Metro Vancouver

Drinking Water Management Plan

Final Draft: January 2026

About Metro Vancouver

Metro Vancouver is a diverse organization that plans for and delivers regional utility services, including drinking water, sewers and wastewater treatment, and solid waste management. It also 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.

About the Greater Vancouver Water District

The Greater Vancouver Water District (GVWD) is a statutory corporation which serves its 18 member municipalities, one electoral area, and one treaty First Nation. The objectives of the GVWD are to protect the regional water supply areas, store, treat, deliver, and ensure the quality of our drinking water. Additionally, to upgrade, maintain, and expand the regional water system, promote water conservation, plan for future drinking water needs, and ensure resilience in the face of climate change impacts.

Directors of the GVWD Board are mayors and councillors appointed by membership councils, and their votes on resolutions are population-weighted. The GVWD and its member jurisdictions work together to plan and manage the supply and transmission of drinking water across the region.

In this plan, the GVWD is referred to as 'Metro Vancouver'. All further references to 'Metro Vancouver', or commitments and responsibilities assigned to 'Metro Vancouver' in this plan should be interpreted to refer to the 'Greater Vancouver Water District (GVWD)' alone. In this plan, 'Metro Vancouver' does not refer to any entity other than the GVWD.

Territorial Acknowledgement

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

Jurisdictions in the Region

GVWD Members

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
City of Vancouver
District of West Vancouver
scəẇ aθən məsteyəxʷ (Tsawwassen First Nation)

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Executive Summary

Metro Vancouver provides high-quality drinking water through its member jurisdictions to over three million residents across the region — that's more than half of BC's population. This includes acquiring and maintaining supply, as well as treating, testing, and delivering water through a complex system of watersheds, dams, treatment facilities, reservoirs, pump stations, and over 520 kilometres of large diameter water mains. From the regional system, water is then conveyed to individual homes and businesses through infrastructure owned and operated by member jurisdictions.

Proactive utility planning is essential to ensuring the water system continues to operate reliably, sustainably, and cost-effectively. The *Drinking Water Management Plan* (DWMP) is Metro Vancouver's 10-year strategic plan that outlines goals, strategies, and actions for Metro Vancouver and member jurisdictions and reflects the shared responsibility across the region given the need for coordinated implementation. This model of regional collaboration keeps costs down, improves efficiency, and ensures our communities stay resilient in the face of climate change, population growth, and seismic risks.

Climate change is bringing hotter and drier summers, reduced snowpack, and more variable rainfall — all factors that affect how and when reservoirs refill – therefore impacting water supply. Population growth and changes to land use are increasing demand for drinking water. Metro Vancouver's population projections (July 2025) indicate that an estimated 3.5 million people will call this region home by 2035, and over four million by 2050.

These conditions heighten the importance of managing water use wisely, making the most of existing infrastructure capacity, and planning carefully for future investments. Infrastructure is complex and expensive and includes water treatment plants, dams, and massive water supply tunnels. These projects require careful planning, long timelines, and significant investment, yet they're essential to keeping our region healthy, livable, and prepared for the future.

The plan responds to these conditions through strategies and actions organized in five priority areas:

- **Resilient Water System** – strengthening the system's ability to anticipate, withstand, and recover from climate extremes, seismic events, natural hazards, and other disruptions
- **Water Supply Quantity and Quality** – protecting source water, planning for future supply needs, and preparing for changing water quality conditions
- **Environmental Protection and Enhancement** – supporting ecological health, reducing greenhouse gas emissions, and protecting fish habitat and local ecosystems

- **Conservation and Efficiency** – reducing per capita water use, improving system efficiency, encouraging metering, and promoting leak reduction, behavioural change, and non-potable water reuse
- **Operational Workforce Development** – attracting, training, and retaining the skilled workforce needed to operate and maintain a complex drinking water system

Development of the plan was informed by research, technical analysis, and a multi-year engagement process involving First Nations, member jurisdictions, interest holders, academic partners, government agencies, non-profit organizations, industry, and the public. Across all engagement activities, people expressed strong support for drinking water conservation, environmental protection, and system reliability.

Together, the goals, strategies, and actions in this plan provide a clear, coordinated path for managing the region's drinking water system in a changing climate, supporting a growing population, and ensuring the continued reliable delivery of high-quality drinking water for generations to come.

Introduction

The *Drinking Water Management Plan* sets the direction and priorities for drinking water initiatives for the region. The plan is the region's shared strategy for protecting, managing, and investing in the drinking water system over the next decade. Together with member jurisdictions, Metro Vancouver is working to ensure that drinking water in the region continues to be:

- High-quality: meeting or exceeding regulatory requirements
- Sustainably managed: using only what we need, protecting what we have
- Reliably delivered: through a system that's built to last

In addition to planning over the next decade, Metro Vancouver undertakes long-term water planning studies to ensure the future supply of high-quality drinking water for generations to come. This plan has been informed by long term planning studies, the most recent of which is the *Water Supply Outlook 2120* which presented key findings and actions to guide Metro Vancouver towards a resilient, adaptable strategy to continue supplying the region with high-quality drinking water over the next 100 years.

Plan Context – Adapting the Plan for Today's Conditions

The region's drinking water system is shaped by several forces that are evolving at the same time: climate change, population growth, aging infrastructure, and seismic risk. Combined with ongoing expectations for reliability and increasing uncertainty and volatility in projections, these pressures are shifting how Metro Vancouver plans for the future.

Since the last plan, published in 2011, the region has benefited from improvements in water quality, system reliability, and continued reductions in seasonal per capita water use through high-efficiency fixture upgrades and strengthened outdoor watering restrictions. However, the operating environment has changed. Summers are becoming hotter and drier, rainfall patterns more variable, and the region is projected to grow by more than 40,000 people per year.

Metro Vancouver still has one of the highest per capita water use rates in Canada, meaning there is substantial opportunity to use water more efficiently. Strong conservation and demand management can play a major role in ensuring the long-term sustainability of the system. Today's economic conditions also reinforce the importance of fiscal responsibility and making the most of existing infrastructure capacity.

In this context, the plan widens the regional focus from building system capacity to managing water use and efficiency for the long-term.

Understanding Our Drinking Water System

Metro Vancouver's drinking water system begins high in the mountains and moves through a complex system before reaching homes and businesses.

