

**METRO VANCOUVER REGIONAL DISTRICT
WATER COMMITTEE**

MEETING

Wednesday, October 2, 2024

1:00 pm

28th Floor Committee room, 4515 Central Boulevard, Burnaby, British Columbia

Webstream available at <https://www.metrovancover.org>

A G E N D A¹

A. ADOPTION OF THE AGENDA

1. October 2, 2024 Meeting Agenda

That the Water Committee adopt the agenda for its meeting scheduled for October 2, 2024 as circulated.

B. ADOPTION OF THE MINUTES

1. September 4, 2024 Meeting Minutes

That the Water Committee adopt the minutes of its meeting held September 4, 2024 as circulated.

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C. DELEGATIONS

D. INVITED PRESENTATIONS

E. REPORTS FROM COMMITTEE OR CHIEF ADMINISTRATIVE OFFICER

1. 2025 – 2029 Financial Plan Overview

Verbal Update

Designated speakers: Jerry W. Dobrovolny, Chief Administrative Officer and Harji Varn, General Manager, Financial Services/Chief Financial Officer

Pg. 9

2. 2025 - 2029 Financial Plan - Water Services

That the Water Committee endorse the 2025 - 2029 Financial Plan for Water Services as presented in the report dated September 19, 2024, titled “2025 - 2029 Financial Plan – Water Services”, and forward it to the Metro Vancouver Board Budget Workshop on October 16, 2024 for consideration.

Pg. 23

¹ Note: Recommendation is shown under each item, where applicable.

- 3. Drinking Water Management Plan Update and Report on Phase 1 Engagement** *Pg. 72*
That the GVWD Board receive for information the report dated September 16, 2024, titled “Drinking Water Management Plan Update and Report on Phase 1 Engagement.”
- 4. Award of RFP 24-006A Component 1 – Program Management Services for the Coquitlam Lake Water Supply Project (CLWSP) and Consulting Engineering Services for the Treatment Pilot Testing Program** *Pg. 113*
That the GVWD Board:
a) approve the award of RFP 24-006A Component 1 – Program Management Services for the CLWSP and Consulting Engineering Services for the Treatment Pilot Testing Program, in the amount of up to \$74,512,561 (exclusive of taxes) to Jacobs Consultancy Canada Inc., for an initial term of six years, with options for two additional two-year terms, subject to final review by the Commissioner; and
b) authorize the General Manager, Procurement and Real Estate to execute the required documentation once the General Manager, Procurement and Real Estate is satisfied that the award should proceed.
- 5. Award of RFP 24-006B Component 2 – Program Management and Consulting Engineering Services for Coquitlam Main No. 4 Project** *Pg. 119*
That the GVWD Board:
c) approve the award of RFP 24-006B Component 2 – Program Management and Consulting Engineering Services for Coquitlam Main No. 4 Project, in the amount of up to \$17,424,401 (exclusive of taxes) to CIMA Canada Inc., for an initial term of five (5) years, with an option for one additional four-year term, subject to final review by the Commissioner; and
d) authorize the General Manager, Procurement and Real Estate to execute the required documentation once the General Manager, Procurement and Real Estate is satisfied that the award should proceed.
- 6. Manager’s Report** *Pg. 123*
That the Water Committee receive for information the report dated September 25, 2024, titled “Manager’s Report”.

F. INFORMATION ITEMS

G. OTHER BUSINESS

H. RESOLUTION TO CLOSE MEETING *Note: The Committee must state by resolution the basis under section 90 of the Community Charter on which the meeting is being closed. If a member wishes to add an item, the basis must be included below.*

That the Water Committee close its meeting scheduled for October 2, 2024 pursuant to section 226 (1) (a) of the *Local Government Act* and the *Community Charter* provisions as follows:

- 90 (1) A part of a council meeting may be closed to the public if the subject matter being considered relates to or is one or more of the following:
- (e) the acquisition, disposition or expropriation of land or improvements, if the council considers that disclosure could reasonably be expected to harm the interests of the municipality;
 - (g) litigation or potential litigation affecting the municipality; and
 - (k) negotiations and related discussions respecting the proposed provision of a municipal service that are at their preliminary stages and that, in the view of the council, could reasonably be expected to harm the interests of the municipality if they were held in public.

I. ADJOURNMENT

That the Water Committee adjourn its meeting of October 2, 2024.

Membership:

Brodie, Malcolm (C) – Richmond
Sager, Mark (VC) – West Vancouver
Albrecht, Paul – Langley City
Bell, Don – North Vancouver City
Cassidy, Laura – scəwáθən məsteyəx^w
(Tsawwassen First Nation)

Guichon, Alicia – Delta
Hodge, Craig – Coquitlam
Keithley, Joe – Burnaby
Little, Mike – North Vancouver District

MacDonald, Nicole – Pitt Meadows
Stutt, Rob – Surrey
vanPopta, Misty – Langley Township
Zhou, Lenny – Vancouver

**METRO VANCOUVER REGIONAL DISTRICT
WATER COMMITTEE**

Minutes of the Regular Meeting of the Metro Vancouver Regional District (MVRD) Water Committee held at 1:00 pm on Wednesday, September 4, 2024 in the 28th Floor Committee Room, 4515 Central Boulevard, Burnaby, British Columbia.

MEMBERS PRESENT:

Chair, Director Malcolm Brodie, Richmond
Vice Chair, Director Mark Sager, West Vancouver*
Director Paul Albrecht, Langley City*
Councillor Don Bell, North Vancouver City
Director Craig Hodge, Coquitlam
Councillor Joe Keithley, Burnaby*
Mayor Mike Little, North Vancouver District
Director Nicole MacDonald, Pitt Meadows*
Director Rob Stutt, Surrey
Director Lenny Zhou, Vancouver

*denotes electronic meeting participation as authorized by the *Procedure Bylaw*

MEMBERS ABSENT:

Director Laura Cassidy, scəwáθən məsteyəx^w (Tsawwassen First Nation)
Councillor Alicia Guichon, Delta
Councillor Misty vanPopta, Langley Township

STAFF PRESENT:

Marilyn Towill, General Manager, Water Services
Nikki Tilley, Legislative Services Supervisor, Board and Information Services
Sabrina Diemert, Senior Project Engineer, Operations and Maintenance, Water Services
Wen Li, Lead Senior Engineer, Engineering and Construction, Water Services
Cal Merry, Division Manager, Engineering and Construction, Water Services

A. ADOPTION OF THE AGENDA

1. September 4, 2024 Meeting Agenda

It was MOVED and SECONDED

That the Water Committee adopt the agenda for its meeting scheduled for September 4, 2024 as circulated.

CARRIED

B. ADOPTION OF THE MINUTES

1. July 3, 2024 Meeting Minutes

It was MOVED and SECONDED

That the Water Committee adopt the minutes of its meeting held July 3, 2024 as circulated.

CARRIED

C. DELEGATIONS

No items presented.

D. INVITED PRESENTATIONS

No items presented.

E. REPORTS FROM COMMITTEE OR CHIEF ADMINISTRATIVE OFFICER

1. GVWD Water Treatment Upgrades

Report dated July 22, 2024 from Wen Li, Lead Senior Engineer, Engineering and Construction, Water Services, and Sabrina Diemert, Senior Project Engineer, Operations and Maintenance, Water Services, providing the Water Committee with an update on upgrade projects and work undertaken on water treatment facilities.

Sabrina Diemert and Wen Li provided a presentation titled “GVWD Water Treatment Upgrades”, which discussed water treatment system and water quality monitoring upgrade projects, optimizing cost efficiency projects, and climate change resiliency projects.

It was MOVED and SECONDED

That the Water Committee receive for information the report dated July 22, 2024, titled “GVWD Water Treatment Upgrades”.

CARRIED

2. GVWD Water Supply System Upgrades

Report dated July 23, 2024 from Cal Merry, Division Manager, Engineering and Construction, Water Services, giving the Water Committee an overview of some of the recently completed water infrastructure utility system upgrade projects.

Cal Merry provided members with a presentation titled “GVWD Water Supply System Upgrades” which provided an overview of water supply system upgrades, targeted repairs, and maintenance in 2023.

It was MOVED and SECONDED

That the Water Committee receive for information the report dated July 23, 2024, titled “GVWD Water Supply System Upgrades”.

CARRIED

3. Award of ITT 23-132 for Installation of Central Park Main No. 2 - Phase 2A: Macpherson Ave. to Griffiths Ave.

Report dated August 15, 2024 from George Kavouras, Director, Procurement, Procurement and Real Estate Services, and Ben Suleiman, Lead Senior Engineer, Engineering and Construction, Water Services, seeking approval from the GVWD to award Tender No. 23-132 for the installation of Central Park Main No. 2 - Phase 2A: Macpherson Ave. to Griffiths Ave., in the amount of up to \$29,720,452 (exclusive of taxes) to BD Hall Constructors Corp.

It was MOVED and SECONDED

That the GVWD Board:

- a) approve award of Tender No. 23-132 for Installation of Central Park Main No. 2 - Phase 2A: Macpherson Ave. to Griffiths Ave., in the amount of up to \$29,720,452 (exclusive of taxes) to BD Hall Constructors Corp., subject to final review by the Commissioner; and
- b) authorize the General Manager, Procurement & Real Estate to execute the required documentation once the General Manager, Procurement & Real Estate is satisfied that the award should proceed.

CARRIED

4. Award of RFP No. 23-368 for Supply and Delivery of Steel Pipe for 2024 to 2026 Water Services Construction Projects

Report dated August 15, 2024 from George Kavouras, Director, Procurement, Procurement and Real Estate Services, and Ross Richardsen, Lead Senior Engineer, Engineering and Construction, Water Services, requesting approval from the GVWD Board to approve the award of RFP No. 23-368 for Supply and Delivery of Steel Pipe for 2024 to 2026 Water Services Construction Projects, in the amount of up to CAD \$13,433,702.57, exclusive of taxes, to Northwest Pipe Company.

It was MOVED and SECONDED

That the GVWD Board:

- a) approve the award of RFP No. 23-368 for Supply and Delivery of Steel Pipe for 2024 to 2026 Water Services Construction Projects, in the amount of up to CAD \$13,433,702.57, exclusive of taxes, to Northwest Pipe Company, for a one-time purchase, subject to final review by the Commissioner; and
- b) authorize the General Manager, Procurement & Real Estate to execute the required documentation once the General Manager, Procurement & Real Estate is satisfied that the award should proceed.

CARRIED

5. Manager's Report

Report dated August 29, 2024 from Marilyn Towill, General Manager, Water Services, giving the Water Committee a status update on the Water Committee 2024 Work Plan, information about planning for future growth, and an overview of the status of Metro Vancouver's drinking water infrastructure.

It was MOVED and SECONDED

That the Water Committee receive for information the report dated August 29, 2024, titled "Manager's Report".

CARRIED

F. INFORMATION ITEMS

1. Metro Vancouver 10-Year Salmon Enhancement Action Plan Update

It was MOVED and SECONDED

That the Water Committee receive for information the report dated July 31, 2024 titled "Metro Vancouver 10-Year Salmon Enhancement Action Plan Update".

CARRIED

G. OTHER BUSINESS

H. RESOLUTION TO CLOSE MEETING

It was MOVED and SECONDED

That the Water Committee close its meeting scheduled for September 4, 2024 pursuant to section 226 (1) (a) of the *Local Government Act* and the *Community Charter* provisions as follows:

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- (e) the acquisition, disposition or expropriation of land or improvements, if the council considers that disclosure could reasonably be expected to harm the interests of the municipality.

CARRIED

I. **ADJOURNMENT**

It was MOVED and SECONDED

That the Water Committee adjourn its meeting of September 4, 2024.

CARRIED

(Time: 1:27 pm)

Nikki Tilley
Supervisor, Legislative Services

Malcolm Brodie
Chair

70339424

To: Water Committee

From: Jerry Dobrovlny, Commissioner/Chief Administrative Officer
Harji Varn, General Manager, Financial Services/Chief Financial Officer

Date: September 23, 2024

Meeting Date: October 2, 2024

Subject: **2025 - 2029 Financial Plan Overview Presentation**

This presentation introduces a high-level overview of the Metro Vancouver 2025-2029 budget.

ATTACHMENTS

1. 2025 - 2029 Financial Plan Overview Presentation

70947232



Metro Vancouver Region

2025 – 2029 Financial Plan Overview

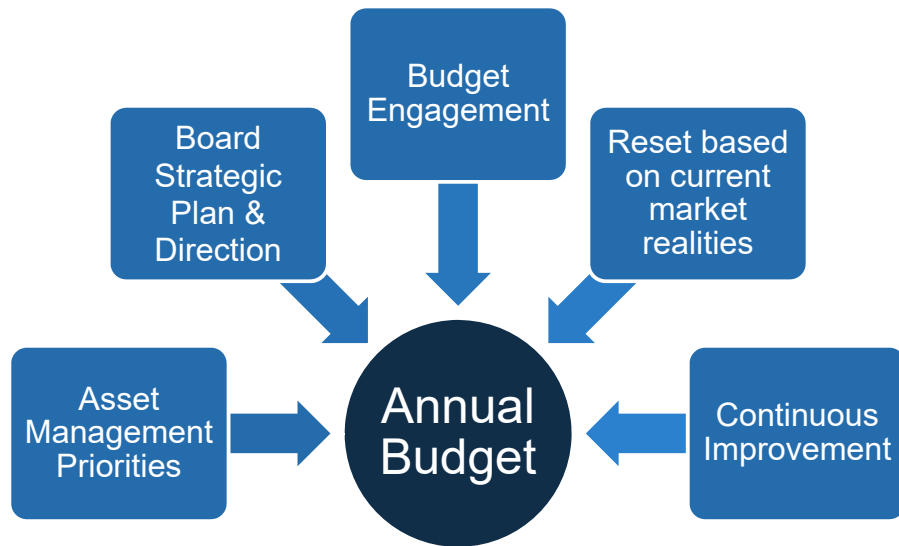
Jerry W. Dobrovolny, P. Eng, MBA
Commissioner / Chief Administrative Officer

Harji Varn
GM Financial Services / Chief Finance Officer

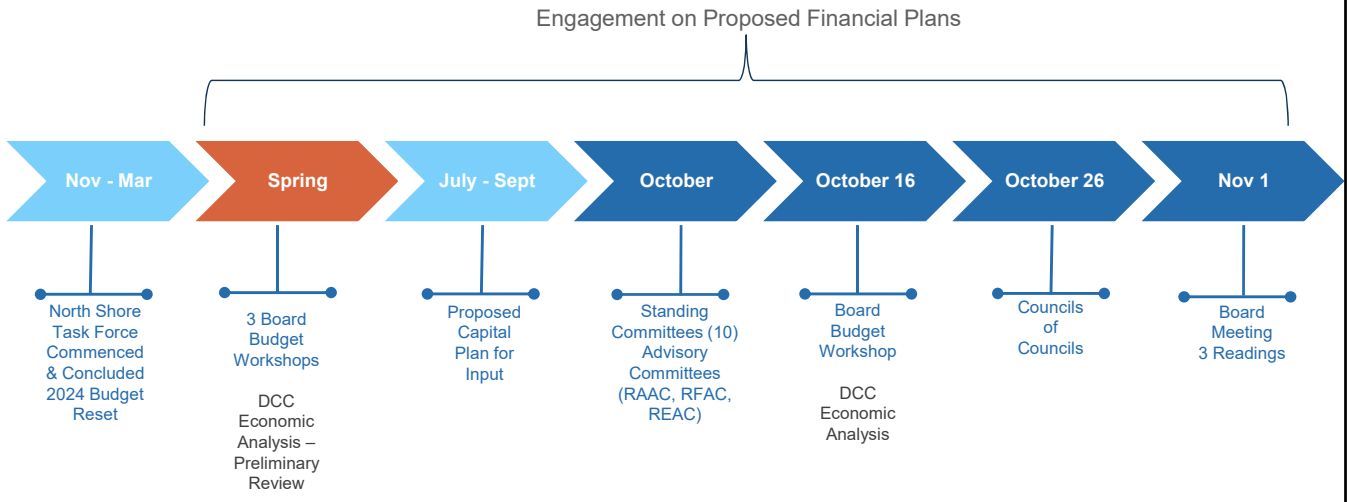


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METRO VANCOUVER BUDGET APPROACH



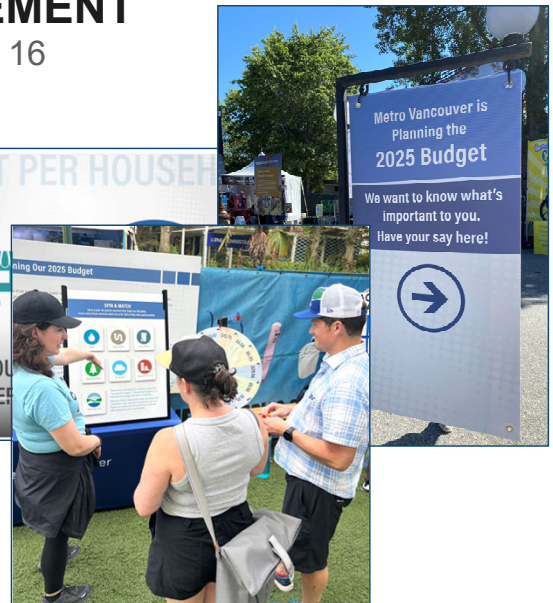
2025 BUDGET CYCLE TIMELINE



COMMUNICATIONS AND ENGAGEMENT

Public Engagement Period, July 31 – September 16

- 291,956+ budget video views
- 14 days at PNE (90,000 showcase visitors)
- 8,483 PNE budget game players
- 1,453 budget webpage visits
- 422 online survey responses
- 79 paper survey responses
- 36 promotional and educational posts on social



COMMUNICATIONS AND ENGAGEMENT

Overall Communications / Member Engagement

- Budget webpage with video
- Budget Overview one pager
- MetroUpdate newsletter article
- Live stream Committee and Board meetings
- Regional Advisory Committees
- Council of Council meetings
- Budget communications throughout the year

The screenshot shows the Metro Vancouver Budget 2024 Overview webpage. It includes a 'Financial Plan Overview' section with text about Metro Vancouver's services and a '2024 Budget at a Glance' section with bullet points. A table titled 'Approximate average cost per household*' is also visible, showing costs for various services like Regional Planning, Air Quality Management, and Drinking Water Services. Below the table are two pie charts: 'Where the Money Comes From' and 'Where the Money Goes'. A video player in the foreground shows a 'PUBLIC WORKSHOP' video titled 'Metro Vancouver Budget Process'.

