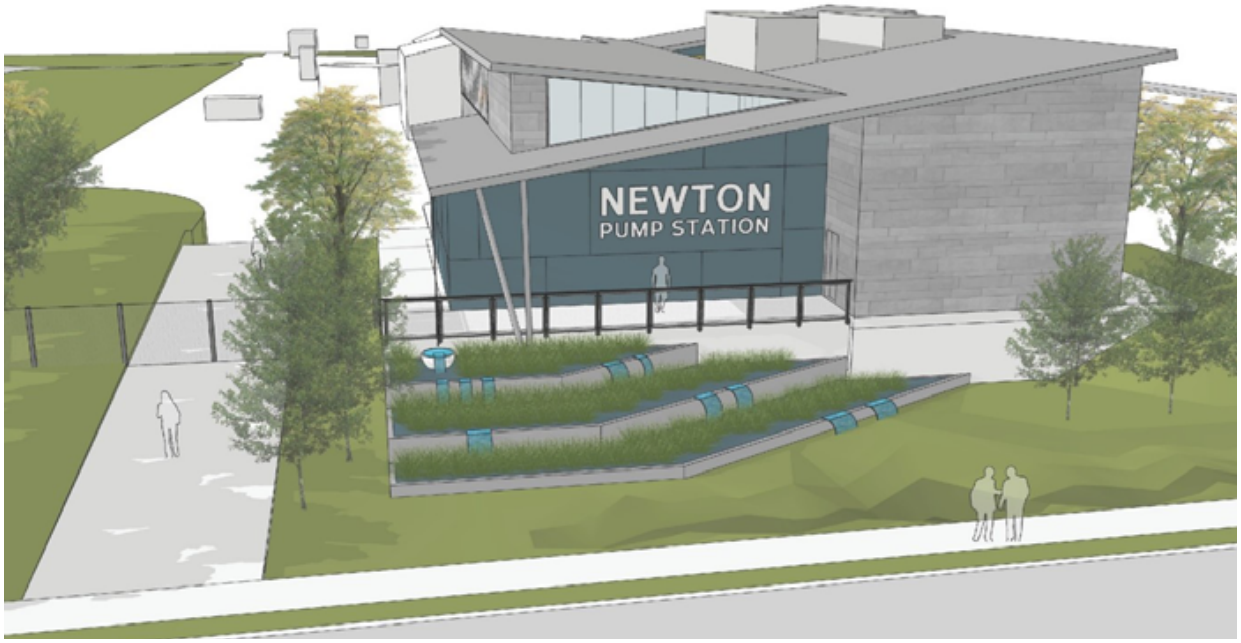
Newton Pump Station No. 2

This project, located in the City of Surrey, consists of replacing the existing Newton Pump Station and includes full backup power redundancy, connections to existing and future infrastructure, and installation of new outlets to the existing Newton Reservoir. The construction contract was awarded in early 2025 and construction work commenced in mid-2025 with completion anticipated in 2028. For more information, see Newton Pump Station No. 2 (metrovancouver.org).

Pebble Hill Seismic Upgrade

Located in the City of Delta's Pebble Hill Park, this project involves the seismic upgrade of Pebble Hill Reservoir Unit 1 and Unit 2 to withstand and remain in operation following a major earthquake. Construction of the upgrade works was completed in 2024, with final restoration finished in spring 2025. For more information, see Pebble Hill Reservoir Seismic Upgrade (metrovancouver.org).

Figure 17: Rendering of Newton Pump Station No. 2: View from 128 Street



Stanley Park Water Supply Tunnel

This 1.4 km long water main, in a tunnel beneath Stanley Park, will replace the existing Capilano Main No. 4 which has experienced leaks and is at the end of its service life. Construction started in late 2024 and is expected to be substantially complete by 2029. For more information, see Stanley Park Water Supply Tunnel (metrovancouver.org).

Second Narrows Water Supply Tunnel

This project involves constructing a 1.1 km long, 6.5 m diameter water supply tunnel under Burrard Inlet between the District of North Vancouver and the City of Burnaby. The tunnel will improve the reliability of the water supply system following a major earthquake. Construction began in 2019 and reached substantial completion in 2025. In 2025, the first of three new water mains was connected to the drinking water system and is now in service. The remaining two water mains will be tied in over the next several winters and are expected to be in service by 2028.For more information, see Second Narrows Water Supply Tunnel (metrovancouver.org).