Source Water and Reservoirs

Three mountain reservoirs, located within the protected, Capilano, Seymour, and Coquitlam water supply areas, along with three alpine lakes, capture and store rainfall and snowmelt. These reservoirs refill primarily during the fall and winter and are relied upon to provide water throughout the year.

Filtration and Treatment

There are multiple measures (multi-barrier approach) to protect the water quality in the drinking water system, including protected water supply areas, treatment facilities, secondary disinfection, and extensive monitoring. Water from Capilano and Seymour is treated at the Seymour Capilano Filtration Plant through filtration and UV treatment, while Coquitlam water is treated at the Coquitlam Water Treatment Plant through ozone and UV treatment.

Regional Transmission System

Over 520 kilometres of large diameter water mains connect a network of dams, pump stations, storage reservoirs and disinfection stations to the member jurisdiction distribution systems. Metro Vancouver operates a network of billing meters to measure and record flows to each member.

Local Distribution Systems

Member jurisdictions receive water at connection points and distribute it through their local networks of mains, pump stations, and reservoirs to the taps of homes and businesses.

Shared Responsibility

Metro Vancouver manages source water, treatment, and regional transmission infrastructure. Member jurisdictions manage local distribution infrastructure, metering, local bylaws, and customer-facing programs.

The plan provides a shared direction for coordinating these responsibilities.

Challenges Facing the Regional Water System

The plan responds to several interconnected challenges facing the regional water system:

Population Growth

Population growth and changes to land use are increasing the overall demand for drinking water in the region. Metro Vancouver and members update regional and municipal population projections (including First Nations' populations) on an annual basis to guide land use and infrastructure planning. The most recent projections (July 2025) estimate that the Metro Vancouver region will grow by over 40,000 people each year, increasing total water demand and accelerating the need for coordinated system planning.

Climate Change and Increasing Uncertainty

Climate projections predict rising temperatures, longer dry periods, reduced snowpack, and more intense rainfall events. These changes put greater pressure on source reservoirs during the summer and change the timing and reliability of their refill. Snowpack has historically acted as a natural buffer, releasing water gradually through spring and keeping the reservoirs full into early summer. Today, warming winters are reducing snow accumulation, and spring snowmelt patterns are becoming more variable, creating uncertainty of how long stored water will last. The region can no longer rely on historic patterns to predict future supply. Planning must account for variability in precipitation, snowpack, and reservoir refill timing, as well as more frequent extreme weather events.

High Per Capita Use and Seasonal Summer Water Use

Per capita water use in the Metro Vancouver region remains one of the highest in Canada. Summer outdoor use in particular drives increases in demand, at a time when the reservoirs are receiving minimal inflows.

Aging Infrastructure

The Greater Vancouver Water District is over 100 years old. Much of the regional network of pipes, tunnels, and pump stations was built decades ago. Upgrades are constantly being made to the water system to maintain the quantity and reliability of high-quality drinking water to the region.

Aging infrastructure in both the regional and member distribution systems is susceptible to leakage. The leakage rate throughout the region is not accurately quantified but understood to be around 20%.

Seismic Risk

Metro Vancouver is located in a seismically active region. Ensuring that critical drinking water infrastructure can withstand a major earthquake and continue to function afterward is a core component of long-term system resilience.

Skilled Workforce

The increase in demand and resulting system growth and complexity requires a larger skilled workforce which is currently under strain from retirements and a lack of skilled certified applicants, particularly in the water operations field.

Regional Affordability

Layered upon these challenges is the issue of regional affordability. Metro Vancouver understands the pressure residents are experiencing from rising costs and is taking action to protect affordability while continuing to deliver the high-quality services residents rely on every day. The plan emphasizes the efficient use of existing infrastructure and supports coordinated actions that help manage long-term system costs.

How the Plan Responds

The plan provides the coordinated regional strategy needed to respond to these challenges by outlining strategies and actions that will:

- Strengthen system resilience to the impacts of climate change including hotter, drier summers, and increased drought risk
- Ensure the region continues to manage treatment, storage, demand, and supply in an integrated, adaptive, and forward-looking way that will meet evolving requirements
- Address system leakage, support conservation and efficient water use to serve growing populations to maximize the capacity life of existing infrastructure, and optimize timing of future investments
- Guide design and construction of water infrastructure, perform operations and implement programs in an environmentally sustainable and responsible manner
- Attract and retain a reliable and skilled workforce to maintain and operate a growing and increasingly complex water system

The plan outlines policy direction for the regional water system. It is not a long-term supply or infrastructure plan, nor does it directly drive capital budgets. New or expanded initiatives that require additional budget or staff will be brought forward to the Greater Vancouver Water District Board for consideration in annual operating and/or capital planning cycles. Large capital projects will continue to progress through the stage gate process and will be brought to the Greater Vancouver Water District Board at relevant stages for information and/or approval.

About the Plan Process

The plan was developed in three phases. At each phase, Metro Vancouver engaged First Nations, member jurisdictions, government agencies, academic institutions, industry, interest groups, and the public. The process also included in-depth research and technical analysis to ensure the plan is evidence-based, inclusive, and reflects the values of the communities it serves.

Phase 1 (2020–2023)	Phase 2 (2023–2025)	Phase 3 (2025-2026)
• Background research and technical review • Gap analysis of 2011 Drinking Water Management Plan • Preliminary engagement • Draft guiding principles and goals	• Develop draft strategies and actions • Technical workshops • Engagement on draft priority areas, strategies, and actions	• Completion of the full draft plan • Engagement on the full draft plan • Finalize the plan • Board approval

Working Collaboratively with Member Jurisdictions

Metro Vancouver works collaboratively with member jurisdictions to provide high-quality drinking water to over three million residents across the region. Success depends on coordinated planning, shared understanding of system pressures, and collective action across all levels of the drinking water system. The plan provides the framework for continuing and enhancing this cooperation. It supports a regional approach to planning, acting, and adapting together as conditions change.

Throughout the plan update, Metro Vancouver worked closely with member jurisdictions through a series of meetings and technical workshops focused on refining the goals, guiding principles, priority areas, strategies, and actions. These sessions strengthened the foundations of the plan by grounding decisions in regional expertise, identifying barriers and opportunities for coordinated action, and clarifying roles and responsibilities.

Workshops on system resilience, environmental protection, water supply, conservation, and workforce development surfaced clear themes: the need for stronger regional coordination, more measurable and outcome-oriented actions, clearer assumptions and priorities, and improved information-sharing across jurisdictions.