COMMITMENT TO CONTINUOUS IMPROVEMENT

- Continue culture of continuous improvement
- Continue to Monitor financial performance
- Continue to utilize data to drive decision making
- Continue to seek alternative funding strategies/sources
- Continue with long range planning and procurement strategies for multi-year programs and project delivery



CONTINUOUS IMPROVEMENT – 2024 COMPLETED OR ONGOING

Initiative	Outcomes
Cyber Resilience (CS)	<ul style="list-style-type: none"> Improve cyber security and resilience to proactively mitigate the risks posed by evolving cyber security threats
Weigh Scale Software Upgrade Implementation (SWS)	<ul style="list-style-type: none"> Range of new features: license plate readers, emailing bills, real-time customer feedback; system resilience.
Refined Environmental Management System (WS)	<ul style="list-style-type: none"> Revised the review and approval process for regulatory reporting, which is freeing up time for our frontline, engineering, and legal teams

CONTINUOUS IMPROVEMENT – 2025 NEW

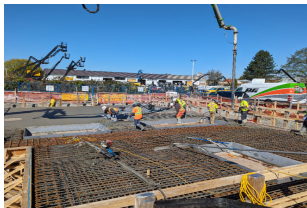
Initiative	Outcomes
Waste-to Energy District Energy (SWS)	<ul style="list-style-type: none"> Up to 70,000 tonnes GHG per year emissions reduction.
Biosolids Hauling de-carbonization (LWS)	<ul style="list-style-type: none"> Trials of low-carbon hauling vehicles (battery electric vehicles and hydrogen electric vehicles) for short to medium haul routes.
Project Quality Management (PD)	<ul style="list-style-type: none"> Consistent implementation of Project Quality Management and reduction of quality related risks. Efficiencies due to risk avoidance and streamlined processes.

MAJOR DRIVERS – CAPITAL PROGRAM

WHAT WE ARE DOING

- Long-term financial planning
- Cost estimating framework
- Reviewing scope and timing of over 300 projects
- Partnership funding

The image shows two overlapping spreadsheets. The top one is titled 'GREATER VANCOUVER WATER DISTRICT CAPITAL BUDGET AND 2025 CAPITAL PLAN' and the bottom one is 'GREATER VANCOUVER DISTRICT AND FRASER VALLEY REGIONAL DISTRICT CAPITAL BUDGET AND 2025 CAPITAL PLAN'. Both tables list various projects with columns for project name, location, start year, and budget amounts.



Fleetwood Reservoir Roof slab



Annacis WWTP Digesters



Widgeon Marsh Development

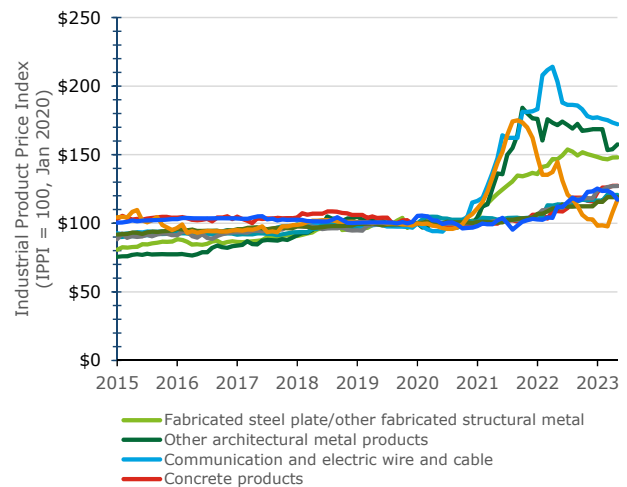


Central Surrey Recycling and Waste

MAJOR DRIVERS – INFLATION AND COST ESCALATION

WHAT WE ARE DOING

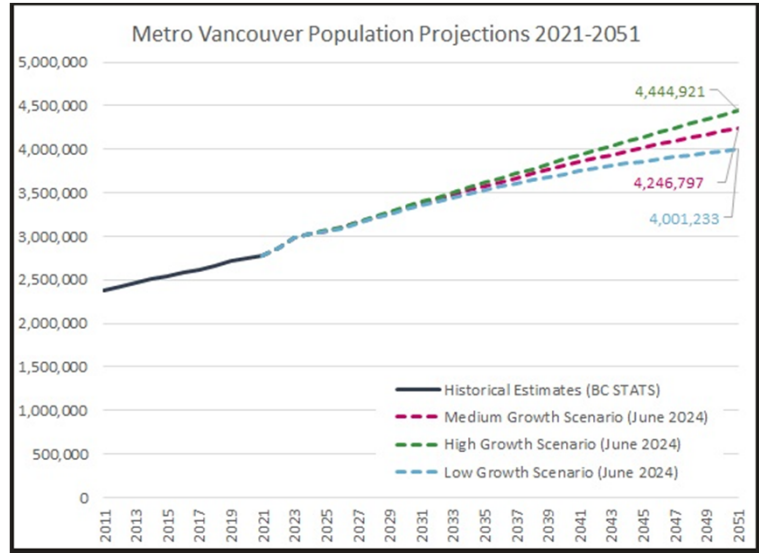
- Strengthening procurement strategies
- Examining revenue sources and partnerships
- Timing and scope of projects and programs



MAJOR DRIVERS - POPULATION GROWTH

WHAT WE ARE DOING

- Examining impacts to infrastructure
- Regular updates and review of DCCs
- Alignment with Province and member jurisdictions



MAJOR DRIVERS - CLIMATE CHANGE AND RESILIENCE

WHAT WE ARE DOING

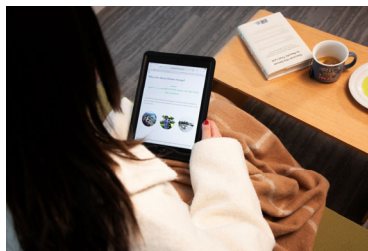
- Infrastructure resilience
- Metro 2050 Policy
- Climate action strategies and programs



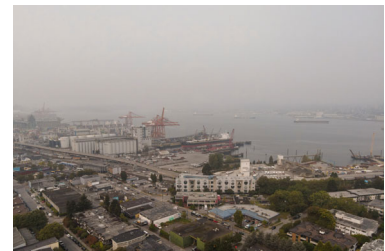
King tide in West Vancouver



Minnehada fire



Climate Literacy Program

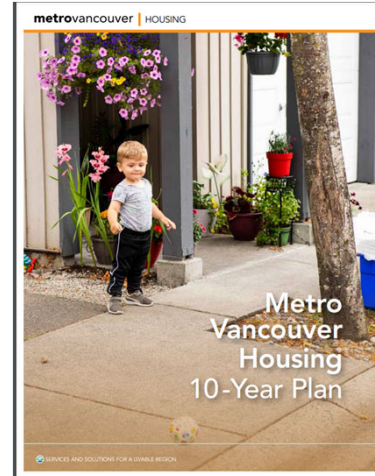


Smoky conditions in Metro Vancouver

MAJOR DRIVERS – BELOW MARKET RENTAL HOUSING

WHAT WE ARE DOING

- Metro Vancouver Housing development and renewal projects (2,100+ units underway)
- Partnerships with member jurisdictions, development community and others
- Historic funding agreement with Province; new federal program



APRIL 2023 BOARD BUDGET WORKSHOP DIRECTION

That the MVRD/MVHC/GVS&DD/GVWD Board at the April 19, 2023 Board Budget Workshop:

- a) *direct staff to proceed through the 2024 budget cycle with household impact targets as follows*
 - i. 2024 – 12%
 - ii. 2025 – 11%
 - iii. 2026 – 5%
 - iv. 2027 – 5%
- b) *direct staff to prepare the 2024–2028 Financial Plan with the following development cost charge (DCC) rate assumptions:*
 - i. *Liquid Waste Development Cost Charges moving to a 1% assist factor with interest as part of the 2024–2028 Financial Plan*
 - ii. *Water Development Cost Charges moving to a 1% assist factor with interest as part of the 2024–2028 Financial Plan; and*
 - iii. *Implementation of a Development Cost Charge for Regional Parks and move to a 1% assist factor within the 2024–2028 Financial Plan*

MARCH 2024 BOARD MEETING

- The DCC Bylaws received Provincial Inspector Approval in February 2024
- On March 22, 2024, the MVRD/ GVS&DD/ GVWD Board had 4th reading and final adoption of the 3 DCC Bylaws
- The DCC Bylaws have a 3-year phase-in January 1, 2025; January 1, 2026; and January 1, 2027

SPRING 2024 BOARD BUDGET WORKSHOPS DIRECTION

April 17 and May 17, 2024 Board Budget Workshops direction to staff was to continue with the direction from April 2023 which were to:

- Maintain the following HHI targets:
 - 2025 – 11%
 - 2026 – 5%
 - 2027 – 5%
 - 2028 – 5%
- Continue with Liquid Waste DCCs, Water DCCs, and Regional Parks DCCs to a 1% assist factor with interest as part of the financial plan

BOARD BUDGET WORKSHOP DIRECTION

May 2024 Board Budget Workshop Resolution

That the GVS&DD Board direct staff to prepare the 2025 Budget and 2025–2029 Financial Plan by allocating the \$2.8B required to complete the NSWWTP Program according to Option 3 from Table 6 in the report dated May 10, 2024, titled “2025 Budget and 5-Year Financial Plan Scenarios for Consideration.”

That the GVS&DD Board direct staff to prepare the 2025 Budget and 2025–2029 Financial Plan by allocating the \$2.8B required to complete the NSWWTP Program according to Option 4 from Table 7 in the report dated May 10, 2024, titled “2025 Budget and 5-Year Financial Plan Scenarios for Consideration.”

	2025	2026	2027	2028	2029
VSA	+\$150	-	-	-	-
NSSA	+\$118	+\$118	+\$118	+\$118	+\$118
LIWSA	+\$80	-	-	-	-
FSA	+\$90	-	-	-	-

2025–2029 FINANCIAL PLAN OVERVIEW

2025 Budget – Bottom Line

11.0%	Prior Projection for 2025
\$88	Increase for the average household in 2025 (Water: \$14, Liquid Waste: \$69, Solid Waste: \$3, MVRD: \$2)
\$884	Average annual cost for all Metro Vancouver services
9.9%	Proposed 2025 Budget
\$79	Increase for the average household in 2025 (Water: \$11, Liquid Waste: \$63, Solid Waste: \$3, MVRD: \$2)
\$875	Average annual cost for all Metro Vancouver services

OVERALL AVERAGE HOUSEHOLD IMPACT 2025–2029

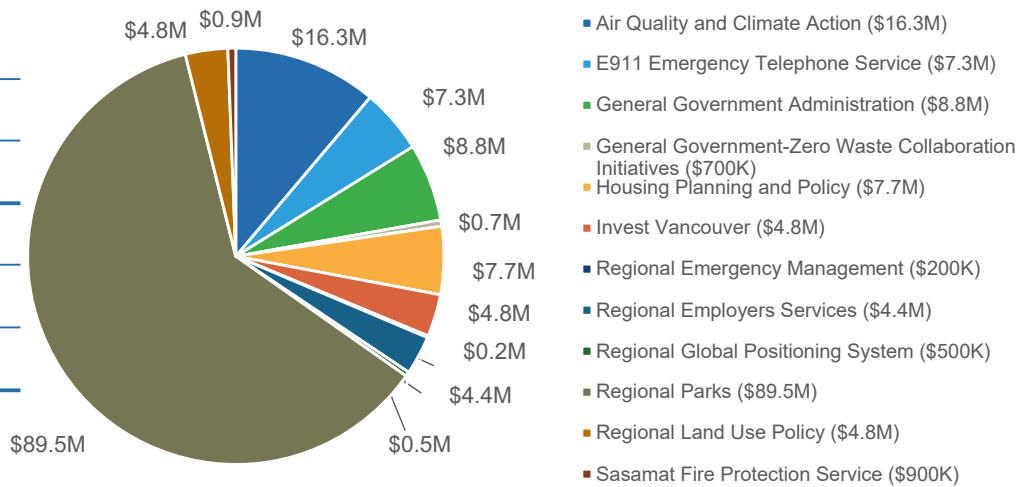
	2024	NSWWTP Amended	2025	2026	2027	2028	2029
Water Services	\$189	\$189	\$200	\$211	\$215	\$218	\$218
Liquid Waste Services	\$349	\$447	\$510	\$549	\$587	\$627	\$672
Solid Waste Services	\$68	\$68	\$71	\$74	\$78	\$82	\$86
Regional District Services	\$92	\$92	\$94	\$84	\$85	\$86	\$87
Total Household Impact	\$698	\$796	\$875	\$918	\$965	\$1,013	\$1,063
Prior Year Forecast - amended			\$884	\$933	\$981	\$1,033	

BUDGET OVERVIEW

2025 MVRD Budget

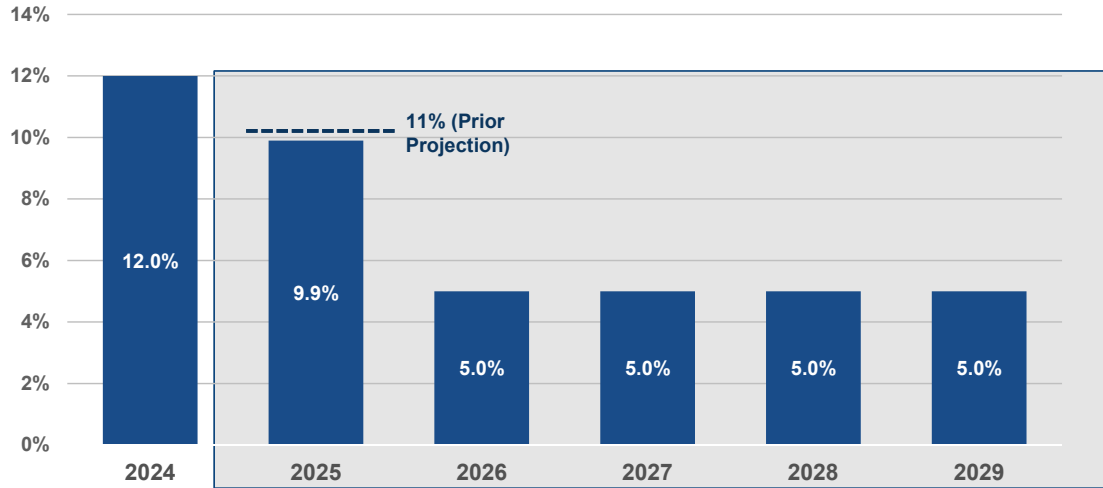
Revenues (millions)	
MVRD Requisition	\$117M
Transfer from Reserves	\$16M
Other Revenues	\$13M
Total	\$146M

Expenditure by Department



METRO VANCOUVER HOUSEHOLD IMPACT % CHANGE

Proposed 2025–2029 Financial Plan



METRO VANCOUVER OPERATING BUDGET

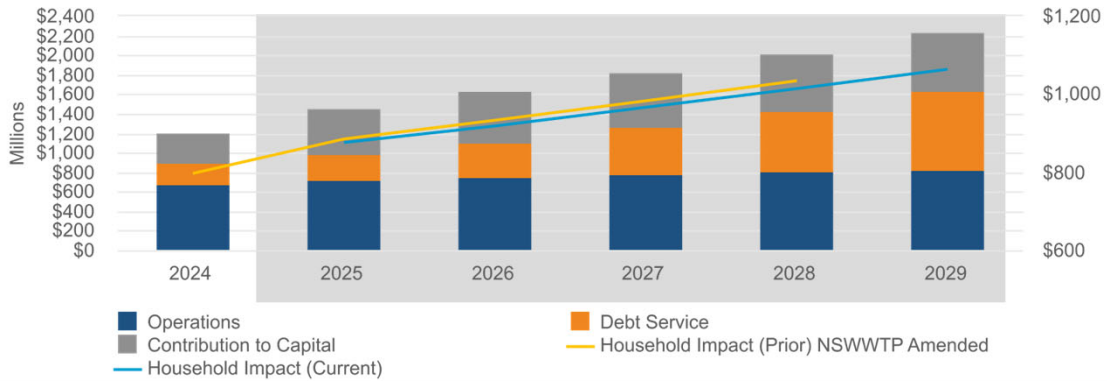
Expenditures

Overview:

- 2024 Operating Budget: \$1,216.0M
- 2025 Operating Budget: \$1,463.7M

Drivers:

- Operating Program is inflationary over the 5 years
- Funding capital program through debt service and contribution to capital in accordance with Board policy



METRO VANCOUVER OPERATING BUDGET

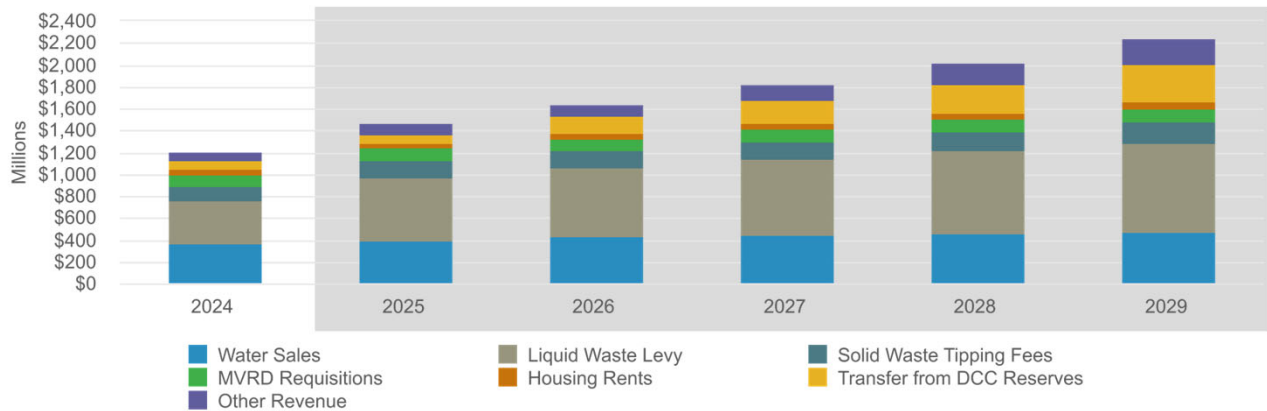
Revenues

Overview:

- Primary funding sources: water sales, sewer levy, tipping fees, rents, MVRD requisition
- Relative stability for primary sources

Drivers:

- Anticipated DCC revenues received and applied having downward pressure on HHI
- Continuously seeking partner funding for support



METRO VANCOUVER CAPITAL PLAN

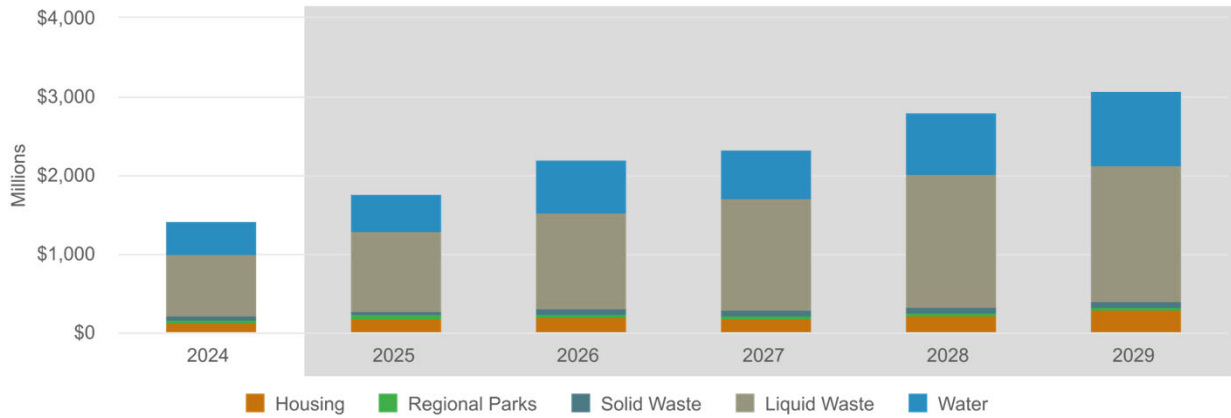
Expenditures

Overview:

- 2024 capital cash flow \$1.42B
- 2025 capital cash flow \$1.77B

Drivers:

- Continued activity on previously approved projects
- Regulatory upgrades and growth projects



Pacific Spirit Regional Park

Questions?