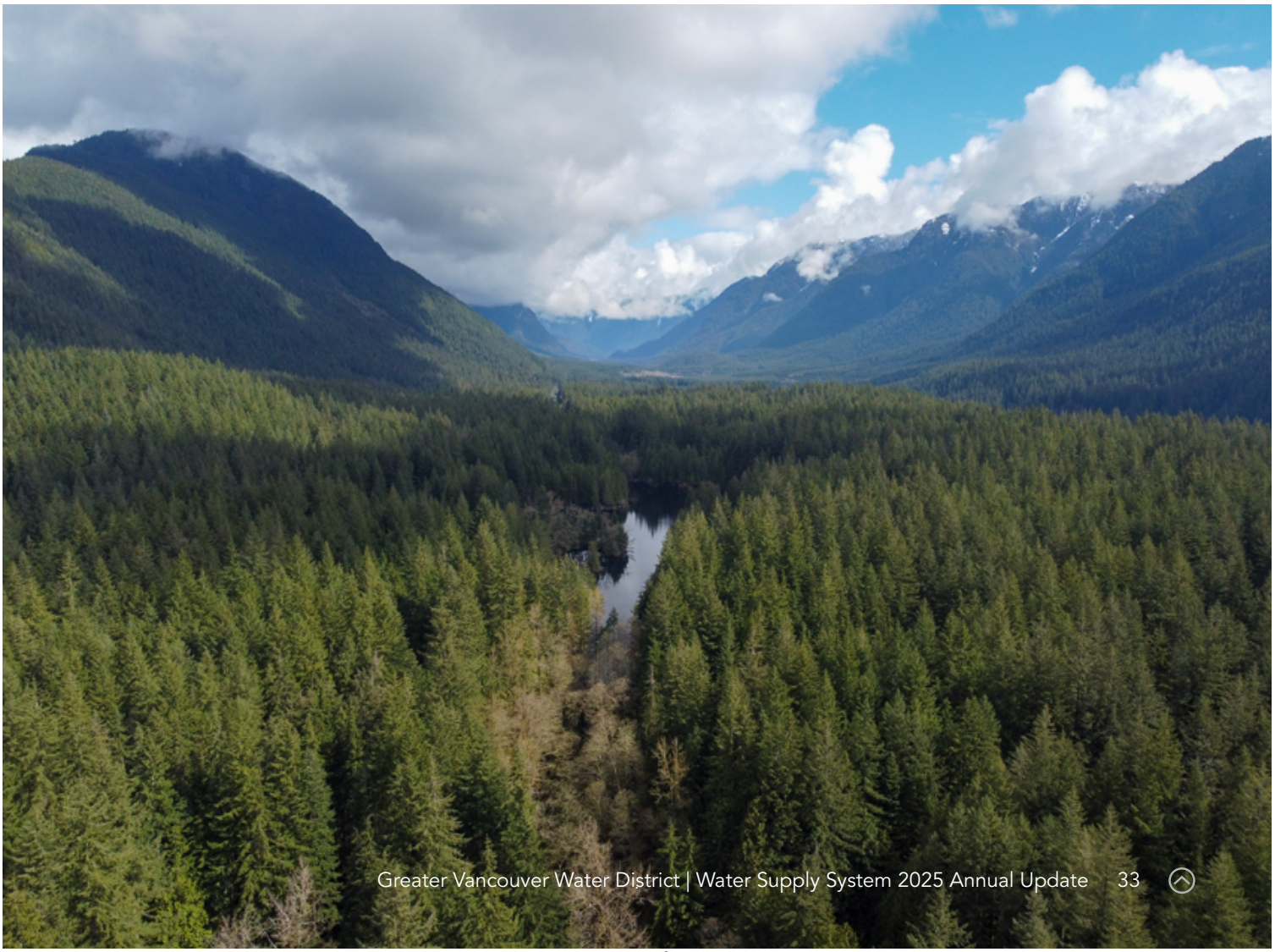
Figure 18: Second Narrows Water Supply Tunnel – Capilano Main No. 7 Tie-in

9.5 Financial Review

In 2025, Metro Vancouver total water sales revenue was approximately $394 million. Wholesale rates, charged to member jurisdictions, from June through September were $1.4214/m^3 and $0.7119/m^3 for the rest of the year resulting in an average annual water rate of $1.0012/m^3.