Workshops on water metering demonstrated conceptual support for residential metering while acknowledging varying local capacities and constraints, and cost implications.

Member jurisdictions also emphasized the importance of early and meaningful involvement of First Nations, recognizing the need for capacity supports and deeper collaboration across all areas of the plan.

Feedback from member jurisdictions directly shaped revisions across all priority areas, resulting in clearer, more practical, and regionally coordinated strategies that reflect shared challenges and support a cohesive, long-term approach to drinking water planning, delivery, and resilience.

Engaging With First Nations

Metro Vancouver recognizes and respects the existing Aboriginal and treaty rights of Indigenous peoples in Canada, as recognized and affirmed by section 35 of the Constitution Act, 1982.

In addition, both the governments of Canada and British Columbia have enacted legislation to affirm the application of the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) to laws within their jurisdiction. In its preamble, UNDRIP states that "respect for Indigenous knowledge, cultures, and traditional practices contributes to sustainable and equitable development and proper management of the environment."

As part of our continued reconciliation efforts, Metro Vancouver is committed to meaningful engagement with First Nations on our plans, programs, and projects, as outlined in Metro Vancouver's Board Strategic Plan, 2022–2026. Metro Vancouver continues to build and strengthen respectful and reciprocal relationships with First Nations, guided by the principles of UNDRIP "as a standard of achievement to be pursued in a spirit of partnership and mutual respect."

Metro Vancouver would like to express sincere appreciation to the First Nations for their time, expertise, and perspectives shared throughout the plan update. Metro Vancouver recognizes that First Nations knowledge and guidance have been crucial in shaping the direction of the plan and will continue to inform Metro Vancouver's work now and in the future.

Throughout each phase of the plan, Metro Vancouver held a separate, government-to-government process with First Nations, and involved First Nations in joint workshops held with member jurisdictions. This customized engagement approach included ongoing dialogue, and online and in-person one-on-one meetings with First Nations. The purpose of this engagement was to better understand First Nations' interests and values related to water and align on how those interests and values can be reflected in the plan.

Listening, sharing, and talking together have created opportunities for reflection and awareness that will continue to inform Metro Vancouver's work beyond the plan. The plan reflects key themes heard during engagement with First Nations, including:

- **Reconciliation** – include cultural and traditional knowledge in planning
- **Salmon Conservation** – protect salmon habitats and address migration challenges caused by low water flows
- **Water Conservation and Use** – prioritize water conservation, explore reuse options, and promote metering to reduce high water use
- **Environmental Stewardship and Accountability** – work together on forest management to reduce wildfire risks
- **Water Quality** – ensure strong water testing and keep communities informed about drinking water quality

These and other themes discussed with First Nations have been embedded throughout the strategies and actions of the plan. Metro Vancouver recognizes that each First Nation is unique, and we look forward to working with First Nations individually and collectively to achieve the goals established in the plan.

Engaging With the Public

Public engagement for the plan unfolded across the three interconnected phases, each designed to make water system planning accessible, informative, and meaningful for residents across the region.

Metro Vancouver delivered a mix of online and in-person opportunities — including surveys, webinars, a story-driven community engagement program, interactive booths at regional events, and large-scale activations at the PNE — paired with clear, plain-language information to support informed participation. Across all engagement channels, residents consistently emphasized:

- The importance of preparing for climate change, drought, and seismic risk
- Strengthening conservation and efficiency, including pay-by-use and leak detection through water metering
- Protecting water quality and environmental health
- Ensuring clear communication about lawn watering rules and drought conditions

Feedback from the public directly shaped revisions across multiple priority areas, reinforcing the need for adaptive planning, improved transparency, and stronger regional coordination. This multi-phase approach created a region-wide conversation about the future of drinking water and ensured that public values, concerns, and priorities are reflected throughout the plan.

Alignment and Linkages

There is interdependence between the goals, strategies, and actions in the *Drinking Water Management Plan* and in other regional plans. These plans collectively guide regional decision-making on climate resilience, infrastructure investment, environmental protection, and sustainable growth.

Board Strategic Plan (2022-2026) – Annual work plans are prepared for Metro Vancouver's service areas that respond to the directions of the Board Strategic Plan. These work plans include high-level performance indicators that have been developed across the organization to evaluate trends, determine key actions for the coming year, and assist in long-term planning. The *Drinking Water Management Plan* and Board Strategic Plan share priorities relating to climate action, resilient services, and infrastructure.

Climate 2050 (2018-2019) – Metro Vancouver's Climate 2050 strategy guides climate change policy and action for the Metro Vancouver region for the next 25 years. Climate 2050 prioritizes climate action in the region. The *Drinking Water Management Plan* and Climate 2050 share priorities relating to adaptation and mitigating climate change risks to the regional water system.

Clean Air Plan (2021) – A plan for managing air quality and greenhouse gases over the next 10 years. This plan includes key actions to effectively reduce greenhouse gas emissions in this region, in pursuit of 2030 emissions targets. The Drinking Water Management Plan and Clean Air Plan share goals relating to ecological and environmental enhancements through reducing greenhouse gas emissions, advancing ecological health, and environmental stewardship across Metro Vancouver.

Metro 2050: Regional Growth Strategy (2022) – The region's collective vision for how growth will be managed to support the creation of complete, connected, and resilient communities, while protecting important lands and ecosystems, and supporting the efficient provision of urban infrastructure and utilities. The *Drinking Water Management Plan* and Metro 2050 are linked via population growth and the resulting increase in demand for drinking water, and share priorities relating to advancing ecological health and environmental stewardship, and addressing climate change through adaptation and mitigation of risks.

Regional Greenways 2050 (2020) – The expansion of the greenway network provides opportunities to promote ecosystem connectivity by protecting some of the region's remaining natural areas, integrating green infrastructure, and increasing regional tree canopy cover. The *Drinking Water Management Plan* and Regional Greenways 2050 share priorities relating to advancing ecological health and environmental stewardship.

Regional Parks Plan (2022) – This plan guides work to protect natural areas and connect people to nature, progressing towards the vision of a resilient network of regional parks and greenways that provides important climate, heath, and other benefits to park visitors and the wider region. The *Drinking Water Management Plan* and Regional Parks Plan share priorities relating to sharing information and best practices on ecological health and environmental stewardship.