To: Water Committee

From: Marilyn Towill, General Manager, Water Services

Date: September 19, 2024 Meeting Date: October 2, 2024

Subject: **2025 - 2029 Financial Plan - Water Services**

RECOMMENDATION

That the Water Committee endorse the 2025 - 2029 Financial Plan for Water Services as presented in the report dated September 19, 2024, titled “2025 - 2029 Financial Plan - Water Services”, and forward it to the Metro Vancouver Board Budget Workshop on October 16, 2024 for consideration.

EXECUTIVE SUMMARY

The 2025 - 2029 Metro Vancouver Financial Plan has been prepared following direction from the Financial Plan Task Force and from the Board at the Board Budget Workshops. The 2025 Budget has come under the household impact targets that were recommended by the Financial Plan Task Force and endorsed by the Board, which has resulted in an overall consolidated household impact for 2025 of 9.9%, down from the 11.0% projected for 2025 in the prior financial planning cycle.

In 2025, the operating budget for Water Services is proposed to increase by \$30.0 million (7.9%) for a total of \$408.9 million. The blended water rate is proposed to increase by 7.2% to \$1.0002 per cubic metre (/m³), which represents an \$11 increase to the average regional household for a total of \$200 household impact (which is less than the previous forecast for 2025 of \$203).

Metro Vancouver, through the GVWD, continues to provide a reliable source of uninterrupted, high quality drinking water to support the growing region and its economic prosperity. Growing demand for drinking water, system resilience, and infrastructure maintenance are met through robust, proactive capital and operating programs supported by long term planning and monitoring.

PURPOSE

To present the 2025 - 2029 Financial Plan for Water Services for consideration by the Committee.

BACKGROUND

Metro Vancouver’s annual budget process includes the development of detailed annual budgets and the updating of five-year financial plans for each of the four Metro Vancouver legal entities (Metro Vancouver Regional District, Metro Vancouver Housing Corporation, Greater Vancouver Water District and Greater Vancouver Sewerage and Drainage District).

Three Board Budget Workshops were held in the spring with the objective to seek direction for the preparation of the 2025 - 2029 Financial Plan. This has resulted in a plan that maintains the goals and objectives of Metro Vancouver while minimizing the impact on ratepayers through evaluation and optimizing the capital and operating programs.

This report focuses on the Water Services function and presents the 2025 annual budget and the updated five-year plan for the years 2025 to 2029 for Committee consideration.

WATER SERVICES PROGRAM

Water Services provides high-quality drinking water to 18 member municipalities, one electoral area and one treaty First Nation within Metro Vancouver, serving a population of approximately 2.8 million. Source water is collected from within three protected mountain water supply areas covering approximately 60,000 hectares. The system itself comprises six mountain storage lakes, five water supply dams, two major water treatment facilities, over 520 km of large diameter transmission mains, 27 storage reservoirs, 19 pump stations, and eight re-chlorination stations. The system treats and distributes an average of 1.0 billion litres of drinking water per day which can increase to over 1.5 billion litres per day during the summer months.

Water Services initiatives planned over the next five years are guided by direction in the *2022 - 2026 Board Strategic Plan* and the *2011 Drinking Water Management Plan*, specifically:

2022 - 2026 Board Strategic Plan strategic priorities:

- Ensure financial sustainability and regional affordability by completing a long-term financial plan, which will ensure the long-term serviceability of its assets and funding sources.
- Take climate action to mitigate unavoidable climate impacts while reducing regional greenhouse gas emissions.
- Continue to increase the resilience of the water system to ensure local communities and organizations can prepare, avoid, absorb, recover and adapt to the effects of shocks and stresses to the system in an efficient manner.
- Continue reconciliation efforts by building and strengthening respectful and reciprocal relationships with local First Nations.

2011 Drinking Water Management Plan:

- Provide clean, safe drinking water
- Ensure the sustainable use of water resources
- Ensure the efficient supply of water

Metro Vancouver's population is growing faster now than it has historically. This increased population will increase the demand for drinking water and the infrastructure needed to deliver it. In addition, climate change is bringing unpredictable weather patterns, drought and additional pressure on the regional water supply. With these stressors in mind, Metro Vancouver is taking a two-pronged approach to plan for the future: the first is to continue promoting water conservation through various plans and campaigns to reduce the demand for drinking water. The second is ensuring adequate water supply and appropriate infrastructure are in place.

WORK PLAN PERFORMANCE INDICATORS

High level performance indicators have been developed across the organization to evaluate trends, determine key actions for the coming year, and to assist in long-term planning. The 2025 Work Plans for Water Services are presented in this report. Within the Water Services Work Plans, 33 performance indicators have been developed and are being tracked. These include:

- Peak per capita water use
- Progress on major and minor capital projects
- Volume of water treated and delivered
- Energy use per unit volume of water treated
- Compliance with treatment operating permit criteria
- Water transmission system leak repairs
- Water samples collected and analyzed
- Dollar savings from continuous improvement initiatives

CONTINUOUS IMPROVEMENT

Water Services continues to explore, evaluate and implement continuous improvement opportunities. The department identified numerous opportunities in 2023 and has made progress on many including:

- Work has been completed to expand the Dam Safety Tracking System to allow entry and tracking of work activities for the entire corporate portfolio of dams.
- Acquiring technology improvements (robotic survey equipment, etc.) to improve efficiency and productivity.
- Completing the first pilot of a formal valve maintenance program which included maintaining and inspecting two transmission water mains and exercising 25 large valves.
- Building Information Modeling Phase-I saw implementation of new standards for vertical projects and infrastructure.
- Replacing propane-powered thermo-electric generators and associated monitoring equipment with emerging satellite-based technology resulting in reduced GHG emissions and improved communications reliability of remote monitoring sites.
- Maintenance Construction Scheduler software upgrade: Adoption of the enhanced software has improved data integrity, enhanced program speed, and an upgraded user interface. These enhancements have resulted in a 2024 performance target improvement of 5% for water system shutdown work over the 2020 – 2022 average.
- Air valve top assembly replacement: Identified issues with certain air valves and worked with the manufacturer to replace the top assemblies at no cost to Metro Vancouver.

For 2025, some opportunities for continuous improvement have been carried forward and new ones have been added including:

- Improved use of remote sensing instrumentation in the water supply areas to reduce helicopter usage time and improve fire safety issue response times.
- Continue work on GHG emissions management towards achieving 45% reduction by 2030 and net zero emissions by 2050.

- Enhance water quality monitoring throughout the transmission system by installing improved in-system reservoir sampling equipment and remote data monitoring of re-chlorination stations.
- Initiate the Water Transmission System Master Plan to develop a long term capital plan prioritizing projects based on updated growth modelling.
- Continue to incorporate Lean Six Sigma methodology to enhance business practices. For example, reduce lost time incidents and meet AWWA Guidelines for reservoir cleaning and inspection through monthly reporting and investigation.
- Continue formalizing a valve exercising and inspection program and improve documentation using the asset and work management systems.

2025 BUDGET AND 2025 - 2029 FINANCIAL PLAN

The five-year financial plans for this cycle have been updated to address five central priorities identified by the Metro Vancouver Board in its Strategic Plan to guide the development of plans and budgets. The five priorities are:

- Financial Sustainability and Regional Affordability
- Climate Action
- Resilient Services and Infrastructure
- Reconciliation
- Housing

Each Metro Vancouver function has an Annual Work Plan that includes strategic directions, performance indicators and key actions to guide the work for the coming year. Each function also has a “What’s Happening” summary that presents program highlights for the next five years.

The 2025 - 2029 Water Services Financial Plan is included as Attachment 1. The 2025 Annual Work Plans for Water Services presented in this report are included in Attachment 3 and the “What’s Happening” highlights for the years 2025 - 2029 are included in Attachment 4.

Operating Budget Highlights

The Water Services operating budget is separated into operating programs and funding required to support the expanding capital program (debt service and contribution to capital). In the previous budget cycle it was proposed that the budget would increase by \$40.1 million to \$415.4 million for 2025. A reduced increase is now being proposed of \$30.0 million, for a total budget of \$408.9 million in 2025 (Attachment 1). This can be attributed to core operating fund increases (\$1.5 million), increases to allocated programs (\$1.7 million), increases to contributions to capital (\$23.4 million), and increases to debt servicing (\$3.4 million).

The 2025 financial plan includes increased water sales revenues of approximately \$31.5 million, based on higher summer rates (\$1.4214/m³) for June through September and the lower rate of \$0.7119/m³ applying for the rest of the year (equating to an overall average water rate of \$1.0002/m³ compared to 2024 forecast for 2025 of \$1.0160/m³). The differential rates are intended to incentivize summer conservation efforts in the region and to assist in reducing long term pressures on the capital budget.

The 2025 operating budget includes the following key actions:

- Continue community wildfire planning with key municipal partners that border the water supply areas, and implement small-scale forest fuel reduction strategies.
- Continue annual cleaning and inspection of drinking water reservoirs to meet Water Services goals and AWWA Guidelines.
- Finalize the Climate 2050 Water and Wastewater Infrastructure Roadmap, and develop a Water Utility Climate Action Plan to establish GHG reduction targets and actions.
- Continue collaboration with member jurisdictions to strengthen regional drinking water conservation and enforcement, reducing pressures on infrastructure development to support population growth.

Highlights of contracts and consulting assignments anticipated to be undertaken in 2025 to respond to work plan requirements within the operating budget include the following:

- Updates to the Drinking Water Management Plan for endorsement by the GVWD Board
- Asset condition assessments of aerial water main crossings and opportunistic condition assessments during leak repairs
- Reservoir Limnology Program to monitor the chemical, physical and biological parameters of the Capilano, Seymour and Coquitlam source water supply reservoirs
- Tree assessments and site treatments associated with the Water Services Hazard Tree Program
- Contracted laboratories or the British Columbia Centre for Diseases Control for the analysis of specialized legislated water quality parameters

Capital Budget Highlights

The Water Services 2025 - 2029 Capital Plan (Attachment 2) includes \$484.5 million in planned expenditures for 2025 and a total of \$3.5 billion over the five years, with an average of \$701.3 million per year. There are 153 projects on the five-year plan and the largest six projects (each over \$100 million) make up approximately 50% of the capital spending over the next five years.

The capital program is funded by a combination of long-term debt, reserves, contributions from the operating budget, external (interagency) contributions, and projected DCC funding.

Capital program expenditures over the next five years are largely driven by system expansion to meet the needs of a growing population, upgrades to improve system resiliency, maintenance of aging infrastructure, and opportunities to reduce life-cycle costs for services and/or achieve Board goals such as climate change mitigation. Throughout the capital planning process, staff reviewed project schedules to ensure efficient project timing, deliverability, and scope.

Highlights of capital projects planned or ongoing for 2025 include the following:

- Commence construction: Central Park Main No. 2 (Phase 2), Annacis Main No. 5 (North), and Stanley Park Water Supply Tunnel.

- Continue construction: Kennedy Newton Main, Fleetwood Reservoir, Capilano Raw Water Pump Station Back-up Power, Douglas Road Main No. 2 (Still Creek Section), Coquitlam Water Main, Annacis Water Supply Tunnel, and Second Narrows Water Supply Tunnel.
- Complete construction: replacement of the Seymour and Capilano Reservoir Dam Safety Booms, and Pebble Hill Reservoir Seismic Upgrade Units 1 & 2.

Reserve Funds

The application of reserve funding in Water Services over the 2025 - 2029 Financial Plan comes from the Sustainability Innovation Fund reserve. In 2025, the financial plan includes \$1,020,000 in funding from the Water Sustainability Innovation Fund for several sustainability project initiatives approved by the Board, and a further planned use of \$300,000 in 2026. The 2025 - 2029 Projected Reserves for Water Services is included in Attachment 5 which includes a Water Laboratory Equipment Reserve with a balance of \$910,202 at the end of 2024.

APPROVAL PROCESS

The proposed 2025 - 2029 Financial Plan and Annual Work Plan is presented for consideration and endorsement before being forwarded to the Board for consideration.

The next steps of the process are:

- The 2025 - 2029 Financial Plan and Annual Work Plan will be presented for consideration at the Metro Vancouver Board Budget Workshop on October 16, 2024.
- The Board will consider adoption of the 2025 Budget and endorsement of the 2025 - 2029 Financial Plan on November 1, 2024.

ALTERNATIVES

1. That the Water Committee endorse the 2025 - 2029 Financial Plan for Water Services as presented in the report dated September 19, 2024, titled "2025 - 2029 Financial Plan - Water Services", and forward it to the Metro Vancouver Board Budget Workshop on October 16, 2024 for consideration.
2. That the Water Committee amend the 2025 - 2029 Financial Plan for Water Services as follows: _____; and forward the amended Financial Plan to the Metro Vancouver Board Budget Workshop on October 16, 2024 for consideration.

FINANCIAL IMPLICATIONS

If the GVWD Board approves the 2025 Budget and endorses the Five-Year Financial Plan for Water Services, as presented under Alternative 1, in 2025, with the increase applied 100% to the water rate for June to September, the projected water rates would be \$1.4214/m³ for June through September and remain at \$0.7119/m³ for January through May and October through December (average water rate of \$1.0002/m³ compared to 2024 forecast for 2025 of \$1.0160/m³). Revenue from the sale of water is projected to increase by \$31.5 million (8.6%) to \$399 million which will generate the majority of the \$408.9 million in total revenue required to offset projected expenditures. The increase in the average water rate represents an \$11 increase in the annual cost to the average regional household to \$200 which is less than the \$203 forecasted for 2025 in the

prior year budget. The application of the proposed increase for 2025 to the peak water rate does not have bearing on the budget or the financial plan.

Over the term of the five-year plan, the blended water rate is projected to increase by an average of \$0.0409/m³ per year with water sales increasing by an average of \$21.3 million per year to provide the required revenue to offset projected expenditures. It is anticipated that the annual cost to the average regional household over the next five years will rise from \$200 in 2025 to \$218 in 2029 representing an average annual increase of \$6 which reflects the increased DCC revenue anticipated that offsets costs for capital growth projects.

CONCLUSION

The 2025 Budget and Five-Year Financial Plan for Water Services have been prepared following direction received at the May 31, 2024 Metro Vancouver Board Budget Workshop and to respond to direction provided in the *2022 - 2026 Board Strategic Plan* and to support the *2011 Drinking Water Management Plan*. It is presented to Committee and Board members to provide overview information on activities and financial impacts for the years 2025 - 2029 for Water Services.

The presentation of the 2025 Budget and Five-Year Financial Plan for Water Services provides the opportunity for Metro Vancouver to share with its member jurisdictions the proposed capital projects and operating programs, and the financial impact of these projects, over the next five years. The financial plan illustrates how Metro Vancouver proposes to pay for water infrastructure investments that will be required to maintain our assets and to respond to our region's growing population. It is intended to be used as a guiding document for member jurisdictions in the development of their five-year financial plans and includes projections on household impact to demonstrate how the plan will remain affordable for Metro Vancouver residents while keeping pace with our critical infrastructure investment requirements.

Staff recommend endorsing the 2025 - 2029 Financial Plan and Annual Work Plans for Water Services as presented under Alternative 1.