The differential rates are designed to encourage member jurisdictions to reduce water use during the high demand season through conservation efforts. Each member jurisdiction determines how it finances the cost of water purchased from Metro Vancouver.

Metro Vancouver introduced Water DCC rates in 2024 to align with the premise that growth will pay for growth. Through its members, Metro Vancouver collects DCCs from new residential and non-residential developments across the region to help fund the cost of water infrastructure required to support future occupants of those buildings. The DCC program is currently being updated. The 2026-2030 Financial Plan has many additional details on the 2026 budget, capital projects, and the Five-year Financial Plan. For more information, see 2026 Budget and 2026 – 2030 Financial Plan.



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SERVICES AND SOLUTIONS FOR A LIVABLE REGION

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SERVICES AND SOLUTIONS FOR A LIVABLE REGION

To: Water Committee

From: Dana Carlson, Project Coordinator, External Relations

Date: March 30, 2026 Meeting Date: April 8, 2026

Subject: **Drinking Water Conservation Communications Update**

RECOMMENDATION
THAT the Water Committee receive for information the report dated March 30, 2026, titled "Drinking Water Conservation Communications Update."

EXECUTIVE SUMMARY
Warmer summers and milder winters continue to increase pressure on the region's drinking water supply — making conservation and compliance with seasonal water restrictions more important than ever.

Communication will focus on educating residents about water restrictions and promoting mindful outdoor water use which includes developing materials to support local jurisdictions' public education and enforcement efforts.

The water conservation campaign, "It's All Drinking Water," reminds people that hose and tap water come from the same treated drinking water system, reinforcing the importance of using it wisely. The campaign will run from June to September across digital, outdoor, and broadcast media. The Water Wagon will offer free water refills at community events while engaging residents on tap water quality and conservation practices.

Additionally, resident's adherence to water restrictions will support Metro Vancouver's work to construct the Stanley Park Water Supply Tunnel — helping ensure a resilient water supply for future generations.

PURPOSE
To update the Water Committee on regional communications to support the 2026 water restrictions, water conservation campaign, and Water Wagon program.

BACKGROUND
Metro Vancouver's water conservation communications support the *Drinking Water Conservation Plan* and the *Drinking Water Management Plan* through three initiatives:

- The water restrictions promotion reminds and educates residents about seasonal water restrictions — especially those pertaining to lawn watering — and supports member jurisdictions' public education and enforcement programs.
- The water conservation behaviour-change campaign encourages the reduction and mindful use of treated drinking water outdoors through water saving tips, such as letting lawns go dormant in the summer.
- The Water Wagon outreach program promotes the region's high-quality tap water, educates residents about the drinking water system, and shares water conservation tips.

Globally, 2025 was the third warmest year on record, behind only 2023 and 2024. Looking ahead, the Metro Vancouver region can expect longer hotter summers and milder winters. Water conservation along with water restrictions enforcement will ensure that drinking water is available for where it is needed most: drinking, cooking, and cleaning.

Following watering restrictions will also support Metro Vancouver's work to construct the Stanley Park Water Supply Tunnel, a project which will help ensure a resilient supply for future generations. The First Narrows Crossing, one of the system's key supply pipes from the reservoirs, has been out of service since last fall to allow for work to take place on the Stanley Park project. While the system is well equipped to supply the region, if too much water is used during the summer for non-essential purposes, like lawn watering, then it could affect water pressure and lead to additional restrictions.