Integrated Solid Waste and Resource Recovery Plan (2011) – The Solid Waste Management Plan is currently being updated and is expected to be published in 2026.

Liquid Waste Management Plan (2026) – The Liquid Waste Management Plan (LWMP) has a very strong linkage to the *Drinking Water Management Plan* given that the liquid waste system is fed by the drinking water used in the homes and businesses across the region. The LWMP focuses on protecting the environment and reducing infrastructure costs by conserving existing wastewater system capacity. This will be achieved by reducing wet weather flows and organic loadings, along with encouraging water conservation. Strategies and actions in the *drinking water management plan* relating to the conservation of drinking water and supporting the use of non-potable water also support the LWMP priorities. The water and liquid waste systems are also linked through the "Circular Water Economy".

Circular Water Economy

The circular water economy is a system where water and wastewater are treated as valuable resources that are sustainably managed to reduce waste and protect water for future needs. The principles of a circular economy extend beyond water reuse and conservation; they also encompass energy recovery and resource optimization.

Strategies and actions in *Drinking Water Management Plan*, particularly those of the Conservation and Efficiency and Environmental Protection and Enhancement priority areas, support a circular water economy by ensuring resources are conserved and repurposed for long-term environmental and economic benefits.

The Liquid Waste Management Plan, updated in 2026, aligns with the *Drinking Water Management Plan* through a focus on water recovery from wastewater processes.

The Drinking Water Management Plan

Vision, Guiding Principles, and Goals

Water Services Vision

Deliver high-quality drinking water in a reliable and environmentally sensitive manner to meet the needs of a growing region.

Guiding Principles

Goals

The plan includes five goals that guide the strategies and actions developed through this update process:

1. Provide high-quality drinking water
2. Provide uninterrupted drinking water service
3. Manage the drinking water system in a cost-effective way
4. Manage water to protect and enhance the environment for all
5. Develop and attract a skilled workforce

How the Plan is Organized

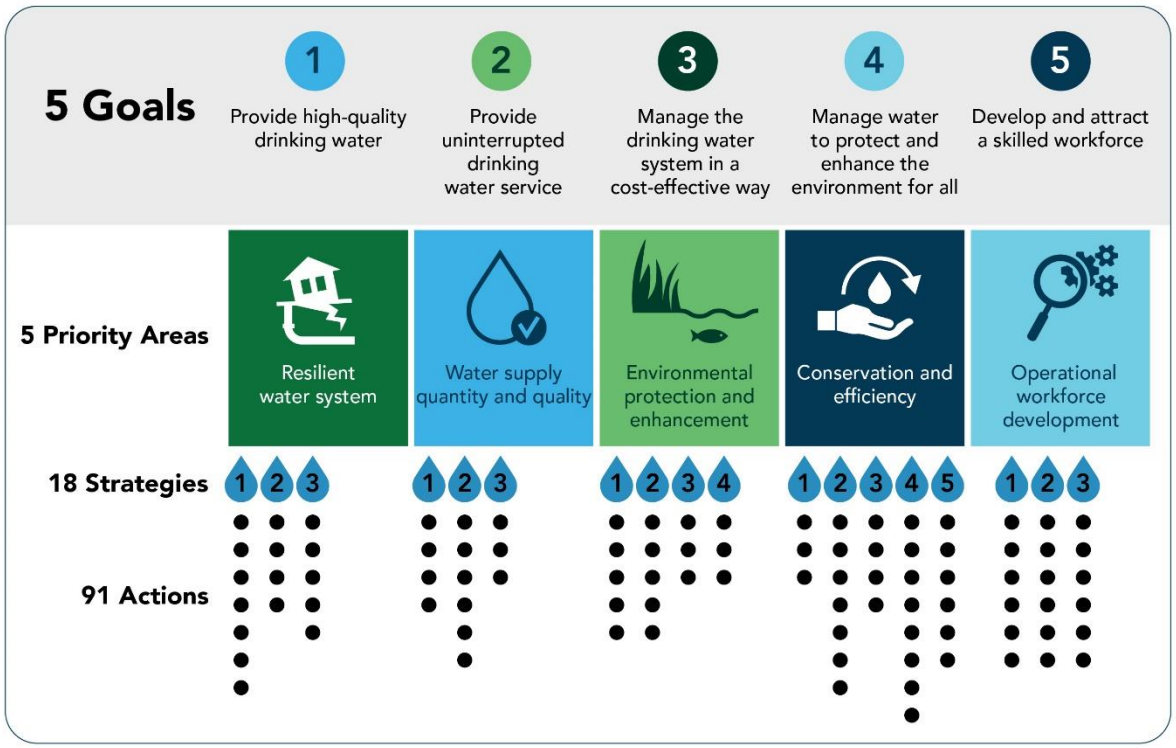
The plan is organized around five priority areas. Each priority area brings together strategies and actions that focus on a common theme in the region's drinking water system. This approach demonstrates how different strategies work together to achieve multiple goals and benefits by clearly connecting actions to the bigger picture.

Relationship between Priority Areas, Strategies, and Actions

- **Priority Areas** describe the major themes shaping Metro Vancouver's drinking water future
- **Strategies** outline the broad approaches for addressing each theme
- **Actions** identify the specific steps Metro Vancouver and member jurisdictions will take

The Five Priority Areas

- Resilient Water System
- Conservation and Efficiency
- Water Supply Quantity and Quality
- Environmental Protection and Enhancement
- Operational Workforce Development



Priority Areas, Strategies, and Actions

The following table identifies the alignment between plan priority areas and strategies and the plan's goals demonstrating how each strategy contributes achieving the five goals.