Attachments:

1. 2025 - 2029 Water Services Financial Plan
2. 2025 - 2029 Water Services Capital Budget Summary
3. 2025 Water Services Work Plans
4. 2025 - 2029 "What's Happening"
5. 2025 - 2029 Projected Reserves - Water Services
6. Presentation re: 2025 – 2029 Financial Plan – Water Services

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**GREATER VANCOUVER WATER DISTRICT
WATER SERVICES**

**2025 BUDGET REVIEW
2025 - 2029 FINANCIAL PLAN**

	2024 BUDGET	2025 BUDGET	% CHANGE	2026 FORECAST	% CHANGE	2027 FORECAST	% CHANGE	2028 FORECAST	% CHANGE	2029 FORECAST	% CHANGE
REVENUES											
Water Sales	\$ 367,535,244	\$ 399,008,564	8.6%	\$ 430,307,762	7.8%	\$ 448,193,029	4.2%	\$ 464,660,294	3.7%	\$ 473,883,406	2.0%
Other External Revenues	3,479,737	2,969,279		2,948,675		2,989,649		2,914,692		2,089,504	
Transfer from DCC Reserves	1,823,949	5,869,716		34,633,139		64,800,184		97,235,296		135,352,900	
Transfer from Sustainability Innovation Fund Reserves	6,044,817	1,020,000		300,000		-		-		-	
TOTAL REVENUES	\$ 378,883,747	\$ 408,867,559	7.9%	\$ 468,189,576	14.5%	\$515,982,862	10.2%	\$ 564,810,282	9.5%	\$ 611,325,810	8.2%
EXPENDITURES											
Operating Programs:											
Policy Planning and Analysis											
Contribution to Sustainability Innovation Reserve	\$ 723,000	\$ 723,000		\$ 723,000		\$ 723,000		\$ 723,000		\$ 723,000	
Research and Innovation	716,477	771,357		803,224		1,040,593		1,081,429		1,104,989	
Utility Modeling and Data Analytics	2,334,267	2,698,464		2,848,301		2,621,812		2,725,153		2,849,242	
Utility Policy and Planning	6,107,180	1,986,582		2,007,786		2,209,541		2,311,454		2,414,860	
	9,880,924	6,179,403	(37.5%)	6,382,311	3.3%	6,594,946	3.3%	6,841,036	3.7%	7,092,091	3.7%
Engineering and Construction											
Minor Capital Projects	10,718,619	10,958,971		11,531,252		11,867,388		12,181,901		12,477,808	
Infrastructure Operations Support	2,546,667	2,662,505		2,729,499		2,977,267		3,048,344		3,121,803	
Dispatch	137,664	138,315		142,526		146,866		150,503		154,823	
	13,402,950	13,759,791	2.7%	14,403,277	4.7%	14,991,521	4.1%	15,380,748	2.6%	15,754,434	2.4%
Shared and Support Services											
Engineers in Training	528,011	513,776		529,943		546,611		563,781		581,533	
Business & Shared Services Support	1,558,072	1,671,683		1,845,858		1,918,286		2,174,759		2,256,812	
Shared & Utility Services	858,652	746,765		554,443		262,356		270,501		278,915	
Minor Capital Projects	949,937	971,238		1,021,957		1,051,747		1,079,620		1,105,845	
Records Management	154,748	154,736		159,578		164,565		169,703		175,009	
	4,049,420	4,058,198	0.2%	4,111,779	1.3%	3,943,565	(4.1%)	4,258,364	8.0%	4,398,114	3.3%
Watershed and Environmental Management											
Watershed and Environmental Management	15,209,574	15,703,658		16,032,687		16,743,749		17,375,275		17,979,450	
	15,209,574	15,703,658	3.2%	16,032,687	2.1%	16,743,749	4.4%	17,375,275	3.8%	17,979,450	3.5%
Water Dam Safety											
Water Dam Safety	3,922,949	3,816,660		3,906,272		4,012,319		4,134,082		4,249,001	
	3,922,949	3,816,660	(2.7%)	3,906,272	2.3%	4,012,319	2.7%	4,134,082	3.0%	4,249,001	2.8%
Operations and Maintenance											
Drinking Water Residuals	1,278,759	1,729,966		1,916,963		1,975,264		1,992,277		2,010,677	
Lake City Operations	1,058,985	455,620		468,685		556,338		572,449		581,060	
Maintenance	10,245,375	10,391,508		10,768,018		11,312,034		11,921,271		12,575,814	
SCADA Control Systems	6,912,373	7,732,392		8,158,729		8,511,725		8,873,161		9,120,511	
Secondary Disinfection	1,438,602	1,579,653		1,693,705		1,807,783		1,948,436		2,000,294	
Seymour Capilano Filtration Plant	13,496,605	14,330,420		14,973,587		15,625,585		16,208,221		16,690,502	
Coquitlam Water Treatment Plant	8,385,800	8,764,184		9,357,866		9,655,066		10,224,935		10,525,940	
Energy Management	156,107	216,399		223,582		231,409		239,427		247,736	
Utility Voice Radio	109,261	112,835		117,572		122,501		127,587		130,725	
Water Supply	20,915,815	22,949,607		23,712,548		24,439,436		25,184,041		25,455,125	
	63,997,682	68,262,584	6.7%	71,391,255	4.6%	74,237,141	4.0%	77,291,805	4.1%	79,338,384	2.6%
Interagency Projects and Quality Control											
Drinking Water Quality Control	3,251,635	3,375,315		3,396,282		3,635,598		3,768,417		3,881,887	
Interagency Projects	617,670	638,377		670,679		689,550		708,987		729,081	
	3,919,305	4,063,692	3.7%	4,116,961	1.3%	4,375,148	6.3%	4,527,404	3.5%	4,660,968	3.0%
Administration and Department Support	2,899,799	2,994,661	3.3%	3,088,917	3.1%	3,270,200	5.9%	3,371,985	3.1%	3,477,150	3.1%
Communications Program	644,158	563,469	(12.5%)	574,739	2.0%	586,234	2.0%	597,959	2.0%	609,919	2.0%
Allocation of Centralized Support Costs	33,335,180	34,993,970	5.0%	36,091,171	3.1%	38,282,603	6.1%	38,756,152	1.2%	39,179,019	1.1%
Total Operating Programs	151,261,941	154,396,086	2.1%	160,099,369	3.7%	167,037,426	4.3%	172,534,810	3.3%	176,738,530	2.4%
Allocation of Project Delivery Cost	4,064,247	4,095,832	0.8%	4,195,068	2.4%	4,382,504	4.5%	4,556,956	4.0%	4,725,915	3.7%
Debt Service	83,113,987	86,528,282	4.1%	111,802,723	29.2%	146,446,452	31.0%	181,179,264	23.7%	223,322,113	23.3%
Contribution to Capital	140,443,572	163,847,359	16.7%	192,092,416	17.2%	198,116,480	3.1%	206,539,252	4.3%	206,539,252	0.0%
TOTAL EXPENDITURES	\$ 378,883,747	\$ 408,867,559	7.9%	\$ 468,189,576	14.5%	\$515,982,862	10.2%	\$ 564,810,282	9.5%	\$ 611,325,810	8.2%
Blended Water Rate (\$/m3)	\$ 0.9333	\$ 1.0002	7.2%	\$ 1.0755	6.5%	\$ 1.0975	3.0%	\$ 1.1233	2.4%	\$ 1.1380	1.3%

**GREATER VANCOUVER WATER DISTRICT
CAPITAL PORTFOLIO
WATER SERVICES
2025 CAPITAL BUDGET AND 2025 - 2029 CAPITAL PLAN**

	CAPITAL BUDGET FOR APPROVAL	2025 CAPITAL CASH FLOW	2026 CAPITAL CASH FLOW	2027 CAPITAL CASH FLOW	2028 CAPITAL CASH FLOW	2029 CAPITAL CASH FLOW	2025 TO 2029 TOTAL CAPITAL CASH FLOW	ACTIVE PHASE	PRIMARY DRIVER
CAPITAL EXPENDITURES									
Water Mains									
37th Avenue Main No. 2 (Rupert Street to Little Mountain Reservoir)	1,150,000	-	-	-	500,000	550,000	1,050,000	Design	Maintenance
Angus Drive Main	30,700,000	500,000	500,000	-	-	-	1,000,000	Construction	Growth
Angus Drive Turbine	-	-	-	-	50,000	1,550,000	1,600,000	Not Started	Opportunity
Annacis Main No. 2 - Queensborough Crossover Improvement	300,000	150,000	50,000	-	50,000	850,000	1,100,000	Design	Maintenance
Annacis Main No. 2 (River Crossing Removal)	-	-	-	-	-	400,000	400,000	Not Started	Maintenance
Annacis Main No. 2 and Barnston Island Main Online Chlorine and pH Analyzers	1,200,000	450,000	-	-	-	-	450,000	Construction	Upgrade
Annacis Main No. 5 (North)	81,100,000	10,500,000	20,100,000	15,000,000	13,200,000	18,500,000	77,300,000	Construction	Growth
Annacis Main No. 5 (South)	80,950,000	15,300,000	18,200,000	7,600,000	7,250,000	20,500,000	68,850,000	Construction	Growth
Annacis Water Supply Tunnel*	482,100,000	65,000,000	54,500,000	50,000,000	10,000,000	32,366,000	211,866,000	Construction	Growth
Burnaby Mountain Main No. 2	2,300,000	300,000	3,200,000	5,000,000	6,500,000	-	15,000,000	Design	Maintenance
Cambie-Richmond Water Supply Tunnel*	62,800,000	2,200,000	2,700,000	8,000,000	7,500,000	38,785,000	59,185,000	Design	Resilience
Central Park Main No. 2 (10th Ave to Westburnco)	35,250,000	3,050,000	12,700,000	7,000,000	4,500,000	5,000,000	32,250,000	Construction	Maintenance
Central Park Main No. 2 (Patterson to 10th Ave)	132,600,000	17,900,000	21,950,000	18,500,000	17,200,000	-	75,550,000	Construction	Maintenance
Clayton Langley Main No. 2	1,900,000	550,000	1,400,000	5,000,000	3,800,000	-	10,750,000	Design	Resilience
Coquitlam Water Main*	1,333,200,000	77,820,000	170,900,000	130,000,000	150,500,000	177,000,000	706,220,000	Multiple	Growth
Douglas Road Main No. 2 (Flow Meter 169) Replacement	2,000,000	750,000	1,100,000	-	-	-	1,850,000	Construction	Maintenance
Douglas Road Main No. 2 (Vancouver Heights Section)	21,450,000	300,000	500,000	-	-	-	800,000	Construction	Maintenance
Douglas Road Main No. 2 Still Creek	60,050,000	3,050,000	5,900,000	-	-	-	8,950,000	Construction	Maintenance
Douglas Road Main Protection	1,550,000	50,000	50,000	50,000	50,000	50,000	250,000	Construction	Maintenance
Haney Main No. 4 (West Section)	8,900,000	950,000	3,500,000	10,000,000	21,000,000	20,500,000	55,950,000	Multiple	Growth
Haney Water Supply Tunnel*	50,250,000	25,000,000	7,747,000	8,000,000	9,000,000	25,000,000	74,747,000	Design	Resilience
Hellings Tank No. 2	-	-	2,000,000	2,500,000	5,000,000	4,000,000	13,500,000	Definition	Growth
Improvements to Capilano Mains No. 4 and 5	2,700,000	250,000	1,750,000	500,000	-	-	2,500,000	Construction	Maintenance
Kennedy Newton Main	166,350,000	20,100,000	7,500,000	5,000,000	3,200,000	-	35,800,000	Construction	Growth
Lulu Island - Delta Main - Scour Protection Phase 2	250,000	50,000	50,000	100,000	-	3,300,000	3,500,000	Design	Maintenance
Lulu-Delta Water Supply Tunnel*	5,000,000	1,300,000	1,300,000	6,500,000	24,500,000	18,350,000	51,950,000	Definition	Maintenance
Lynn Valley Road Main No. 2	650,000	-	-	50,000	550,000	1,000,000	1,600,000	Design	Maintenance
Lynn Valley Road Main, Seymour Main No. 3 & Seymour Main No. 4 Aerial Crossings Rehabilitation	4,200,000	850,000	1,050,000	-	-	-	1,900,000	Construction	Maintenance
Maple Ridge Main West Lining Repairs	5,400,000	500,000	1,000,000	3,650,000	-	-	5,150,000	Construction	Maintenance
Newton Reservoir Connection	850,000	400,000	1,100,000	2,500,000	4,200,000	7,000,000	15,200,000	Design	Growth
Palisade Outlet Works Rehabilitation	2,950,000	1,500,000	250,000	50,000	50,000	50,000	1,900,000	Construction	Maintenance

**GREATER VANCOUVER WATER DISTRICT
CAPITAL PORTFOLIO
WATER SERVICES
2025 CAPITAL BUDGET AND 2025 - 2029 CAPITAL PLAN**

	CAPITAL BUDGET FOR APPROVAL	2025 CAPITAL CASH FLOW	2026 CAPITAL CASH FLOW	2027 CAPITAL CASH FLOW	2028 CAPITAL CASH FLOW	2029 CAPITAL CASH FLOW	2025 TO 2029 TOTAL CAPITAL CASH FLOW	ACTIVE PHASE	PRIMARY DRIVER
Port Mann Main No. 2 (South)	39,100,000	550,000	1,000,000	1,600,000	3,000,000	4,500,000	10,650,000	Multiple	Growth
Port Mann No. 1 South Section Decommissioning	650,000	150,000	800,000	1,000,000	-	-	1,950,000	Design	Maintenance
Port Moody Main No. 1 Christmas Way Relocation	2,400,000	100,000	100,000	100,000	100,000	100,000	500,000	Construction	Maintenance
Port Moody Main No. 3 Scott Creek Section	28,000,000	8,800,000	20,750,000	9,950,000	9,000,000	1,850,000	50,350,000	Construction	Maintenance
Queensborough Main Royal Avenue Relocation	7,500,000	100,000	100,000	100,000	100,000	100,000	500,000	Construction	Maintenance
Rehabilitation of AN2 on Queensborough Bridge	3,850,000	100,000	500,000	400,000	-	-	1,000,000	Construction	Maintenance
Relocation and Protection for MOTI Expansion Project Broadway	8,900,000	100,000	100,000	100,000	100,000	100,000	500,000	Construction	Maintenance
Relocation and Protection for MOTI George Massey Crossing Replacement	2,450,000	100,000	100,000	100,000	100,000	100,000	500,000	Construction	Maintenance
Relocation and Protection for Translink Expansion Project Surrey Langley SkyTrain	6,600,000	100,000	100,000	100,000	100,000	100,000	500,000	Construction	Maintenance
Sapperton Main No. 1 New Line Valve and Chamber	4,350,000	300,000	-	-	-	-	300,000	Construction	Upgrade
Sapperton Main No. 2 North Road Relocation and Protection	6,500,000	100,000	100,000	100,000	100,000	100,000	500,000	Construction	Maintenance
Scour Protection Assessments and Construction General	4,000,000	550,000	550,000	650,000	-	-	1,750,000	Construction	Resilience
Second Narrows Crossing 1 & 2 (Burrard Inlet Crossing Removal)*	2,000,000	400,000	400,000	400,000	700,000	3,000,000	4,900,000	Design	Maintenance
Second Narrows Water Supply Tunnel*	468,550,000	15,000,000	10,000,000	10,000,000	10,000,000	32,637,000	77,637,000	Construction	Resilience
Seymour Main No. 2 Joint Improvements	7,100,000	50,000	500,000	2,000,000	1,250,000	2,000,000	5,800,000	Construction	Resilience
Seymour Main No. 5 III (North)	26,600,000	2,000,000	5,000,000	7,400,000	18,000,000	73,400,000	105,800,000	Design	Resilience
South Delta Main No. 1 - Ferry Road Check Valve Replacement	600,000	100,000	-	-	-	-	100,000	Construction	Maintenance
South Delta Mains - 28 Ave Crossover	12,350,000	500,000	500,000	750,000	-	-	1,750,000	Construction	Upgrade
South Fraser Storage Yard	9,000,000	1,500,000	4,250,000	3,500,000	1,000,000	7,000,000	17,250,000	Design	Maintenance
South Surrey Main No. 1 Nickomekl Dam Relocation	7,100,000	1,100,000	3,500,000	2,100,000	-	-	6,700,000	Construction	Maintenance
South Surrey Main No. 2	18,500,000	1,150,000	4,950,000	9,500,000	25,000,000	39,000,000	79,600,000	Design	Growth
South Surrey Main No. 2 Nickomekl Dam Prebuild	2,000,000	500,000	1,000,000	500,000	-	-	2,000,000	Construction	Growth
South Surrey Supply Main (Serpentine River) Bridge Support Modification	1,350,000	50,000	250,000	-	-	-	300,000	Construction	Maintenance
Stanley Park Water Supply Tunnel*	495,000,000	64,652,000	75,083,000	50,000,000	70,000,000	50,000,000	309,735,000	Construction	Maintenance
Tilbury Junction Chamber Valves Replacement with Actuators	5,600,000	450,000	400,000	-	-	-	850,000	Construction	Upgrade
Tilbury Main North Fraser Way Valve Addition	3,100,000	150,000	1,000,000	1,400,000	-	-	2,550,000	Construction	Maintenance
Water Chamber Improvements and Repairs	2,000,000	250,000	300,000	300,000	300,000	300,000	1,450,000	Construction	Maintenance
Water Meter Upgrades	22,400,000	1,500,000	1,500,000	1,500,000	1,000,000	3,250,000	8,750,000	Construction	Upgrade
Water Optimization - Instrumentation	39,050,000	2,400,000	3,400,000	5,500,000	6,250,000	8,600,000	26,150,000	Multiple	Upgrade
Whalley Kennedy Main No. 2	2,900,000	500,000	1,800,000	2,800,000	17,600,000	25,500,000	48,200,000	Design	Growth
Whalley Main	31,800,000	500,000	-	-	-	-	500,000	Construction	Growth
Total Water Mains	\$3,849,400,000	\$352,572,000	\$479,030,000	\$396,850,000	\$452,300,000	\$626,388,000	\$2,307,140,000		

**GREATER VANCOUVER WATER DISTRICT
CAPITAL PORTFOLIO
WATER SERVICES
2025 CAPITAL BUDGET AND 2025 - 2029 CAPITAL PLAN**

	CAPITAL BUDGET FOR APPROVAL	2025 CAPITAL CASH FLOW	2026 CAPITAL CASH FLOW	2027 CAPITAL CASH FLOW	2028 CAPITAL CASH FLOW	2029 CAPITAL CASH FLOW	2025 TO 2029 TOTAL CAPITAL CASH FLOW	ACTIVE PHASE	PRIMARY DRIVER
Pump Stations									
Barnston/Maple Ridge Pump Station - Back-up Power	\$ 16,000,000	\$ 4,000,000	\$ 750,000	\$ 600,000	\$ 2,100,000	\$ 12,850,000	\$ 20,300,000	Construction	Resilience
Barnston/Maple Ridge Pump Station Power Generation	2,900,000	-	-	-	200,000	1,000,000	1,200,000	Construction	Opportunity
Burnaby Mountain Pump Station Improvement	-	-	6,000,000	-	-	-	6,000,000	Not Started	Upgrade
Burnaby Mountain Pump Station No. 2	9,300,000	1,100,000	3,500,000	4,500,000	25,250,000	25,000,000	59,350,000	Design	Maintenance
Cape Horn Pump Station No. 2 Power Distribution and DC Drive Replacement	-	-	200,000	400,000	400,000	800,000	1,800,000	Not Started	Maintenance
Cape Horn Pump Station No. 3	29,050,000	3,000,000	4,400,000	37,000,000	82,000,000	75,000,000	201,400,000	Design	Growth
Capilano Primary Disinfection Decommissioning	-	-	2,000,000	-	-	-	2,000,000	Not Started	Maintenance
Capilano Raw Water Pump Station - Back-up Power	81,000,000	22,000,000	8,000,000	1,450,000	-	-	31,450,000	Construction	Resilience
Capilano Raw Water Pump Station Bypass PRV Upgrades	3,800,000	2,100,000	750,000	-	-	-	2,850,000	Construction	Maintenance
Central Park WPS Starters Replacement	20,000,000	3,000,000	7,150,000	7,000,000	-	-	17,150,000	Construction	Maintenance
Grandview Pump Station Improvements	4,500,000	1,000,000	400,000	-	-	-	1,400,000	Construction	Resilience
Newton Pump Station No. 2	82,550,000	13,650,000	17,500,000	17,500,000	9,500,000	4,000,000	62,150,000	Construction	Growth
Pebble Hill Pump Station Seismic Upgrade	-	-	150,000	350,000	1,000,000	1,000,000	2,500,000	Not Started	Resilience
Westburnco Pump Station - Back-up Power	5,300,000	1,500,000	7,550,000	16,500,000	16,000,000	12,000,000	53,550,000	Design	Resilience
Westburnco Pump Station No. 2 VFD Replacements	3,050,000	1,000,000	400,000	-	-	-	1,400,000	Construction	Maintenance
Total Pump Stations	\$ 257,450,000	\$ 52,350,000	\$ 58,750,000	\$ 85,300,000	\$136,450,000	\$131,650,000	\$ 464,500,000		
Reservoirs									
Burnaby Mountain Tank No. 2 and No. 3	\$ 6,750,000	\$ 600,000	\$ 2,260,000	\$ 3,050,000	\$ 12,000,000	\$ 14,800,000	\$ 32,710,000	Design	Resilience
Cape Horn Reservoir Condition Assessment and Structural Repair	500,000	200,000	1,100,000	1,000,000	-	-	2,300,000	Design	Maintenance
Capilano Energy Recovery Facility 66" PRV Replacement	1,800,000	500,000	1,300,000	3,500,000	3,500,000	-	8,800,000	Design	Maintenance
Capilano Energy Recovery Facility Operational Upgrades	1,800,000	450,000	500,000	250,000	-	-	1,200,000	Construction	Maintenance
Central Park Reservoir Structural Improvements	700,000	200,000	2,200,000	3,000,000	1,600,000	-	7,000,000	Design	Maintenance
Dechlorination for Reservoir Overflow and Underdrain Discharges	3,500,000	800,000	1,000,000	500,000	-	-	2,300,000	Construction	Maintenance
Fleetwood Reservoir	61,150,000	5,000,000	4,000,000	-	-	-	9,000,000	Construction	Growth
Grandview Reservoir Unit No. 2	-	-	-	300,000	1,500,000	2,700,000	4,500,000	Not started	Growth
Hellings Tank Operational Upgrades	15,950,000	800,000	5,000,000	2,900,000	-	-	8,700,000	Construction	Growth
Kersland Reservoir No. 1 Structural Improvements	5,500,000	100,000	1,650,000	-	-	-	1,750,000	Construction	Maintenance
Newton Reservoir Cell #2 Structural Improvements	-	-	200,000	1,900,000	2,900,000	1,500,000	6,500,000	Not Started	Maintenance
Pebble Hill Reservoir No. 3 Seismic Upgrade	500,000	50,000	-	6,000,000	6,000,000	-	12,050,000	Design	Resilience
Pebble Hill Reservoir Seismic Upgrade	12,850,000	500,000	-	-	-	-	500,000	Construction	Resilience
Prospect Reservoir Knotweed Removal and Drainage Improvements	2,000,000	500,000	1,000,000	500,000	-	-	2,000,000	Construction	Maintenance
Reservoir Isolation Valve Automation	6,450,000	1,250,000	1,550,000	1,000,000	1,000,000	-	4,800,000	Construction	Resilience
Reservoir Sampling Kiosks - Multi Location	1,300,000	550,000	350,000	-	-	-	900,000	Construction	Upgrade