WATER CONSERVATION COMMUNICATIONS

Approach and Timing

The seasonal water restrictions are in effect from May 1 until October 15 and communication will include:

- Updating industry stakeholders with water restrictions information (March)
- Supplying promotional materials to member jurisdictions (March)
- Issuing a media release (April), followed by a second release when restrictions begin (May 1)
- Posting on Metro Vancouver's social media channels (April to October)
- Running paid media placements from (June to September)
- Mailing water restrictions reminder postcard to homes/townhomes (early July)

Water Restrictions Communications Materials

To help supplement member jurisdictions' public education and bylaw enforcement programs, Metro Vancouver provides communication materials including social media content, posters, rack cards, door hangers, brochures, translated items, and other products upon request. Additionally, a postcard outlining the lawn watering restrictions and water conservation tips is delivered across the region to single-family homes and townhouses to remind them of restrictions when the weather gets warmer. All materials lead to the water restrictions web page: metrovancouver.org/lawns (**Reference 1**).

Water Conservation Campaign

The water conservation campaign, "It's All Drinking Water," reminds people that the water that comes out of your hose is the same as the water that comes out of your tap. Combined with supporting messages like "whether tap or hose, it's all drinking water" and tips such as "water one hour a week for a healthy lawn," the campaign encourages mindful water use for the driest months of the year.

The campaign launches late June with paid media placements including digital (e.g., display ads, social media), outdoor (e.g., billboards, transit shelter ads), and broadcast (e.g., radio, television).

Smaller social media promotions bookend the paid water conservation campaign. These promotions focus on our water supply, where our water comes from, and seasonal lawn care tips to help lawns thrive with less water.

Campaign materials lead to itsalldrinkingwater.ca (**Reference 2**) for water restrictions information, lawn care tips, water conservation tips, and information about the region's drinking water system. See **Attachment 1** for examples of campaign and promotional materials.

Water Wagon

The Water Wagon helps to reduce single-use bottled water by offering free water bottle refills at community events across the region at no charge to event organizers. Water Wagon outreach staff engage with event attendees through displays that highlight Metro Vancouver's water system and promote the region's high-quality tap water.

In March, members can request the wagon for events. The Water Wagon will be on tour for about 35 event days, plus an additional 15 days at Metro Vancouver's Showcase at the PNE Fair.

ALTERNATIVES

This is an information report. No alternatives are presented.

FINANCIAL IMPLICATIONS

The 2026 water restrictions communications, water conservation campaign, and Water Wagon program have a total budget of $563,469. These costs are included in the Board approved 2026 Water Services budget managed by External Relations.

CONCLUSION

Metro Vancouver supports seasonal water conservation through three complementary communications initiatives: the water restrictions promotion that begins in March, the water conservation campaign that launches in June, and Water Wagon outreach at community events and the PNE Fair.

ATTACHMENT

1. 2026 Drinking Water Conservation Communications Materials Examples.

REFERENCES

1. Metro Vancouver. (2026). *Watering Restrictions*. https://metrovancouver.org/services/water/water-restrictions
2. Metro Vancouver. (2026). *It's All Drinking Water*. https://metrovancouver.org/services/water/its-all-drinking-water

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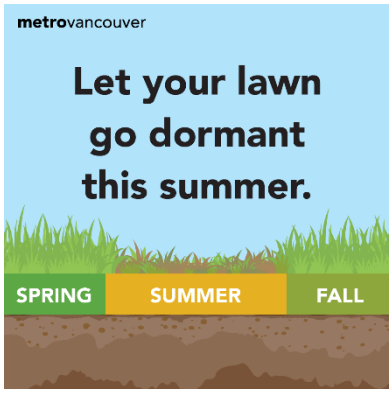
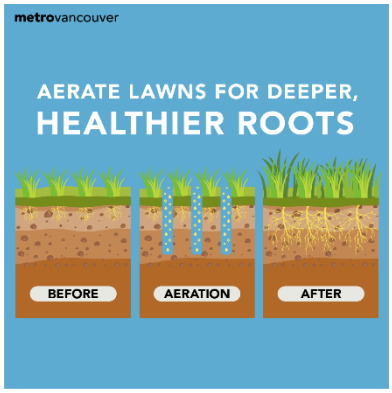
2026 Drinking Water Conservation Communication Materials Examples

Primary Promotion: Water Conservation Campaign



Secondary Promotion: Water Source and Seasonal (Spring/Fall) Lawn Care



Stage 1 Water Restrictions

Rack Card Front

Rack Card Back

Social Media Story Image

Postcard Front

Postcard Back