STRATEGIES		GOALS				
Priority Area – Resilient Water System						
1.	Advance planning and designing for resilient infrastructure		2			
2.	Respond and recover from emergencies		2			
3.	Proactively manage existing infrastructure for longevity		2	3		
Priority Area – Water Supply Quantity and Quality						
1.	Prepare for water quality changes due to climate change and natural hazards	1	2		4	
2.	Protect and manage water quality	1	2			
3.	Prepare for future drinking water supply and demands		2	3		
Priority Area – Environmental Protection and Enhancement						
1.	Reduce GHG Emissions and implement energy efficiency measures		2	3	4	
2.	Advance ecological health and environmental stewardship	1			4	
3.	Support healthy fish populations in the Capilano, Seymour, and Coquitlam river systems				4	
4.	Minimize the environmental impacts of leaks and spills			3	4	
Priority Area – Conservation and Efficiency						
1.	Metro Vancouver and members to work together to reduce total annual average demand to a maximum of 320 litres per capita per day by 2035.		2	3		
2.	Advance metering to support conservation and system efficiency		2	3	4	
3.	Reduce drinking water use through active conservation		2	3		
4.	Promote the recovery and reuse of non-potable water		2	3		
5.	Optimize cost efficiency across operational and capital programs			3		
6.	Increase operational efficiency			3		
Priority Area – Operational Workforce Development						
1.	Promote regional youth recruitment opportunities					5
2.	Collaborate with key industry advocates and training providers					5
3.	Enhance career development opportunities for existing Metro Vancouver operators		2			5

Priority Area: Resilient Water System

Metro Vancouver's drinking water system is under increasing pressure from climate change, population growth, aging assets, and seismic risk. Extreme heat, shifting snowpack patterns, and more frequent storms are already influencing water quality and supply, while the system must also be ready to operate during power disruptions and other emergencies. To stay ahead of these challenges, Metro Vancouver must strengthen its ability to anticipate, withstand, and recover from future disruptions.

This priority area focuses on designing, operating, and maintaining infrastructure to remain reliable under climate extremes and natural hazards, while ensuring rapid and effective emergency response, extending the life of existing infrastructure, and building new infrastructure that supports long-term system resilience, including seismic preparedness, redundancy, and strategic renewal to maintain high-quality drinking water delivery under all conditions.

Strategy 1: Advance planning and designing for resilient infrastructure		
#	Action	Responsible
1	Increase the seismic resilience of the water system by conducting prioritized structural analysis to identify seismic vulnerabilities	Metro Vancouver
2	Increase the automation of the seismic response for the water system including automatic shutoffs throughout the transmission system and automated building damage assessments	Metro Vancouver
3	Coordinate with member jurisdictions to identify points of failure due to seismic activity in the transmission and distribution systems to support the planning of upgrades and redundancy	Metro Vancouver and Member Jurisdictions
4	Assess and address infrastructure vulnerabilities to extreme heat, wildfires, floods, landslides, seismic activity, winter storms, and other emerging hazards to support the development and implementation of an infrastructure resiliency framework and inform infrastructure upgrades	Metro Vancouver
5	Increase water system redundancies and flexibility to prepare for the possibility of infrastructure failures	Metro Vancouver
6	Integrate climate resiliency design standards into infrastructure planning and design	Metro Vancouver
7	Develop a coordinated approach to planning and constructing utilities in the shared rights-of-way with members, First Nations and other utilities	Metro Vancouver and Member Jurisdictions

Strategy 2: Respond and recover from emergencies		
#	Action	Responsible
1	Define supply commitments in the event of an emergency	Metro Vancouver and Member Jurisdictions
2	Collaborate with member jurisdictions to implement the Regional Temporary Provision of Drinking Water Guideline	Metro Vancouver and Member Jurisdictions
3	Strengthen emergency preparedness, security, and business continuity through regular updates of the security and emergency plans	Metro Vancouver
4	Coordinate emergency preparedness and response with member jurisdictions, First Nations and other levels of government (i.e., Federal and Provincial government)	Metro Vancouver and Member Jurisdictions

Strategy 3: Proactively manage existing infrastructure for longevity		
#	Action	Responsible
1	Continue the implementation of the *Water Services Asset Management Plan* in accordance with international standards and industry best practices	Metro Vancouver
2	Strengthen internal asset management capabilities and resourcing through developing in-house task analysis and reliability programs	Metro Vancouver
3	Implement a comprehensive spare parts strategy by establishing a centralized management system with expanded inventory for critical infrastructure and developing proactive replacement plans for assets lacking manufacturer support	Metro Vancouver
4	Evaluate dam capacity and debris management practices to ensure resilience against extreme weather and landslide events and identify necessary capital improvements to implement remedial measures	Metro Vancouver
5	Improve front-line staff experience (utility, ease of use and access, efficiency, reliability) with asset documentation including drawings, enterprise asset management software, and digital field applications for data collection	Metro Vancouver

Priority Area: Water Supply Quantity and Quality

Metro Vancouver's drinking water system relies on the health and resilience of its water supply areas to deliver high-quality drinking water. Increasing pressures from climate change and population growth are reshaping water supply dynamics and creating new challenges for both water quantity and quality. Hotter, drier summers, reduced snowpack, heavier storms, and more variable hydrology are driving greater uncertainty, while natural hazards such as wildfires, floods, and droughts heighten risks to source water quality. At the same time, growing demand and high per capita consumption require proactive planning to secure future supply. These stressors require stronger protections for source water, more adaptive treatment processes and forecasting tools, and continuous optimization of water quality throughout the network to ensure high-quality drinking water for a growing region.

This priority area focuses on ensuring a reliable supply of high-quality drinking water by preparing for water quality changes, protecting and managing water quality across the system, and planning for future drinking water demands. These strategies strengthen source water protection, enhance treatment and monitoring, and help ensure that the region can continue delivering a high-quality, reliable supply of drinking water as conditions evolve.

Strategy 1: Prepare for water quality changes due to climate change and natural hazards		
#	Action	Responsible
1	Assess risks to water supply areas from climate change and natural hazards by applying updated climate projections and scenario-based analysis to identify emerging threats to source water quality	Metro Vancouver
2	Strengthen resilience to climate change by researching and applying emerging technologies and fostering knowledge sharing to enhance forest management practices	Metro Vancouver
3	Improve the ability to respond to rapid changes in source water quality by exploring treatment enhancements and increasing system interconnectivity	Metro Vancouver
4	Assess and mitigate the impacts of rising water temperatures on treated water quality across the supply system	Metro Vancouver

Strategy 2: Protect and manage water quality		
#	Action	
1	Enhance protection of water supply areas by implementing and enforcing access bylaws, defining conduct for work activities, and working with First Nations to address access for cultural practices while safeguarding source water quality	Metro Vancouver