**GREATER VANCOUVER WATER DISTRICT
CAPITAL PORTFOLIO
WATER SERVICES
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	CAPITAL BUDGET FOR APPROVAL	2025 CAPITAL CASH FLOW	2026 CAPITAL CASH FLOW	2027 CAPITAL CASH FLOW	2028 CAPITAL CASH FLOW	2029 CAPITAL CASH FLOW	2025 TO 2029 TOTAL CAPITAL CASH FLOW	ACTIVE PHASE	PRIMARY DRIVER
Reservoir Structural Assessments Phase 1	3,200,000	1,100,000	100,000	-	-	-	1,200,000	Definition	Maintenance
Reservoir Structural Assessments Phase 2	-	-	500,000	1,700,000	1,000,000	-	3,200,000	Not Started	Maintenance
Sasamat Reservoir Refurbishment	400,000	200,000	750,000	1,300,000	500,000	-	2,750,000	Design	Maintenance
Sunnyside Reservoir Units 1 and 2 Seismic Upgrade	25,000,000	2,100,000	11,000,000	4,000,000	-	-	17,100,000	Construction	Resilience
Vancouver Heights System Resiliency Improvements	2,500,000	300,000	1,000,000	-	-	-	1,300,000	Construction	Resilience
Total Reservoirs	\$ 151,850,000	\$ 15,200,000	\$ 35,460,000	\$ 30,900,000	\$ 30,000,000	\$ 19,000,000	\$ 130,560,000		
Treatment Plants									
Coquitlam Intake Tower Seismic Upgrade	\$ 2,200,000	\$ -	\$ -	\$ -	\$ -	\$ 1,000,000	\$ 1,000,000	Design	Resilience
Coquitlam Lake Water Supply*	160,750,000	30,750,000	34,750,000	41,900,000	60,200,000	68,200,000	235,800,000	Design	Growth
Critical Control Sites - Back-Up Power	-	-	300,000	400,000	500,000	800,000	2,000,000	Not Started	Resilience
CWTP CO2 System Improvements	750,000	500,000	2,000,000	2,000,000	2,000,000	500,000	7,000,000	Design	Maintenance
CWTP Mobile Disinfection System	900,000	350,000	1,500,000	500,000	-	-	2,350,000	Construction	Upgrade
CWTP Ozone Back-up Power	-	-	800,000	1,300,000	6,000,000	3,000,000	11,100,000	Not Started	Resilience
CWTP Ozone Generation Upgrades for Units 2 & 3	7,500,000	1,200,000	-	-	-	-	1,200,000	Construction	Upgrade
CWTP Ozone Sidestream Pipe Heat Trace and Insulation	900,000	100,000	-	-	-	-	100,000	Construction	Maintenance
CWTP Ozone Sidestream Pump VFD Replacement	1,400,000	450,000	200,000	-	-	-	650,000	Construction	Maintenance
CWTP Temporary Water Supply	-	-	-	-	400,000	2,000,000	2,400,000	Not Started	Maintenance
Online Chlorine and pH Analyzers	2,500,000	1,500,000	350,000	-	500,000	1,500,000	3,850,000	Construction	Upgrade
SCADA Moscad Server & ICS Historian Expansion & Partitioning	1,500,000	50,000	-	-	-	-	50,000	Construction	Maintenance
Industrial Communication Manager Migration	500,000	500,000	1,500,000	2,500,000	1,750,000	1,000,000	7,250,000	Design	Maintenance
SCFP - Greenwood and Back Wash Water Supply Pumps & SCOUR Blower VFD Replacement	4,500,000	800,000	2,200,000	1,000,000	500,000	-	4,500,000	Construction	Maintenance
SCFP Additional Pre-Treatment	-	-	1,000,000	5,500,000	22,000,000	30,000,000	58,500,000	Not Started	Upgrade
SCFP Centralized Compressed Air System	1,900,000	500,000	300,000	-	-	-	800,000	Construction	Maintenance
SCFP Clearwell Baffle Replacement	3,100,000	1,650,000	1,000,000	1,000,000	3,300,000	3,000,000	9,950,000	Construction	Maintenance
SCFP Clearwell Membrane Replacement	1,800,000	200,000	800,000	7,500,000	7,500,000	3,900,000	19,900,000	Design	Maintenance
SCFP CO2 Tank Upgrade - Heat Insulation/Heater Replacement	-	-	1,000,000	-	-	-	1,000,000	Not Started	Upgrade
SCFP Floc Tank Baffle Replacement and Ladder Installation to Improve Accessibility	13,800,000	2,400,000	6,050,000	5,000,000	-	-	13,450,000	Construction	Maintenance
SCFP Heat Pump Retrofit	-	-	4,000,000	-	-	-	4,000,000	Not Started	Maintenance
SCFP OMC Building Expansion	4,600,000	2,300,000	1,050,000	550,000	-	-	3,900,000	Construction	Maintenance
SCFP Polymer System Upgrade	4,650,000	150,000	-	-	-	-	150,000	Construction	Maintenance
SCFP Residuals Handling PH Adjustment Permanent System	-	-	4,000,000	-	-	-	4,000,000	Not Started	Upgrade
Total Treatment Plants	\$ 213,250,000	\$ 43,400,000	\$ 62,800,000	\$ 69,150,000	\$104,650,000	\$114,900,000	\$ 394,900,000		

**GREATER VANCOUVER WATER DISTRICT
CAPITAL PORTFOLIO
WATER SERVICES
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	CAPITAL BUDGET FOR APPROVAL	2025 CAPITAL CASH FLOW	2026 CAPITAL CASH FLOW	2027 CAPITAL CASH FLOW	2028 CAPITAL CASH FLOW	2029 CAPITAL CASH FLOW	2025 TO 2029 TOTAL CAPITAL CASH FLOW	ACTIVE PHASE	PRIMARY DRIVER
Others									
Beach Yard Facility - Site Redevelopment	\$ -	\$ -	\$ 2,800,000	\$ 3,200,000	\$ 13,500,000	\$ 26,000,000	\$ 45,500,000	Design	Maintenance
Capilano Raw Water Pump Station VFD Upgrades	2,600,000	1,600,000	1,200,000	600,000	300,000	-	3,700,000	Construction	Maintenance
Capilano Reservoir and Seymour Reservoir Dam Safety Boom Replacement	9,700,000	5,310,000	1,250,000	2,500,000	-	-	9,060,000	Construction	Maintenance
Capilano Watershed Bridge Replacements - Crown Creek and Capilano River	-	-	-	95,000	200,000	1,000,000	1,295,000	Not Started	Maintenance
Capilano Watershed Security Gatehouse	5,700,000	1,900,000	850,000	-	-	-	2,750,000	Construction	Maintenance
CLD & SFD Fasteners Replacement & Coating Repairs	2,350,000	150,000	300,000	-	-	-	450,000	Construction	Maintenance
CLD and SFD Lead Paint Removal, Surface Crack Injection and General Corrosion Mitigation	3,000,000	1,550,000	1,500,000	1,000,000	1,000,000	-	5,050,000	Construction	Maintenance
Cleveland Dam - Lower Outlet HBV Rehabilitation	5,200,000	300,000	-	-	-	-	300,000	Construction	Maintenance
Cleveland Dam Drumgate Seal Replacement	1,300,000	250,000	250,000	-	-	-	500,000	Construction	Maintenance
Cleveland Dam MCE Seismic Upgrades	-	-	-	-	1,000,000	4,000,000	5,000,000	Not Started	Resilience
Cleveland Dam Power Resiliency Improvements	1,700,000	50,000	750,000	750,000	-	-	1,550,000	Construction	Resilience
Cleveland Dam Public Warning System and Enhancements	10,000,000	2,000,000	2,250,000	700,000	-	-	4,950,000	Construction	Maintenance
Cleveland Dam Seismic Stability Evaluation	1,500,000	300,000	600,000	200,000	-	-	1,100,000	Design	Resilience
Cleveland Dam Spillway Resurfacing	-	-	400,000	1,000,000	3,000,000	3,400,000	7,800,000	Not Started	Maintenance
Facilities O&M Documentation Development	2,000,000	800,000	750,000	-	-	-	1,550,000	Design	Resilience
Lake City HVAC Upgrade	1,500,000	600,000	800,000	-	-	-	1,400,000	Construction	Resilience
Loch Lomond Formalized Spillway Design and Construction	-	-	-	-	50,000	250,000	300,000	Not Started	Maintenance
Loch Lomond Outlet Works Rehabilitation	450,000	200,000	500,000	200,000	5,700,000	3,500,000	10,100,000	Design	Resilience
Lower Seymour Conservation Reserve Learning Lodge Replacement	5,050,000	250,000	-	-	-	-	250,000	Construction	Upgrade
Microbiology Laboratory Expansion	500,000	200,000	600,000	1,500,000	3,000,000	250,000	5,550,000	Design	Maintenance
Newton Rechlorination Station No. 2	850,000	400,000	1,150,000	1,200,000	2,500,000	1,000,000	6,250,000	Design	Maintenance
Palisade and Burwell Dam Boom Detailed Design and Construction	-	-	100,000	350,000	400,000	-	850,000	Not started	Resilience
Pitt River Rechlorination Station Reconstruction	-	-	500,000	1,200,000	3,300,000	5,000,000	10,000,000	Not Started	Maintenance
Rechlorination Sites - Back-Up Power	-	-	-	-	-	200,000	200,000	Not Started	Resilience
Rechlorination Station Upgrades	5,300,000	2,000,000	1,300,000	6,000,000	6,000,000	3,500,000	18,800,000	Design	Maintenance
Rice Lake Dams Rehabilitation	3,000,000	250,000	1,500,000	900,000	-	-	2,650,000	Construction	Maintenance
Seymour Falls Dam Backup Generator Containment and Replacement	-	-	2,000,000	-	-	-	2,000,000	Not Started	Maintenance
Seymour Falls Dam Public Warning System	10,000,000	800,000	2,000,000	2,000,000	500,000	500,000	5,800,000	Construction	Maintenance
Seymour Falls Dam Seismic Stability Assessment	1,800,000	500,000	1,800,000	1,350,000	1,000,000	2,500,000	7,150,000	Definition	Resilience
Small Logic Controller Control System Upgrades Phase 1	3,000,000	600,000	600,000	600,000	600,000	400,000	2,800,000	Construction	Maintenance
South Fraser Works Yard	61,000,000	1,000,000	7,900,000	16,900,000	16,700,000	2,000,000	44,500,000	Design	Maintenance
Total Others	\$ 137,500,000	\$ 21,010,000	\$ 33,650,000	\$ 42,245,000	\$ 58,750,000	\$ 53,500,000	\$ 209,155,000		
TOTAL CAPITAL EXPENDITURES	\$4,609,450,000	\$484,532,000	\$669,690,000	\$624,445,000	\$782,150,000	\$945,438,000	\$3,506,255,000		

**GREATER VANCOUVER WATER DISTRICT
CAPITAL PORTFOLIO
WATER SERVICES
2025 CAPITAL BUDGET AND 2025 - 2029 CAPITAL PLAN**

	CAPITAL BUDGET FOR APPROVAL	2025 CAPITAL CASH FLOW	2026 CAPITAL CASH FLOW	2027 CAPITAL CASH FLOW	2028 CAPITAL CASH FLOW	2029 CAPITAL CASH FLOW	2025 TO 2029 TOTAL CAPITAL CASH FLOW	ACTIVE PHASE	PRIMARY DRIVER
CAPITAL FUNDING									
New External Borrowing	\$ 995,612,000	\$128,958,000	\$126,851,000	\$ 91,702,000	\$165,260,000	\$244,558,000	\$ 757,329,000		
New Borrowing funded by DCC	2,312,310,000	180,219,000	345,631,000	332,276,000	408,175,000	492,596,000	1,758,897,000		
Contribution to Capital	1,271,428,000	163,847,000	192,092,000	198,116,000	206,539,000	206,539,000	967,133,000		
Reserve	4,567,000	3,474,000	-	-	-	-	3,474,000		
External Funding - Interagency	25,533,000	8,034,000	5,116,000	2,351,000	2,176,000	1,745,000	19,422,000		
Total	\$4,609,450,000	\$484,532,000	\$669,690,000	\$624,445,000	\$782,150,000	\$945,438,000	\$3,506,255,000		
SUMMARY BY DRIVER									
Growth	\$2,627,900,000	\$246,970,000	\$352,700,000	\$336,600,000	\$413,150,000	\$498,766,000	\$1,848,186,000		
Maintenance	1,083,250,000	147,012,000	230,033,000	195,545,000	236,750,000	173,300,000	982,640,000		
Resilience	793,200,000	81,100,000	66,957,000	78,550,000	102,250,000	227,472,000	556,329,000		
Upgrade	102,200,000	9,450,000	20,000,000	13,750,000	29,750,000	43,350,000	116,300,000		
Opportunity	2,900,000	-	-	-	250,000	2,550,000	2,800,000		
Total	\$4,609,450,000	\$484,532,000	\$669,690,000	\$624,445,000	\$782,150,000	\$945,438,000	\$3,506,255,000		

* Project is part of Metro Vancouver's formal stage gate framework. Detailed project report will be brought forward as part of the stage gate review process.

WATER SERVICES

Watersheds & Environment

Description of Services

Water Services provides a reliable supply of high quality drinking water to the Metro Vancouver region through the Greater Vancouver Water District. The Watersheds & Environment Division protects and maintains 60,000 hectares of GVWD water supply lands and associated infrastructure surrounding the three primary source reservoirs of Capilano, Seymour, and Coquitlam. The division also oversees the Environmental Management System and various environmental programs and initiatives for the drinking water utility. Technical and field staff in this area undertake a breadth of work ranging from collection of reservoir and potable water samples, fisheries management, environmental protection and watershed management activities including security, road and infrastructure maintenance, wildfire response for both GVWD lands and GVRD Regional Parks, public education on the region's water supply and a key role in the organization's reconciliation activities with the local First Nations who have interests in the water supply lands.

Alignment of Strategic Directions and High Level Goals

Board Strategic Plan

- Ensure that our critical regional infrastructure is sufficiently maintained or replaced to meet current and future service needs, and is resilient to impacts from seismic events, wildfires, power failures, and natural disasters.
- Engage and collaborate with the public, member jurisdictions, other orders of government, interested and affected parties, and First Nations on a range of initiatives that support Metro Vancouver's services. Ensure that our services and infrastructure are able to meet the needs of a growing population.
- Ensure that all services and infrastructure anticipate and meet regulatory requirements, and that the organization is responsive to legislative change.
- Deliver utility and regional services in a way that ensures affordability for residents and long-term financial sustainability for the organization, using sound fiscal policies that balance the organization's long-term financial health while maintaining affordability for regional ratepayers. Proactively work to respond to the climate emergency by preparing for the impacts of climate change and accelerating reductions in greenhouse gas emissions.
- Continue to make investments and adaptations in service areas to ensure that our communities and organizations can prepare, avoid, absorb, recover, and adapt to the effects of shocks and stresses in an efficient manner.

Drinking Water Management Plan

- Goal 1 - Provide clean, safe drinking water
- Goal 2 - Ensure the sustainable use of water resources

Performance Indicators

Indicator	Historical and/or Industry Benchmark	Current Performance	2025 Performance Objective
Annual participants in water education tours and K-12 school programs conducted in person and virtually.	MV 3-year average (2021-2023): 7,822 2021: 8,880 2022: 7,513 2023:7,075	2024 YTD (Aug 30 th): 5,349 Objective 6,500	6,800
Number of days the water supply areas are in high or extreme fire hazard *Objective is the lowest 3-year value	MV 3-year average (2021-2023): 63 2021: 52 2022: 62 2023: 77	2024 YTD (Aug 30 th): 39 Objective: 52	39

2025 Key Actions

- Complete installation of replacement dam safety booms in Capilano and Seymour Reservoirs.
- Continue to work with Strategic Municipal Partners to develop Community Wildfire Protection Plans along the interface areas; seeking joint opportunities to conduct forest fuels mitigation work.
- Address two priority areas (refrigerants and invasive species) in preparation for ISO Certification of the GVWD Environmental Management System in 2026.
- Continue to work with local First Nations on access to the water supply area lands for cultural activities.
- Continue to work with Fisheries and Oceans Canada on *Fisheries Act Authorization's* for the five Capilano and Seymour dam facilities.