2	Improve water quality at in-system reservoirs by enhancing circulation and optimizing turnover and maintenance	Metro Vancouver
3	Implement operational practices that enhance reservoir turnover by prioritizing withdrawal from reservoirs over transmission pipes	Member Jurisdictions
4	Integrate water quality planning into transmission modelling, infrastructure-strategy development, and the design and delivery of transmission projects	Metro Vancouver
5	Integrate water quality monitoring stations into the asset-management portfolio to support long-term monitoring reliability	Metro Vancouver
6	Members to protect water quality in local distribution systems by implementing a regional cross-connection control approach and collaborating with Metro Vancouver to optimize water quality	Member jurisdictions

Strategy 3: Prepare for future drinking water supply and demands		
#	Action	Responsible
1	Use adaptive planning to refine the timing of future supply increments	Metro Vancouver
2	Investigate changes in drinking water demand across different sectors to support accurate modelling of future demand forecasts	Metro Vancouver
3	Develop a drought response plan to manage water supply during potential multi-year droughts	Metro Vancouver

Priority Area: Environmental Protection and Enhancement

Healthy, resilient water supply areas are the foundation of Metro Vancouver's drinking water system, but they face growing pressures from climate change, surrounding urban development, and increased demand driven primarily by population growth. These challenges threaten the forests, wetlands, waterways, and wildlife, making ecological stewardship critical for maintaining water quality, conserving biodiversity, and building long-term resilience.

To address these risks, Metro Vancouver has adopted Climate 2050 strategies, aiming for carbon neutrality by 2050. While the water system has relatively low emissions due to gravity-fed flows and renewable electricity, further improvements are possible. Protecting and stewarding more than 60,000 hectares of coastal temperate rainforest will play a vital role in climate mitigation and adaptation while efforts continue to reduce environmental impacts across water supply, treatment, and transmission systems.

This priority area focuses on reducing greenhouse gas emissions, advancing ecological health and environmental stewardship across Metro Vancouver, and supporting healthy fish populations in the Capilano, Seymour, and Coquitlam river systems. By aligning drinking water management with environmental protection, Metro Vancouver supports a more sustainable, resilient, and vibrant region.

Strategy 1: Reduce GHG emissions and implement energy efficiency measures		
#	Action	Responsible
1	Develop and implement energy resilience measures by integrating low GHG fuels and technologies, exploring fuel recycling, and addressing barriers to adoption	Metro Vancouver
8	Develop a diverse portfolio of energy sources, energy efficiency, and capacity management opportunities, including potential storage options	Metro Vancouver
2	Develop and work towards clear and realistic carbon reduction targets for the water system using a scope-based carbon accounting approach	Metro Vancouver
3	Support and prioritize the adoption of low carbon transportation assets and fuels to reduce carbon emissions	Metro Vancouver
4	Optimize energy efficiency in the regional water system and utility operations to reduce energy-related emissions through research and strategic planning of renewable energy integration and generation opportunities	Metro Vancouver
5	Implement fiscally responsible, low carbon procurement and construction practices to reduce emissions and prioritize sustainable solutions	Metro Vancouver

Strategy 2: Advance ecological health and environmental stewardship		
#	Action	Responsible
1	Integrate ecological enhancement and carbon sequestration measures into the design and delivery of capital infrastructure projects where feasible to mitigate the environmental impacts of water infrastructure	Metro Vancouver
2	Design and plan projects to minimize or avoid impacts to the surrounding environment through adoption of carbon neutral processes, technologies, and recycled materials where feasible	Metro Vancouver
3	Support ecological health through integrated management of natural assets, ecological enhancement initiatives, and collaboration with partners such as First Nations and member jurisdictions	Metro Vancouver
4	Identify opportunities to reduce the impacts of natural hazards and protect water supply area ecosystems through continued risk assessments and develop strategies and solutions to address these risks	Metro Vancouver
5	Collaborate with partners, such as First Nations and technical associations, to deliver public education initiatives that promote ecological health and environmental protection	Metro Vancouver

Strategy 3: Support healthy fish populations in the Capilano, Seymour, and Coquitlam river systems		
#	Action	Responsible
1	Increase high-quality fish habitat and support migration and spawning for native fish species by collaborating with partners, such as First Nations and Fisheries and Oceans Canada, and sharing environmental monitoring efforts	Metro Vancouver
2	Protect fish habitat and minimize spawning impacts by identifying feasible options for improving Metro Vancouver's ability to monitor and manage ramping rates and environmental flows	Metro Vancouver
3	Manage the source reservoir supplies during the high demand period to support environmental flow needs in the fall, especially during drought conditions, and incorporate this consideration into operational planning	Metro Vancouver

Strategy 4: Minimize the environmental impacts of leaks and spills		
#	Action	Responsible
1	Minimize leaks and spills from new and existing infrastructure, equipment, and operations by updating, developing, and applying design practices and further investigating options for diversion or treatment	Metro Vancouver
2	Strengthen environmental and operational resilience by developing or improving environmental management programs and tools under the Environmental Management System, such as those that manage hydrocarbons or support wildlife	Metro Vancouver
3	Develop and implement quantitative metrics and staff training to accompany the roll-out of new and updated environmental management programs	Metro Vancouver

Priority Area: Conservation and Efficiency

Metro Vancouver's drinking water system is increasingly influenced by hotter, drier summers, shifting weather patterns, and population growth, all of which place greater pressure on how water is used across the region. Reducing per capita water use and finding and fixing leaks will preserve existing system capacity, thereby prolonging future infrastructure investments.

Early in the plan update process, Metro Vancouver and members identified the need for a shared benchmark to guide future planning and collaboratively developed a regional drinking water use reduction target. Given the region is not fully metered, it is challenging to calculate a meaningful and consistent per capita residential demand. Though gross or total per capita doesn't directly reflect residential demand, it is included to provide a benchmark the region can collectively work towards.

Regional Target: Metro Vancouver and members will work together to keep total annual average water use to a maximum of 320 litres per capita per day by 2035.

Technical analysis through the Assessment of Drinking Water Conservation Potential study identified a combination of actions that support progress toward this target, including finding and fixing leaks, using pricing structures that encourage efficient use of drinking water, and implementing focused education and behaviour-change programs.

To better manage higher summer water use, members and Metro Vancouver will work together to strengthen education, enforcement, and updates to watering restrictions and local bylaws.

Metering is recognized as a best practice tool that enables many of these efforts, such as improved leak detection, customer awareness, and pay-for-use billing. Members are encouraged to advance metering in ways that align with their local needs, including metering new builds, fully metering the industrial, commercial, and institutional (ICI) sector, expanding voluntary programs, and, where appropriate, exploring universal metering programs.

Advancing non-potable water recovery and reuse, along with improving operational efficiency, further supports shift towards using water that is treated to a level that matches its use and reflects responsible stewardship of public infrastructure and investment.

Together, these actions strengthen fiscal responsibility by helping expand the life of existing infrastructure — in both the drinking water and liquid waste systems. Encouraging water conservation to reduce dry weather flows is a priority within the Liquid Waste Management Plan (2026).

Strategy 1: Advance metering to support conservation and system efficiency		
#	Action	Responsible
1	Members are encouraged to require metering, through local bylaws, on all new residential, industrial, commercial, and institutional construction and one or more of the following by 2028: • Properties undergoing major renovations • Properties undergoing utility service replacement • Properties participating in a voluntary metering program • Properties undergoing transfer of ownership • Properties with secondary or laneway suites • Existing meter-ready connections • Connections with pools, hot tubs, and/or water features	Member Jurisdictions
2	Members are encouraged to increase the percentage of drinking water that is metered (all sectors) by 2035, from 2021 levels: • In jurisdictions where less than or equal to 25% of drinking water volume is metered, target to increase to 2.0 times that amount • If 26% to 50% of drinking water volume is metered, target to increase to 1.5 times that amount • If 51% to 75% of drinking water volume is metered, target to increase to 1.2 times that amount • If more than 76% of drinking water volume is metered, target to increase to 1.1 times that amount	Member Jurisdictions
3	Develop metering implementation guidance and communication materials to support member jurisdictions in policy adoption, public engagement, and rollout	Metro Vancouver

Strategy 2: Reduce drinking water use through active conservation		
#	Action	Responsible
1	Implement leakage reduction programs	Member Jurisdictions
2	Research and promote emerging technologies for leak reduction and system efficiency	Metro Vancouver

3	Advance region-wide drinking water conservation through targeted education, communication, and behaviour change campaigns	Metro Vancouver and Member Jurisdictions
4	Work together to conserve drinking water by reducing seasonal demand through strengthening enforcement, updating water restrictions and local bylaws, and promoting outdoor water use efficiency	Metro Vancouver and Member Jurisdictions
5	Explore the use of water pricing structures that promote conservation, such as tiered, and seasonal rates	Metro Vancouver and Member Jurisdictions
6	Work with the Province to limit the use of once-through cooling systems through the BC Plumbing Code	Metro Vancouver
7	Progress a region-wide drinking water conservation program for the industrial, commercial, institutional, and agriculture sectors	Metro Vancouver and Member Jurisdictions

Strategy 3: Promote the recovery and reuse of non-potable water		
#	Action	Responsible
1	Collaborate with the Province, member jurisdictions, academic institutions, and industry partners to advance the adoption of non-potable water systems through advocacy, education, and applied research	Metro Vancouver
2	Collaborate with member jurisdictions and First Nations to identify and pursue opportunities for non-potable water use in their communities through research, engagement, and pilot projects	Metro Vancouver
3	Support member jurisdictions and First Nations to integrate non-potable water use into policies, bylaws, and operations	Metro Vancouver
4	Implement non-potable water systems and use fit-for-purpose water where feasible in Metro Vancouver infrastructure, and buildings	Metro Vancouver
5	Demonstrate and promote non-potable water systems within regional, and member facilities	Metro Vancouver and Member Jurisdictions

Strategy 4: Optimize cost efficiency across operational and capital programs		
#	Action	Responsible
1	Conduct post-project audits of design and construction to identify lessons learned and opportunities for cost efficiency	Metro Vancouver

2	Develop equipment-level budgeting and reporting for major assets (e.g., pumps) to improve life cycle cost management	Metro Vancouver
3	Optimize and expand Metro Vancouver's in-house capacity in design, construction management, and inspections for capital project delivery to reduce overall project cost	Metro Vancouver
4	Explore innovative procurement strategies that integrate contractor involvement in the design process to optimize competition during tendering	Metro Vancouver
5	Develop facility-level upgrade plans that coordinate the delivery of major and minor capital projects to optimize cost-effectiveness and minimize duplication of effort	Metro Vancouver
6	Expand Metro Vancouver's bulk metering program to include the installation of meters on all new and replacement connections as well as unmetered existing connections, where feasible	Metro Vancouver
7	Expand key performance indicators to promote long-term monitoring of financial performance	Metro Vancouver

Strategy 5: Increase operational efficiency		
#	Action	Responsible
1	Develop key performance indicators for maintenance programs	Metro Vancouver
2	Develop and implement automation strategies for the operations of the treatment and transmission system	Metro Vancouver
3	Evaluate and implement opportunities to maximize beneficial use of treatment residuals and evaluate solutions to reduce residual production and improve dewatering to reduce transport costs	Metro Vancouver
4	Develop a long-term strategy to reduce the number of direct connections to enhance system efficiency	Metro Vancouver
5	Foster stronger collaboration with member jurisdictions to enhance knowledge sharing, optimize operations across systems, and uphold the shared commitment to deliver high-quality drinking water to the region	Metro Vancouver
6	Continue to identify non-regional assets in the transmission system and pursue asset transfer strategies with relevant members	Metro Vancouver

Priority Area: Operational Workforce Development

Metro Vancouver relies on a skilled and qualified workforce to reliably deliver high-quality drinking water. The sector is currently facing a critical shortage of water operators across North America due to retirements, growing competition for skilled workers, and a lack of awareness of the career path amongst younger generations. Ensuring long-term system reliability requires proactive strategies to attract youth to the career path, recruit new qualified operators, and retain existing operators to meet the operational requirements of our growing and complex regional water system.

This priority area focuses on recruiting and retaining qualified water operators by engaging youth and emerging professionals, collaborating with industry stakeholders and post-secondary institutions, and strengthening workforce planning. These actions help ensure Metro Vancouver can sustain a skilled and qualified operations workforce with the capacity to deliver high-quality, reliable drinking water for generations to come.