WATER SERVICES

Policy, Planning and Analysis

Description of Services

Water Services provides a reliable supply of high quality drinking water to the Metro Vancouver region through the Greater Vancouver Water District. The Policy, Planning, and Analysis division provides policy development and coordination; conducts infrastructure analysis and planning; develops and implements the Drinking Water Management Plan; leads regional water conservation efforts through the Drinking Water Conservation Plan; implements key components of the Joint Water Use Plan for the Capilano and Seymour Watersheds; manages the water metering network; and ensures QA/QC of water billing, and issues monthly water bills.

Alignment of Strategic Directions and High-Level Goals

Board Strategic Plan

- Ensure that our services and infrastructure are able to meet the needs of a growing population.
- Ensure that all services and infrastructure anticipate and meet regulatory requirements, and that the organization is responsive to legislative change.
- Deliver utility and regional services in a way that ensures affordability for residents and long-term financial sustainability for the organization, using sound fiscal policies that balance the organization's long-term financial health while maintaining affordability for regional ratepayers.
- Engage with members on processes and initiatives that contribute to an effective and well-functioning organization.
- Proactively work to respond to the climate emergency by preparing for the impacts of climate change and accelerating reductions in greenhouse gas emissions.
- Continue to make investments and adaptations in service areas to ensure that our communities and organizations can prepare, avoid, absorb, recover, and adapt to the effects of shocks and stresses in an efficient manner.

2011 Drinking Water Management Plan (DWMP) is the overarching plan for Metro Vancouver's water utility which sets the direction and priority for regional drinking water initiatives. This plan has three goals:

- Provide clean, safe drinking water
- Ensure the sustainable use of water resources
- Ensure the efficient supply of water

Performance Indicators

Indicator	Historical and/or Industry Benchmark	Current Performance	2025 Performance Objective
Peak day per capita water use (litres/c/day)	MV 5-year average (2019 - 2023): 587 2019: 569 2020: 600 2021: 651 2022: 571 2023: 545	2024 Objective: 577	556
Average day per capita water use (litres/c/day)	MV 5-year average (2019-2023): 401 2019: 418 2020: 401 2021: 405 2022: 394 2023: 384	2024 Objective: 373	370
Annual volume of drinking water sales (ML)	MV 5-year average (2019-2023): 387,500 2019: 383,400 2020: 378,700 2021: 391,700 2022: 388,500 2023: 395,100	2024 Objective: 393,000	398,000

2025 Key Actions

Utility Planning and Policy

- Continue the update of the *Drinking Water Management Plan*
- In partnership with Liquid Waste Services, develop the Climate 2050 Infrastructure Roadmap
- Continue the assessment of the feasibility of producing green hydrogen from hydropower at Cleveland Dam
- Continue work on the regional equity and affordability of drinking water
- Initiate the feasibility study to optimize energy use in the transmission system

Utility Modelling and Data Analytics

- Continue the Water Transmission System Master Plan
- Actively support “Water Supply Plan Using Adaptive Pathways” study
- Publish 2023 Water Use by Sector report, 2024 Peak-Day and Water Consumption Statistics reports
- Continue directing new membership and connection requests, asset transfers agreements, DCC and legal enquiries
- Continue the Capital Water Meter Upgrades Program
- Complete replacement of 3 billing water meters
- Complete installation of 8 non-billing water meters

WATER SERVICES

Engineering and Construction

Description of Services

Water Services provides safe a reliable supply of high quality drinking water to the Metro Vancouver region through the Greater Vancouver Water District. The Engineering and Construction division provides delivery of core water infrastructure projects, including water mains, reservoirs, pump stations and water treatment facilities and also provides shared construction and dispatch services.

Alignment of Strategic Directions and High Level Goals Supported

Board Strategic Plan

- Maintain Metro Vancouver's world-class water system that provides clean, safe drinking water and ensure its capacity to meet future needs.
- Ensure the long-term resilience of the regional drinking water system to withstand natural hazards, climate change and other significant disruptions.
- Develop and implement financial plans and policies that reflect a commitment to sound financial management and long-term planning, in consideration of current and future ratepayers.
- Strengthen awareness and engagement with the public, members, other orders of government, and key stakeholders on a range of initiatives that will ensure the delivery of clean, safe drinking water, now and into the future.

Drinking Water Management Plan

- Goal 1 - Provide clean, safe drinking water
- Goal 2 - Ensure the sustainable use of water resources
- Goal 3 - Ensure the efficient supply of water

Performance Indicators

Indicator	Historical and/or Industry Benchmark	Current Performance	2025 Performance Objective
Percent of GVWD Capital Program Expenditures Achieved:	3 year average (2021 – 2023): 59% 2021: 50% 2022: 63% 2023: 64%	(as of July 2024) YTD: 30% Objective: 80%	90%
Percent of Minor Capital Program Expenditures Achieved:	3 year average (2021 – 2023): 95% 2021: 98% 2022: 80% 2023: 107%	(as of July 2024) YTD: 58% Objective: 100%	100%

Indicator	Historical and/or Industry Benchmark	Current Performance	2025 Performance Objective
Percent of project complete:		(as of July 2024)	
Kennedy Newton Main (Phase 3A) – Construction	n/a	0%	50%
Annacis Main No. 5 (North) New West Section – Construction	n/a	0%	20%
Capilano Raw Water Pump Station Backup Power – Construction	n/a	47%	95%
Fleetwood Reservoir plus Feeder Main – Construction	n/a	65%	100%
Annacis Main No. 2 Pipe Joints Inspection and Repairs Under Queensborough Bridge	n/a	0%	100%
Central Park Main No. 2 (Phase 2A) – Construction	n/a	0%	60%
Port Moody Main No. 3	n/a	0%	25%
Cape Horn Pump Station No. 3 – Design	n/a	60%	95%
Newton Pump Station No. 2 - Construction	n/a	0%	20%

2025 Key Actions

- *Continue construction of Kennedy-Newton Main (Phase 3A).*
- *Commence construction of Annacis Main No. 5 (North) New West Section.*
- *Commission Capilano Raw Water Pump Station Backup Power late 2025 and turn over in 2026.*
- *Complete construction of Fleetwood Reservoir plus Feeder Main, commission and turn over for operations.*
- *Complete construction of Annacis Main 2 repairs under Queensborough Bridge.*
- *Continue construction of Central Park Main No. 2 (Phase 2A).*
- *Commence construction of Port Moody Main No. 3.*
- *Continue design of Cape Horn Pump Station No. 3.*
- *Commence construction of Newton Pump Station No. 2*

WATER SERVICES

Operations and Maintenance

Description of Services

Water Services delivers a reliable supply of high quality drinking water to the Metro Vancouver region through the Greater Vancouver Water District.

The Operations and Maintenance (O&M) division provides management of the source water reservoirs and dams, treatment of source water, operation and control of the water transmission system, secondary disinfection of treated water, and maintenance of associated supporting infrastructure (works yards, communications systems, and control systems). The division closely collaborates with shared services which provides maintenance of all water treatment and transmission infrastructure, and management and disposal of water treatment residuals.

The operation and management of aging infrastructure requires ongoing assessments to ensure the safe and reliable operation of the drinking water storage reservoirs, water transmission systems and associated equipment. Regularly scheduled line maintenance, reservoir cleanings, valve exercising and condition assessments often lead to corrective actions, initiated and performed through minor capital and capital projects.

The nature of O&M's work involves close collaboration with other Water Services divisions to ensure the safe, efficient and cost effective operation of the water supply system. In addition, the O&M teams provide support from design through commissioning for major and minor capital projects.

Alignment of Strategic Directions and High Level Goals

Board Strategic Plan

- Ensure that our critical regional infrastructure is sufficiently maintained or replaced to meet current and future service needs, and is resilient to impacts from seismic events, wind storms, wildfires, power failures, and natural disasters.
- Ensure that our services and infrastructure are able to meet the needs of a growing population.
- Ensure that all services and infrastructure anticipate and meet regulatory requirements, and that the organization is responsive to legislative change.
- Deliver utility and regional services in a way that ensures affordability for residents and long-term financial sustainability for the organization, using sound fiscal policies that balance the organization's long-term financial health while maintaining affordability for regional ratepayers.
- Proactively work to respond to the climate emergency by preparing for the impacts of climate change and accelerating reductions in greenhouse gas emissions.
- Continue to make investments and adaptations in service areas to ensure that our communities and organizations can prepare, avoid, absorb, recover, and adapt to the effects of shocks and stresses in an efficient manner.

Drinking Water Management Plan

- Goal 1 – Provide clean, safe drinking water
- Goal 2 – Ensure the sustainable use of water resources
- Goal 3 – Ensure the efficient supply of water

Performance Indicators

Indicator	Historical and/or Industry Benchmark	2024 YTD (January – June) Performance	2025 Performance Objective
Annual volume of drinking water treated, delivered (in million litres)	MV 3-year average (2021-23): 391,773 2021: 391,709 2022: 388,490 2023: 395,121	146,754 (Jan – May only)	393,000
Energy use in the treatment and delivery of drinking water (amount of gigajoules (GJ) used per ML of water)	MV 3-year average (2021-23): 0.52 2021: 0.54 2022: 0.52 2023: 0.50	0.49 (Jan – Feb only)	0.50
Compliance with treatment operating permit criteria	MV 3-year average (2021-23): 100% 2021: 100% 2022: 100% 2023: 100%	100%	100%
Number of leak repairs in water transmission system piping per 100 kilometers of pipe ¹	MV 3-year average (2021-23): 2.72 2021: 1.87 2022: 2.68 2023: 3.61	1.33	< 3.1
Number of remote monitoring and control points to ensure system resiliency	MV 3-year average (2021-23): 31,977 2021: 31,746 2022: 31,995 2023: 32,191	32,406	32,900

Note 1: AWWA Partnership for Safe Water Distribution System Optimization Program goal: 9 breaks/100 km/year

2025 Key Actions

- Develop new safety initiatives and a centralized documentation system with Corporate Safety.
- Continue to expand the current valve inspection program and asset documentation.
- Continue annual cleaning and inspection of drinking water reservoirs (six reservoirs per year) to meet Water Services goals and AWWA Guidelines.
- Fully develop preventative maintenance performance tracking program for water treatment plants and transmission system.

WATER SERVICES

Interagency Projects and Quality Control

Description of Services

Water Services provides high-quality drinking water to the Metro Vancouver region through the Greater Vancouver Water District (GVWD). The Interagency Projects & Quality Control division provides the coordination of major interagency projects impacting Metro Vancouver's water utility infrastructure. The Division is responsible for testing and monitoring drinking water quality to ensure federal guidelines and provincial regulatory standards for the region's drinking water are met and liaising with local health authorities for Water Services. Quality Control is performed by technical and scientific staff undertaking a breadth of activities including field support, laboratory analysis of drinking water for Metro Vancouver and member jurisdictions, as well as system water quality data review, ensuring compliance with quality control standards for the region's drinking water.

Alignment of Strategic Directions and High Level Goals

Board Strategic Plan:

- Ensure that our critical regional infrastructure is sufficiently maintained or replaced to meet current and future service needs, and is resilient to impacts from seismic events, wildfires, power failures, and natural disasters.
- Ensure that our services and infrastructure are able to meet the needs of a growing population.
- Ensure that all services and infrastructure anticipate and meet regulatory requirements, and that the organization is responsive to legislative change.
- Deliver utility and regional services in a way that ensures affordability for residents and long-term financial sustainability for the organization, using sound fiscal policies that balance the organization's long-term financial health while maintaining affordability for regional ratepayers.
- Continue to make investments and adaptations in service areas to ensure that our communities and organizations can prepare, avoid, absorb, recover, and adapt to the effects of shocks and stresses in an efficient manner.

Drinking Water Management Plan:

- Goal 1 - Provide clean, safe drinking water
- Goal 2 - Use drinking water sustainably
- Goal 3 - Ensure the efficient supply of water

Performance Indicators

Indicator	Historical and/or Industry Benchmark	Current Performance		2025 Performance Objective
		2024 YTD July 31	Projected 2024	
Number of water tests completed on samples collected from source reservoirs, water treatment plants, and GVWD transmission/member jurisdiction distribution systems	MV 3-year average (2021 - 2023): 171,346 2021: 178,675 2022: 166,674 2023: 168,688	98,970	168,000	180,000
Number of samples collected from the GVWD system that were positive for <i>E.coli</i> bacteria	MV 3-year average (2021 - 2023):0 2021:0 2022:0 2023:0	0	0	0*
Percent of samples positive for total coliform bacteria in the GVWD system	MV 3-year average (2021 - 2023): 0.2% 2021: 0.2% 2022: 0.2% 2023: 0.2%	0.1%	<10%	<10%*
Number of major interagency projects coordinated	MV 3-year average (2021 - 2023): 13 2021:12 2022:13 2023:15	14	16	15

*Based on the BC *Drinking Water Protection Regulation*

2025 Key Actions

- Continue coordination of interagency work for key projects such as the DFO Capilano River Salmon Hatchery, MOTI Broadway Subway, TransLink Operations and Maintenance Centre 4, MOTI Fraser River Tunnel and the Surrey-Langley Skytrain
- Continue the design coordination for the expanded Microbiological Laboratory to enhance functionality, efficiency and safety
- Coordinate the assessment by Canadian Association for Laboratory Accreditation Inc. (CALA) as required for the continued operation of the Water Services Laboratories
- Coordinate the *Enhanced Water Quality Assurance Program* (EWQA) audit as required by the BC Ministry of Health for the continued operation of the Water Services Laboratories
- Prepare and publish the Annual Water Quality Report as required by the BC *Drinking Water Protection Regulation*
- Continue to coordinate the installation of improved in-system reservoir sampling equipment at high priority reservoir sites
- Continue to coordinate the installation of additional online chlorine analyzers to assess real-time water quality

WATER SERVICES

Dam Safety

Description of Services

Water Services delivers a reliable supply of high quality drinking water to the Metro Vancouver region through the Greater Vancouver Water District.

The Dam Safety division manages dam safety activities for the corporate dam portfolio, in the Water Services, Liquid Waste Services, Solid Waste Services and Regional Parks areas of authority. This includes Dam Safety Management, Dam Geotechnical Monitoring, Dam Safety Compliance, and Dam Studies & Assessments. The division manages geotechnical instruments and groundwater control infrastructure, maintains regulatory documents, conducts formal dam inspections, retains consultants for formal dam safety reviews, various dam safety studies, assessments and investigations, monitors the execution of dam activities and implements risk reduction measures for the corporate dam portfolio.

The nature of the Dam Safety division's work involves close collaboration with other departments and Water Services divisions to ensure the overall safety of the portfolio of dams.

Alignment of Strategic Directions and High Level Goals

Board Strategic Plan

- Continue to develop and implement asset management and capital plans that build and maintain regional infrastructure
- Enhance understanding of Indigenous knowledge to help inform policies and goals on ecosystem preservation and adaptation measures
- Incorporate climate action measures (greenhouse gas reduction and resilience to impacts) in all services, projects, and initiatives
- Ensure the long-term resilience of the regional drinking water system by prioritizing seismic upgrades, upgrading aging assets, and installing back-up power for critical water system infrastructure

Drinking Water Management Plan

- Goal 1 – Provide clean, safe drinking water
- Goal 2 – Ensure the sustainable use of water resources
- Goal 3 – Ensure the efficient supply of water

Performance Indicators

Indicator	Historical and/or Industry Benchmark	Current Performance		2025 Performance Objective
		End of July 2024	2024 Objective	
Percent of dam abutment drainage infrastructure tests and inspections completed (Note 1)	3-year average (2021-23): 100% 2021: 100% 2022: 100% 2023: 100%	63%	63%	100%
Percent of formal regulatory dam inspections completed (Note 2)	3-year average (2021-23): N/A 2021: N/A 2022: N/A 2023: N/A (Note 6)	38%	44%	100%
Percent of annual emergency contact communication tests completed (Note 3)	3-year average (2021-23): N/A 2021: N/A 2022: N/A 2023: N/A (Note 6)	0% (Note 7)	0% (Note 7)	100%
Percent of annual Water Committee and regulatory reports completed (Note 4)	3-year average (2021-23): N/A 2021: N/A 2022: N/A 2023: N/A (Note 6)	88%	88%	100%
Percent of operating program expenditures achieved (Note 5)	3-year average (2021-23): 109% (WS) 2021: 103% (WS) 2022: 153% (WS) 2023: 71% (WS)	44% (WS) 0% (LWS) 0% (SWS) 0% (Parks) (Note 7)	58% (WS) 58% (LWS) 58% (SWS) 58%(Parks)	100%

Notes:

- (1) Includes 8 annual WS tasks - 4 CDEA pump well tests, 1 SFD relief well and drainage manhole inspection, 1 CDEA E2 shaft inspection, 1 CDEA T505/506 adit inspection, 1 CDEA T470 adit inspection.
- (2) Includes 16 annual formal dam inspections – 9 WS, 1 LWS, 1 SWS, 5 Parks.
- (3) Includes 14 regulated dam annual emergency contact communication tests (Q4).
- (4) Includes 8 annual tasks – 1 Water Committee report (June), 6 Dam Status Reports (Q1 – 4 WS, 1 SWS, 1 Parks), 1 Corporate Dam Portfolio Consequence Classification Review.
- (5) Includes operating project budgets managed by WS Dam Safety for WS, LWS, SWS, Parks.

(6) "N/A" because the metrics are for the entire corporate portfolio of dams, and WS Dam Safety only started to conduct formal inspections for other department dams in 2024.

(7) Performance of 0% because this work activity is to be carried out later this year.

2025 Key Actions

- Prioritize activities for compliance with applicable regulations
- Develop corporate governance and implementation manuals for Dam Safety and Public Safety Around Dams
- Investigate opportunities for enhancements to test operation of dam discharge equipment
- Manage planned operating projects for WS, LWS, SWS, and Parks dams

WATER SERVICES

Shared and Support Services

Description of Services

Water Services provides a reliable supply of high quality drinking water to the Metro Vancouver region through the Greater Vancouver Water District. Shared and Support Services (S&SS) provides: Survey, Inspection and Drafting Services to WS, LWS and PDE departments through its Shared Utility Services (SUS) Division; provides Administrative Support services to WS; operates the Regional GPS program; and provides oversight and coordination to WS on business planning, financial management, capital planning, emergency planning/response, asset management, performance management, continuous improvement, and utility benchmarking, in collaboration with Finance, PDE and Corporate Safety and Emergency Management.

Alignment of Strategic Directions and High Level Goals

Board Strategic Plan

- Ensure that our critical regional infrastructure is sufficiently maintained or replaced to meet current and future service needs, and is resilient to impacts from seismic events, wildfires, power failures, and natural disasters.
- Ensure that our services and infrastructure are able to meet the needs of a growing population.
- Ensure that all services and infrastructure anticipate and meet regulatory requirements, and that the organization is responsive to legislative change.
- Deliver utility and regional services in a way that ensures affordability for residents and long-term financial sustainability for the organization, using sound fiscal policies that balance the organization's long-term financial health while maintaining affordability for regional ratepayers.
- Proactively work to respond to the climate emergency by preparing for the impacts of climate change and accelerating reductions in greenhouse gas emissions.
- Continue to make investments and adaptations in service areas to ensure that our communities and organizations can prepare, avoid, absorb, recover, and adapt to the effects of shocks and stresses in an efficient manner.