Strategy 1: Promote regional youth recruitment opportunities		
#	Action	Responsible
1	Collaborate with regional school district partners and Metro Vancouver School and Youth Leadership program participants to identify recommended pathways to support water operations career awareness and education goals and objectives through existing youth programs and activities	Metro Vancouver
2	Identify opportunities to enhance and further integrate water operations career awareness through existing Metro Vancouver School and Youth Leadership Programs	Metro Vancouver
3	Identify opportunities to provide a job-shadow ‘day in the life of an operator’ program or similar program for interested students	Metro Vancouver
4	Work with First Nations to identify the best communication approach to inform interested youth of water operations career opportunities	Metro Vancouver
5	Develop a communications toolkit to target various youth audiences to promote the water operations career path as a dynamic technical career option with strong growth potential and long-term stability	Metro Vancouver
6	Develop recruitment messaging for relevant platforms to help address operations career awareness gaps and to target individuals in minimum-wage jobs who are interested in a stable career opportunity	Metro Vancouver

Strategy 2: Collaborate with key industry advocates and training providers		
#	Action	Responsible
1	Work with post-secondary institutions and local training and certification providers to create or expand current water operator certificate and diploma programs	Metro Vancouver
2	Collaborate with industry advocates to develop and deliver outreach campaigns that raise awareness of water sector career opportunities	Metro Vancouver
3	Collaborate to develop a communications toolkit of information on career opportunities for use in communication materials by Metro Vancouver and industry associations	Metro Vancouver
4	Participate in industry workshops, roundtables, and other events to identify new opportunities for engagement and recruitment	Metro Vancouver
5	Advocate for Metro Vancouver needs with local training and certification providers including BC Water and Waste Association (BCWWA) and Environmental Operators Certification Program (EOCP)	Metro Vancouver
6	Support staff who actively participate in industry associations where there is a benefit to both Metro Vancouver and the staff member	Metro Vancouver

Strategy 3: Enhance career development opportunities for existing Metro Vancouver operators		
#	Action	Responsible
1	Work with Metro Vancouver water operations staff to identify critical positions for potential workforce planning and develop individual employee development plans to support internal growth	Metro Vancouver
2	Work with water operators, as necessary, to develop individual employee development plans	Metro Vancouver
3	Develop and deliver programs or resources to actively support continuing education	Metro Vancouver
4	Evaluate the creation and implementation of a water operator continuing education guideline	Metro Vancouver

5	Seek opportunities for water operators to participate in peer-to-peer connection and knowledge exchange opportunities to highlight the work they do, when resources allow	Metro Vancouver
6	Advocate for BCWWA and EOCP to create a Community of Practice for water operators across the region	Metro Vancouver

Monitoring and Reporting

The approach to monitoring and reporting for the plan will be developed following the plan's approval. This ensures that the monitoring framework and reporting framework aligns with the final goals, strategies, and actions. The future monitoring process will include tools to track progress, evaluate effectiveness, and identify opportunities for continuous improvement, while reporting mechanisms will provide transparency and accountability.

Specific indicators, data collection methods, and reporting timelines will be determined during the implementation phase of the plan, in consultation with subject matter experts. This staged approach allows flexibility to incorporate best practices and operational considerations as they evolve, ensuring that monitoring and reporting remain practical, meaningful, and responsive to changing needs.

Metro Vancouver produces an annual peak day report, annual water consumption statistics report, and bi-annual water use by sector report. These reports will be reviewed and built upon as needed to track and report on progress related to actions outlines in the plan.

Glossary

Adaptive Planning
A planning approach develops multiple future scenarios and adjusts future decisions based on monitoring of specific driving parameters, new information, and changing conditions, ensuring the system remains resilient over time.

Asset Management
A coordinated approach to operating, maintaining, renewing, and replacing infrastructure to ensure long-term performance and reliability.

Behaviour-Change Programs
Education, communication, and outreach initiatives designed to encourage people to use water more efficiently.

Carbon Reduction Targets
Goals that guide efforts to reduce greenhouse gas emissions from the drinking water system's operations and infrastructure.

Climate Change Projections
Scientific estimates of future climate conditions such as temperature, rainfall, and snowpack, based on global and regional modelling.

Drought
A naturally reoccurring period of abnormally dry conditions that may result in water scarcity or other adverse impacts on people, aquatic ecosystems, wildlife or vegetation and may directly impact the regional drinking water system through reduced streamflow, snowpack, and reservoir refill.

Environmental Flows
Water released downstream of reservoirs to support fish and aquatic ecosystems year-round, with particular focus during dry conditions.

GHG Emissions (Greenhouse Gas Emissions)
Emissions from energy use and operations that contribute to climate change. Reducing GHG emissions is a key component of Metro Vancouver's environmental strategy.

Leak Detection
Techniques and technologies used to identify and repair hidden leaks from water pipes to reduce water loss and improve system efficiency.

Member Jurisdictions
A partnership of 18 municipalities, one electoral area (Area A), and one Treaty First Nation (sc̓əw̓aθən məsteyəxʷ Tsawwassen First Nation) which comprise the Greater Vancouver Water District.

Meter
A device installed either at the service connection to a property or the connection to the water distribution system to measure the volume of water passing through it.

Metering
The practice of measuring the volume of water used at all properties within the water system through the use of a meter at the connection to the distribution system. Metering helps identify leaks, supports system monitoring, and enables efficient water use.

Natural Hazards
Events such as wildfires, landslides, floods, storms, and earthquakes that can affect source water quality, supply reservoir operation, or infrastructure.

Non-Potable Water
Water that is not treated for drinking but can be used for other purposes, such as irrigation, toilet flushing, or industrial processes.

Total or Gross Per Capita Water Use
The average annual daily volume of potable water supplied by Metro Vancouver, divided by the serviced population, in a calendar year.

Reservoir Refill
The process of water filling reservoirs through inflows from rainfall and snowmelt, during fall, winter, and spring.

Reservoir Reserves
Storage volumes in reservoirs that are held for essential needs or can only be accessed under specific operating conditions.

Seismic Risk
The potential impacts of earthquakes on the drinking water system, requiring preparedness measures such as system redundancy and infrastructure strengthening.

Source Water
Raw, untreated water stored in the region's supply reservoirs before it enters treatment facilities.

Summer Water Use
Seasonal indoor and outdoor water use (including lawn and garden watering), that significantly increases regional demand during hot and dry periods.

Transmission Mains
Large-diameter pipes that move treated drinking water from Metro Vancouver facilities to member jurisdictions for local distribution.

Treatment (Water Treatment)
Processes that remove contaminants and disinfect source water to meet high drinking water quality standards.

Water Supply Areas
Protected land areas that collect rainfall and snowmelt and drain into reservoirs. Metro Vancouver's water supply areas are closed to the public to safeguard source water quality.