Drinking Water Management Plan

- Goal 1 - Provide clean, safe drinking water
- Goal 2 - Ensure the sustainable use of water resources
- Goal 3 - Ensure the efficient supply of water

Performance Indicators

S&SS supports the KPIs identified in O&M and E&C Work Plans.

Indicator	Historical and/or Industry Benchmark	Current Performance		2025 Performance Objective
		End of July 2024	2024 Objective	
Continuous improvement savings (\$/yr)	2021: \$15,000 2022: \$516,632 2023: 1.3M ¹	\$642,000	\$650,000	\$750,000
Continuous improvement safety – time loss incidents	2021: 8 2022: 7 2023: 4	1	0	0
Continuous improvement safety – injuries to employee in total incidents	2021: 35 2022: 28 2023: 26	21	27	25
Number of operational (level 1) condition assessments completed	2021: 22 2022: 83 2023: 213	19	100+	100+
Number of expert (level 2) condition assessments completed	2021: 2 2022: 3 2023: 9	4	10+	10+

¹Based on estimates from each division summarized in WS Continuous Improvement Tracker

2025 Key Actions

- Enhance condition assessment program for aerial crossings and buried watermains, establish a process to identify priority remediation projects, and integrate with Enterprise Asset Management.
- Continue to improve performance using Lean processes and tools.
- Continue to advance Water Utility Climate Action Plan in alignment with Climate 2050 to establish GHG emission reduction targets and actions to achieve targets.
 - Reduce GHG emissions by working with Fleet Services to optimize and electrify Water Services vehicles.
 - Set target for energy reduction and develop facility specific energy management plans.
- Support the adoption and smooth integration of Building Information Modeling (BIM) standards and procedures for applicable water and liquid waste infrastructure projects.
 - Begin tracking reduced design and/or change order costs (capital projects), as a result of implementing 3D design reviews process/tools.
- Launch next phase of the BIM program, based on approved action plan devised at the end of 2024 (end of BIM Phase I project).
- Expand the utility of the Earthquake Early Warning and Strategic Response System to include more sites and / or response actions
- Develop access points at key reservoirs for emergency supply of water, in accordance with the Temporary Provision of Water Guidelines developed by REAC.

METRO VANCOUVER REGIONAL DISTRICT

Regional Global Positioning System

Description of Services

Regional Global Positioning System is a Metro Vancouver Regional District function established to provide an accurate and consistent engineering survey standard in the Metro Vancouver region. Through a High Precision Network (HPN) of approximately 350 survey control monuments, five (5) Active Control Points (ACPs), and a real-time broadcast service of Global Navigation Satellite Systems (GNSS) data, local government and private users (the latter for a fee) are able to efficiently locate and layout various infrastructure and related works, such as water and sewer lines, reservoirs, roadways, trails, rights-of-way, bathymetric surveys, and topography. By pooling resources, local governments are able to reduce their individual costs for maintaining a high-accuracy geospatial reference system while also ensuring consistent survey standards are maintained in the region.

Strategic Directions and High Level Goals Supported

Board Strategic Plan

- Maintain Metro Vancouver's world-class water system that provides clean, safe drinking water and ensure its capacity to meet future needs.
- Ensure the long-term resilience of the regional drinking water system to withstand natural hazards, climate change and other significant disruptions.
- Develop and implement financial plans and policies that reflect a commitment to sound financial management and long-term planning, in consideration of current and future ratepayers.
- Strengthen awareness and engagement with the public, members, other orders of government, and key stakeholders on a range of initiatives that will ensure the delivery of clean, safe drinking water, now and into the future.
- Continue to engage with members on processes and initiatives that contribute to an effective and well-functioning organization.
- Enhance relationships between Metro Vancouver and other orders of government, First Nations, adjacent regional districts and key stakeholders.

Performance Indicators

Indicator	Historical and/or Industry Benchmark	Current Performance (2024)	2025 Performance Objective
Percent of service uptime (business hours, 8am – 4pm, M-F): <ul style="list-style-type: none"> • Real-time service to mobile surveyors 	MV 3-year average (2021-2023): 99% 2021 99% 2022 99% 2023 99%	99%	99%
Percent of service uptime (24 x 7, 365 days / year): Post-mission data availability through Provincial portal	MV 3-year average (2021-2023): 99% 2021 99% 2022 99% 2023 99%	99%	99%

2025 Key Actions

- With local government partners, implement actions under the five-year (2024-2028) GPS Program Strategic Plan, including:
 - Begin implementation of up to 3 new Active Control Point sites in the region, to be fully operational by 2026
 - Organize plan for new refresh of the horizontal and vertical datums for the region, implementation of which is to be completed by 2029
- Expand the Regional GPS Program’s real-time Active Control Point network, per new 5-year GPS Program Strategic Plan (2024-2028)

2025 to 2029 – WHAT’S HAPPENING

Below is a summary of the significant initiatives to be undertaken by Water Services over the next five years. Includes water-related projects managed by the Project Delivery Department.

Initiative	Description	Theme
2025		
Seymour Falls Dam (SFD) Updated Groundwater Modelling	Complete updates to the SFD groundwater model initiated in 2024.	Regulatory and Legislative Environment
Seymour Falls Dam Upstream Face Leakage Investigation	Carry out an underwater inspection of SFD concrete dam upstream face.	Regulatory and Legislative Environment
Cleveland Dam (CLD) East Abutment Updated Slope Stability Assessment	Complete an updated stability assessment of the CLD East Abutment E2 area slopes	Regulatory and Legislative Environment
Capilano and Seymour Watershed geohazard Study	Carry out a LiDAR survey and geohazard investigation within the Capilano and Seymour watersheds	Regulatory and Legislative Environment
Evaluation of bio-filtration at Seymour Capilano Filtration Plant (SCFP)	Evaluate bio-filtration option at SCFP	System Stewardship and Financial sustainability
Coquitlam Water Treatment Plant (CWTP) Control System Upgrade	Design and programming to upgrade the controls at CWTP Ozone Generation, Corrosion Control, and Chlorination facilities.	System Stewardship
CWTP Feasibility Study for On-site Oxygen Generation and Recovery	Conduct study to evaluate options to produce liquid oxygen on site and incorporate an oxygen recovery system.	Financial Sustainability
Drinking Water Management Plan Update	Finalize Drinking Water Management Plan for GVWD Board endorsement	Regional Growth, Resilience, and System Stewardship
Drinking Water Stress Index	Develop a public-facing tool to communicate in real-time the status of the region’s water supply and demand, and factors in activation of restrictions.	System Stewardship
Regional Water Rate Evaluation	Conduct a study to review current regional water pricing and provide recommendations on changes to the rate structure.	Financial Sustainability
Climate 2050 Water and Wastewater Infrastructure Roadmap	In partnership with Liquid Waste Services, draft the Climate 2050 Water and Wastewater Infrastructure Roadmap.	Environmental Sustainability
River and Watershed Models Update	Develop three new hydrological models for source watersheds and update the hydraulic models.	System Stewardship
Water Audit Study	Perform a water audit study for the transmission system.	System Stewardship
Water Transmission System Master Plan	Develop a long-term capital plan for the water transmission system.	Regional Growth, Resilience and System Stewardship

Regional Water Meter Upgrades	Design and construct new regional flow meters	System Stewardship and Financial sustainability
Dam Safety Booms in Seymour and Capilano Reservoirs Replacement	Complete replacement of the Seymour and Capilano dam safety booms.	System Stewardship & Environmental Sustainability
Canadian Association of Laboratory Accreditation	Enhance the level of accreditation with the implementation of additional key parameters.	Regulatory and Legislative Environment
DFO Capilano River Salmon Hatchery Renewal	Work with DFO on their design and construction of two new wells, a new water supply intake in Capilano Reservoir and associated pipeline to the redeveloped Capilano River Fish Hatchery.	Environmental Sustainability
Coquitlam Water Main Project	Commence construction of Coquitlam Water Main – Cape Horn Section Pre-build.	Regional Growth
Coquitlam Lake Water Supply Project	Continue engagement with First Nations and stakeholders, and submission of applications for Water Licence and Volumetric right-of-way for tunnel.	Regional Growth
Second Narrows Water Supply Tunnel - Construction	Complete construction of the 1.1 km long water supply tunnel under Burrard Inlet.	System Stewardship
Pitt River (Haney) Water Supply Tunnel – Preliminary Design	Commence preliminary design of new water supply tunnel under the Pitt River	System Stewardship
Lulu-Delta Water Supply Tunnel – Conceptual Design	Commence project definition/conceptual design of a new trenchless crossing under the Fraser River	System Stewardship
Building Information Modeling (BIM) Phase I-III implementation	Complete piloting of Common Data Environment (CDE) for managing BIM models and related data. Implementation of phases to continue through 2026 with completion in 2028.	System Stewardship & Environmental Sustainability
Valve Management Program	Formalize a valve exercising and inspection program.	System Stewardship
Earthquake Early Warning and Structural Health Monitoring Expansion (EEW-SHM)	Expand the pilot EEW to complete regional coverage and reliability, as well as to enable automated actions for life-saving and water / water infrastructure saving actions.	System Stewardship & Environmental Sustainability
Water Services Emergency Response Planning	Pilot access points at key reservoirs for emergency supply of water for local jurisdictions.	System Stewardship & Environmental Sustainability
Engineering Quality Assurance (Field)	Implement field, mobile access to engineering drawings and tablet use for construction quality assurance inspections.	System Stewardship & Environmental Sustainability
Westburnco Pump Station 2 – Variable Frequency Drive (VFD) Replacement	Replacement and commissioning of four 800HP VFDs	System Stewardship
CWTP Ozone Side Stream VFD Replacement	Replacement and commissioning of two 350HP VFDs	System Stewardship
SCFP Pumps & Scour Blower VFD Replacement	Replacement and commissioning of nine VFDs	System Stewardship

Transmission System Online Chlorine Analyzers Addition	Begin a multi-year program to install additional online chlorine analyzers within the transmission system.	System Stewardship
Douglas Road Main No. 2 (Still Creek Section) - Construction	Complete Douglas Road Main No. 2 (Still Creek Section).	System Stewardship
Annacis Main No. 5 (North) - Construction	Commence construction of Annacis Main No. 5 (North).	Regional Growth
Port Moody Main No. 3 – Scott Creek Section - Construction	Commence construction of Port Moody Main No. 3 – Scott Creek Section.	System Stewardship
Whalley Kennedy Main No. 2	Commence design work on the Whalley Kennedy Main No. 2.	Regional Growth
South Fraser Storage Yard	Commence detailed design of storage yard.	
Second Narrows (SN) Crossing 1 & 2 (Burrard Inlet Crossing Removal)	Commence detailed design for the existing SN crossing removals.	System Stewardship
Seymour Falls Dam Public Warning System	Begin Preliminary Design Studies along Seymour River	Infrastructure Maintenance
Loch Lomond Outlet Works Rehabilitation	Begin Preliminary Design Studies for replacement of the outlet works at Loch Lomond.	Infrastructure Maintenance
CLD and SFD Lead Paint Removal, Surface Crack Injection and General Corrosion Mitigation	Removal and abatement of lead-containing paint on surfaces at CLD and SFD	Infrastructure Maintenance
2026		
CLD and SFD Updated Probable Maximum Floods (PMF) Assessment	Carry out updated determination of the PMF for CLD and SFD.	Regulatory and Legislative Environment
CLD and SFD Gate and Valve Assessment	Conduct assessments and testing of mechanical discharge gates and valves at CLD and SFD.	Regulatory and Legislative Environment
Water Transmission System Master Plan	Complete development a long-term capital plan for the water transmission system	Regional Growth, Resilience and System Stewardship
Coquitlam Water Main Project	Complete construction of Coquitlam Water Main – South Section (Robson Drive to Guildford Way).	Regional Growth
Coquitlam Water Main Project	Commence Construction of Coquitlam Water Main – City Centre Tunnel Section.	Regional Growth
Coquitlam Lake Water Supply Project	Commence preliminary design of intake, tunnel and treatment plant.	Regional Growth
Cape Horn Pump Station No. 2 (CHPS2) Power Distribution and DC Drive replacement	Upgrade power distribution system and replace four 1000HP drives	System Stewardship
Environmental Management System	Complete development of an ISO 14001 compliant Environmental Management System for Water Services operations.	Environmental Sustainability & Regulatory and Legislative Environment

Engineering Drawing Updates (Field)	Complete implementation of digital engineering drawings field mark-ups, processing and approvals.	System Stewardship & Environmental Sustainability
Westburnco Pump Station Backup Power – Design & Construction	Complete design and start construction of Westburnco Pump Station No. 1 & No. 2 Backup Power.	System Stewardship
Fleetwood Reservoir - Construction	Complete construction of Fleetwood Reservoir.	Regional Growth
Kennedy Newton Main - Construction	Complete construction of Kennedy Newton Main.	Regional Growth
Capilano Raw Water Pump Station Backup Power Facility - Construction	Complete construction of the Capilano Raw Water Pump Station Backup Power Facility.	System Stewardship
Cap Raw Water Pump Station VFD Replacement	Replacement and commissioning of eight VFDs	System Stewardship
Burnaby Mountain Tank No. 2 and 3	Commence detailed design of Burnaby Mountain Tank No. 2 and 3	Regional Growth
Cleveland Dam Spillway Resurfacing	Detailed design for maintenance and repair of the concrete surface of the CLD Spillway.	Infrastructure Maintenance
2027		
Coquitlam Water Main Project	Commence Construction of Coquitlam Water Main – Central Section.	Regional Growth
Earthquake Early Warning and Structural Health Monitoring System (EEW-SHM)	Complete action plans associated with the EEW-SHM program.	System Stewardship & Environmental Sustainability
North Shore Works Yard - Planning	Plan for redevelopment of Beach Yard Works Yard, after Second Narrows Water Supply Tunnel project completion.	System Stewardship
Water Supply Area Security Upgrades	Complete system upgrades to allow for enhanced monitoring across the three water supply areas	System Stewardship
Cape Horn Pump Station No. 3 - Construction	Commence construction of Cape Horn Pump Station No. 3.	Regional Growth
Annacis Main No. 5 (North) - Construction	Complete construction of Annacis Main No. 5 (North).	Regional Growth
Seymour Main No. 5 (North)	Complete design of the open cut sections of the Seymour Main No. 5 (North) between SFD and SCFP.	System Stewardship
Port Moody Main No. 3 – Scott Creek Section - Construction	Complete construction of Port Moody Main No. 3 – Scott Creek Section.	System Stewardship
Haney Main No. 4 - West Section	Commence construction of Haney Main No. 4 – West Section.	Regional Growth
South Surrey Main No. 2	Commence construction of the South Surrey Main No. 2.	Regional Growth
Whalley Kennedy Main No. 2	Commence construction of the Whalley Kennedy Main No. 2.	Regional Growth

2028		
CLD and SFD Automated Data Acquisition System (ADAS) Replacement	Replace aging ADAS equipment at CLD East Abutment and at SFD.	Regulatory and Legislative Environment
Renewal of water licences for Capilano and Seymour associated with the Joint Water Use Plan	Water licences need to be renewed to allow for potential investigation of hydropower at CLD and SFD.	System Stewardship and Environmental Sustainability
Update Drinking Water Conservation Plan (DWCP)	Review and update the DWCP which includes implementation by Member jurisdictions and public communication.	System Stewardship and Environmental Sustainability
Newton Pump Station No. 2 - Construction	Complete construction of Newton Pump Station No. 2.	Regional Growth
South Fraser Works and Storage Yard	Complete development of South Fraser Works and Storage Yard to support WS Construction activities.	System Stewardship
Annacis Main No. 5 (South) - Construction	Complete construction of Annacis Main No. 5 (South).	Regional Growth
Central Park Main No. 2 – Imperial Section	Complete construction of the Central park Main.	System Stewardship
Cleveland Dam Maximum Credible Earthquake (MCE) Seismic Upgrades	Design and construct upgrades to CLD based on changes to Seismic Design Code for MCE.	System Stewardship
Loch Lomond Formalized Spillway Design and Construction	Design and construct upgrades to Loch Lomond’s spillway.	Infrastructure Maintenance
Burnaby Mountain Tank No. 2 and 3	Commence construction of Burnaby Mountain Tank No. 2 and 3.	Regional Growth
2029		
Wildfire Preparedness	Complete Community Wildfire Planning with key municipal partners and continue implementation of forest fuel reduction treatments and early detection system trials.	System Stewardship
Pitt River (Haney section) Water Supply Tunnel - Construction	Commence construction of new water supply tunnel under the Pitt River.	System Stewardship
Cambie-Richmond Water Supply Tunnel - Construction	Commence construction of new water supply tunnel under the Fraser River.	System Stewardship
Building Information Modeling (BIM) Phases II-III Implementation	Complete implementation of multi-year Phase II-III program.	System Stewardship & Environmental Sustainability
Seymour Main No. 5 (North)	Commence construction of the first of two open cut sections of the Seymour Main No. 5 (North) between SFD and SCFP.	System Stewardship
Second Narrows Crossing 1 & 2 (Burrard Inlet Crossing Removal)	Commence construction for the existing SN crossing removals.	System Stewardship

METRO VANCOUVER DISTRICTS
2025 - 2029 PROJECTED RESERVES - WATER

OPERATING RESERVES

	2024 ENDING BALANCE	2025 OPENING BALANCE	CONTRIBUTION	WITHDRAWALS	INTEREST	2025 ENDING BALANCE	2026 ENDING BALANCE	2027 ENDING BALANCE	2028 ENDING BALANCE	2029 ENDING BALANCE
Water Services	\$ 42,739,784	\$ 42,739,784	\$ -	\$ -	\$ 1,068,495	\$ 43,808,279	\$ 44,903,486	\$ 46,026,073	\$ 47,176,725	\$ 48,356,143

STATUTORY RESERVES

	2024 ENDING BALANCE	2025 OPENING BALANCE	CONTRIBUTION	WITHDRAWALS	INTEREST	2025 ENDING BALANCE	2026 ENDING BALANCE	2027 ENDING BALANCE	2028 ENDING BALANCE	2029 ENDING BALANCE
Water Services										
Water Laboratory Equipment Reserve	\$ 910,202	\$ 910,202	\$ 50,000	\$ -	\$ 23,380	\$ 983,582	\$ 1,058,797	\$ 1,135,892	\$ 1,214,914	\$ 1,295,912
Water Sustainability Innovation Fund Reserve	10,309,539	10,309,539	723,000	(1,020,000)	254,026	10,266,565	10,951,517	11,957,342	12,988,313	14,045,058
Total	\$ 11,219,741	\$ 11,219,741	\$ 773,000	\$ (1,020,000)	\$ 277,406	\$ 11,250,147	\$ 12,010,314	\$ 13,093,234	\$ 14,203,227	\$ 15,340,970



E2

1924-2024

100 YEARS

DRINKING WATER

2025 – 2029 FINANCIAL PLAN

WATER SERVICES

Marilyn Towill

General Manager, Water Services

Water Committee – October 2, 2024
68636935

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Vancouver Heights Reservoir Pump Station (1958)

CELEBRATING 100 YEARS OF DRINKING WATER

The Greater Vancouver Water District (GVWD) was established in 1924 with a mandate to ensure drinking water for the region's residents.



Vancouver Heights Pump Station (1958)



Barnston/Maple Ridge Pump Station



Capilano Chlorination Plant (1960)

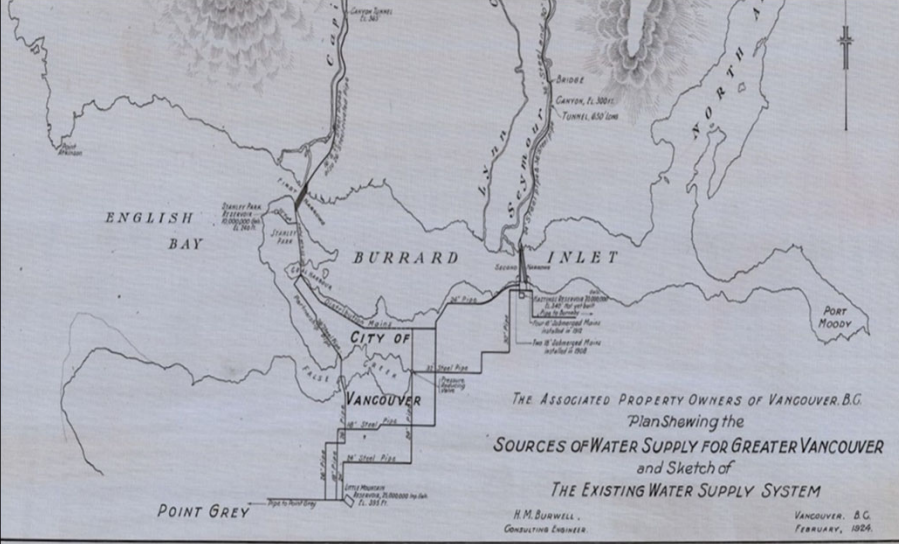


Jericho Reservoir

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2

ONE HUNDRED YEARS AGO



WATER SERVICES OVERVIEW

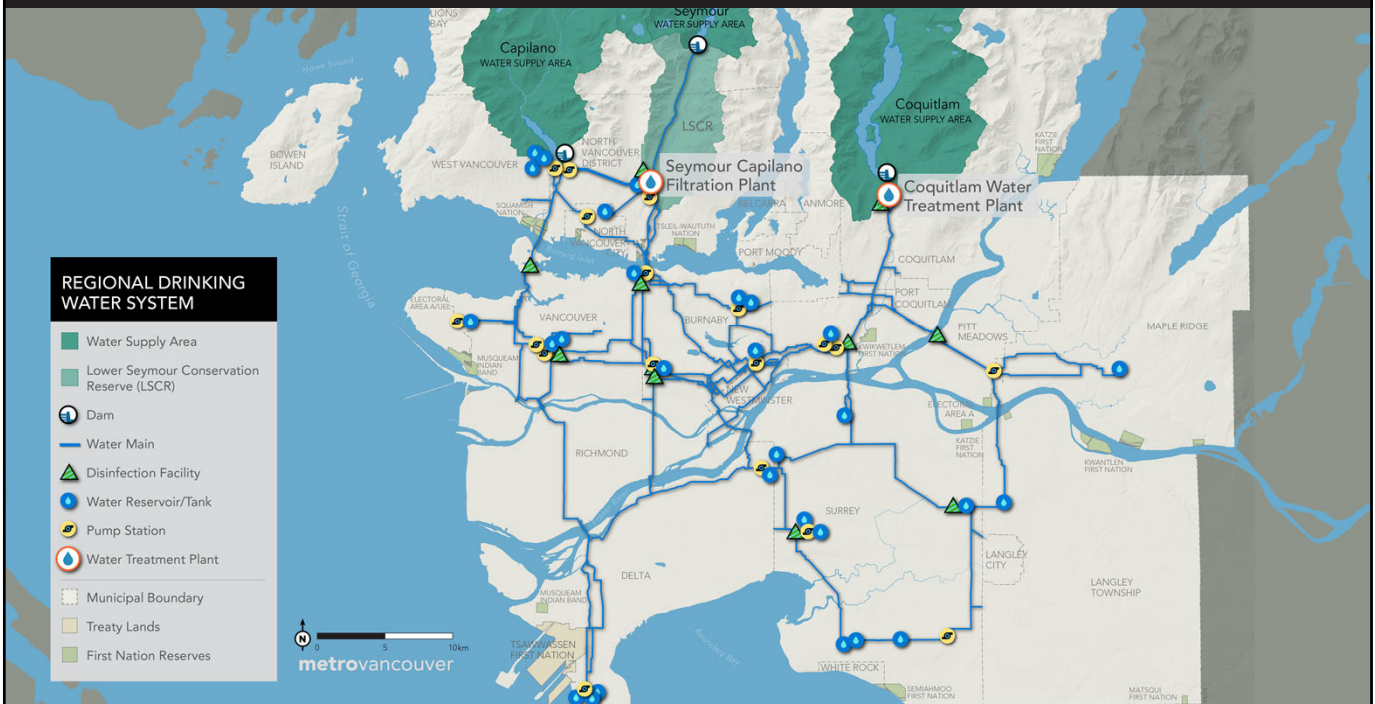
Water Services over the next 5 years

In order to manage the long term Water Supply demands in a responsible manner, this Plan factors in conservation measures, new infrastructure development, resiliency, financial sustainability, climate action, First Nations reconciliation, and strong external partnerships over the next 5 years.

CUSTOMER LEVELS OF SERVICE OBJECTIVES

- Maintain Quality of the Drinking Water Delivered
- Maintain Capacity and Reliability of the Water Supply System
- Improve Environmental Stewardship
- Minimize Timeline to recover from a Major Event (including Seismic, Power Interruption and Climate Change)

Water Utility Overview



WHAT DRIVES & GUIDES OUR WORK



Annacis Main No.2, Magnetic Flowmeter installation in a new chamber



Water main installation in Stanley Park – Circa 1932

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7

PERFORMANCE METRICS

Water Services

Key Performance	Past Performance (Average)	Expected Performance 2025
Peak day per capita water use (liters per person per day)	587	
Water transmission system leak repairs (# leaks / 100km of pipe)	2.72	
Progress on GVWD capital program (% expenditures)	59	
Bacteriological tests from GVWD system meet or exceed BC Water Quality Standard	100%	

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8

CONTINUOUS IMPROVEMENT – 2024 COMPLETE OR ONGOING

Water Services

Initiative	Outcomes
On-Site Field Services Improvements	<ul style="list-style-type: none"> Acquired technology improvements (robotic survey equipment, etc.) to improve on-site efficiency
Completed a Dam Safety Tracking System	<ul style="list-style-type: none"> Allows entry and tracking of work activities for the entire corporate portfolio of dams
Refined Environmental Management System	<ul style="list-style-type: none"> Revised the review and approval process for regulatory reporting which was established in 2015. New process is freeing up time for our frontline, engineering, and legal teams

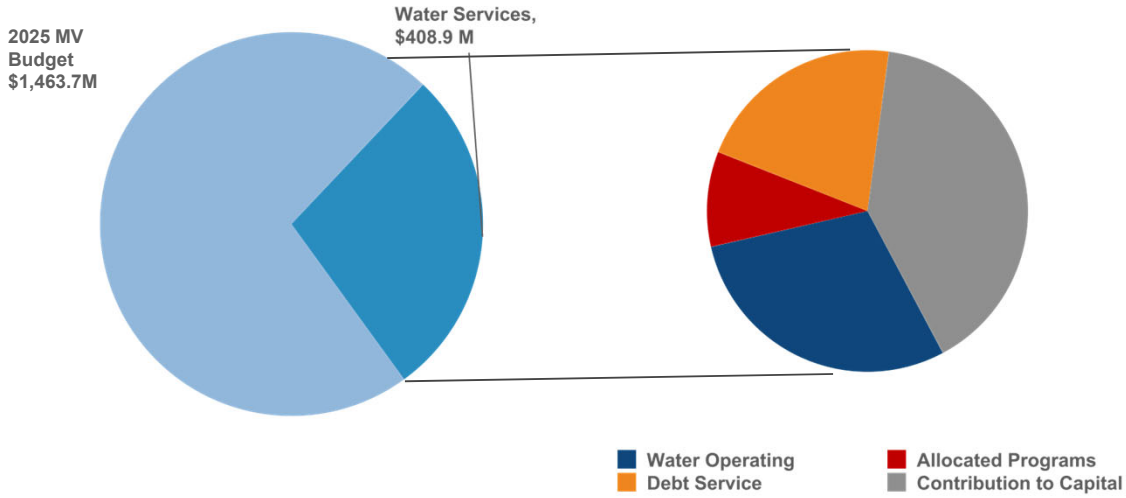
CONTINUOUS IMPROVEMENT – 2025 NEW

Water Services

Initiative	Outcomes
Departmental GHG emissions management	<ul style="list-style-type: none"> Working towards achieving 45% reduction by 2030 and net-zero emissions by 2050 with focus on fleet electrification
Enhancing water quality monitoring	<ul style="list-style-type: none"> Installation of improved in-system reservoir sampling equipment and remote data monitoring of rechlorination stations
Retrofit air valves	<ul style="list-style-type: none"> Retrofitting air valves to avoid future failures, emergency repair costs, as well as reduce the environmental risk

BUDGET OVERVIEW

2025 Operating Budget Breakdown - Water



OPERATING EXPENDITURES

Water Services Financial Plan

Overview:

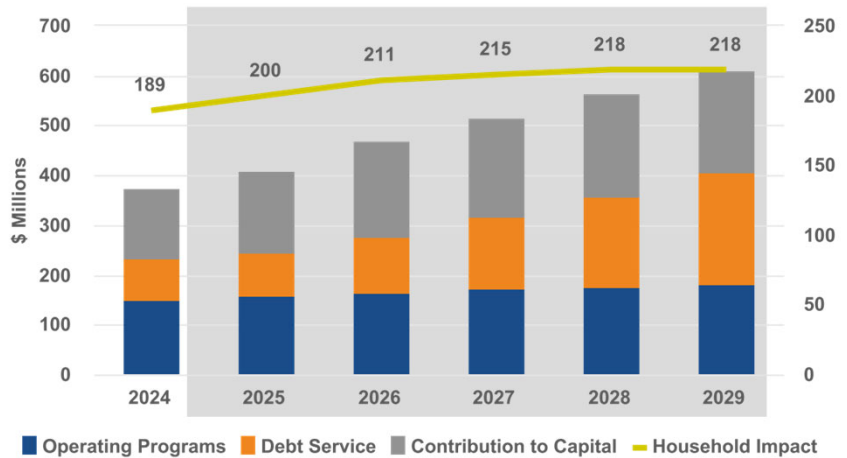
2024 Operating Budget: **\$378.9M**
 2025 Operating Budget: **\$408.9M**

7.9% increase

Drivers for Change:

- Increases to operating programs are largely inflationary
- Increased debt service (growing capital program)
- Managing contribution to capital (Financial Management Policy)

2025 - 2029 Water Services Financial Plan



OPERATING REVENUES

Water Services Financial Plan

Overview:

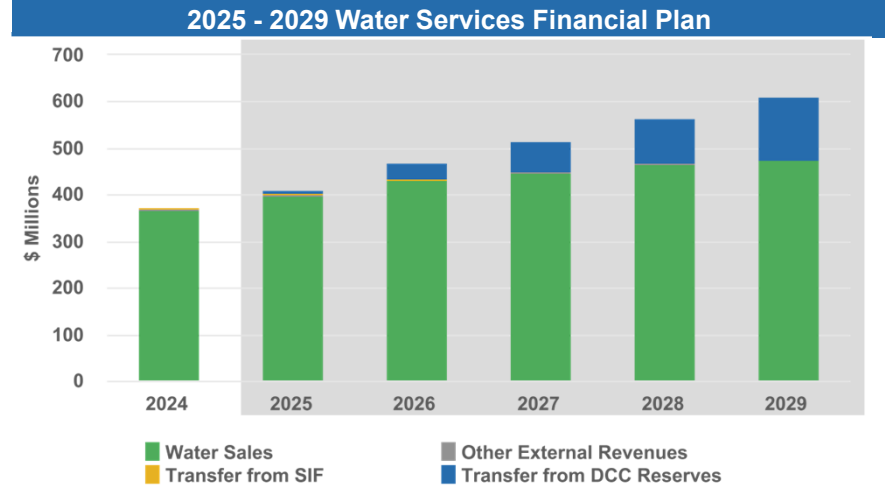
2024 Operating Budget: **\$378.9M**

2025 Operating Budget: **\$408.9M**

7.9% increase

Drivers for Change:

- Population growth and increased consumption
- Maintaining funding for capital program



OPERATING REVENUES

Benchmark of Utility Costs

	Wholesale Water Rate (\$CAD / m3) (2023)	Residential Water Use (litres per person per day) (year of published data)
Metro Vancouver	\$1.00 (2025)	269 (2021)
Capital Regional District	\$0.81	220 (2023)
Waterloo	\$1.13	152 (2019)
San Francisco	\$2.25	155 (2023)
Portland	\$3.34	167 (2023)

OPERATING HIGHLIGHTS

Water Services

Budget year	Initiative	Description
2025	Drinking Water Management Plan Update	Finalize Drinking Water Management Plan for GVWD Board endorsement
2026	Environmental Management System	Complete development of an ISO 14001 compliant Environmental Management System.
2027	Earthquake Early Warning and Structural Health Monitoring System	Complete action items associated with the Earthquake Early Warning and Structural Health Monitoring System.
2028	Automated Data Acquisition System (ADAS) Replacement	Replace aging ADAS equipment at the Cleveland and Seymour Falls dams
2029	Wildfire Preparedness	Complete Community Wildfire Planning with key municipal partners

CAPITAL EXPENDITURES

Water Services Capital Plan

Overview:

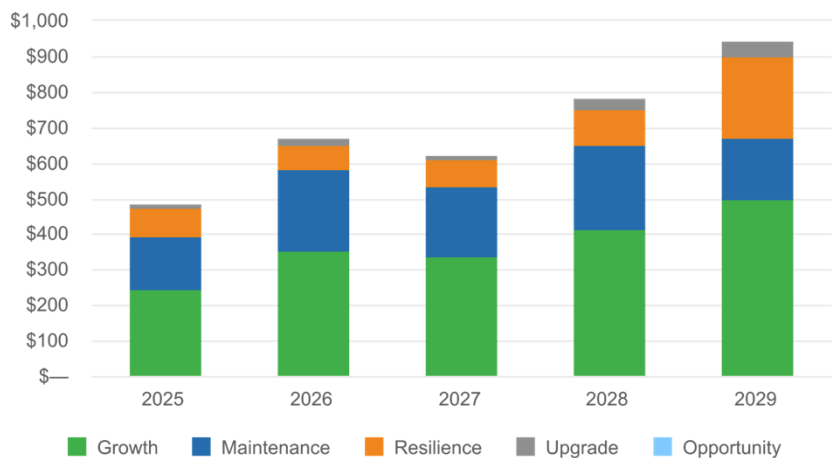
2024 Capital Cash Flow: **\$424.9M**
 2025 Capital Cash Flow: **\$484.5M**

14.0% increase

Drivers for Change:

- Coquitlam Water Main
- Annacis Water Supply Tunnel
- Stanley Park Water Supply Tunnel
- Coquitlam Lake Water Supply
- Haney Water Supply Tunnel
- Capilano Raw Water Pump Station - Back-up Power
- Kennedy Newton Main

2025 - 2029 Water Services Capital Cash Flow



CAPITAL FUNDING

Water Services Capital Plan

2025 - 2029 Water Services Capital Funding

Overview:

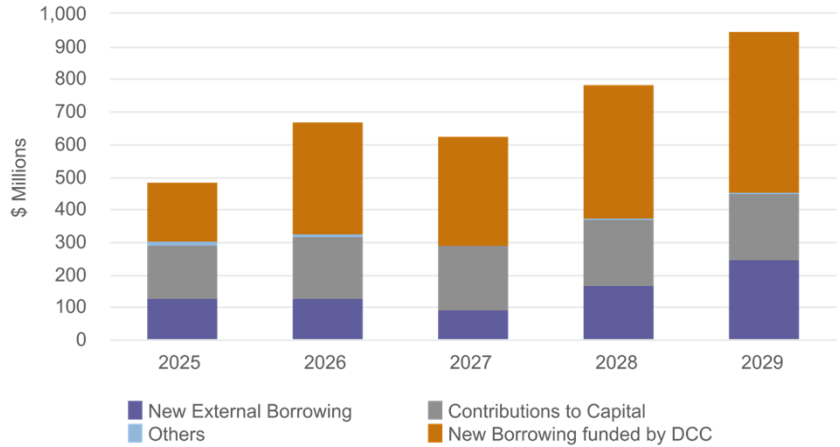
2024 Capital Cash Flow: **\$424.9M**

2025 Capital Cash Flow: **\$484.5M**

14.0% increase

Drivers for Change:

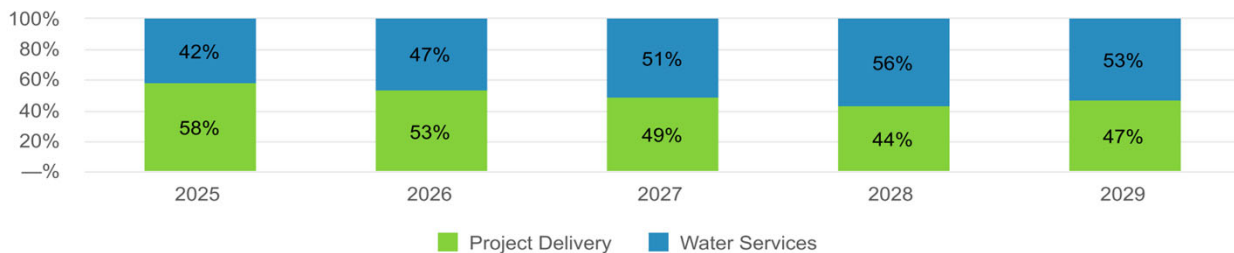
- Contribution to Capital funding to comply with Financial Management Policy
- DCC's in place for 2024 and onwards



WATER 2025 - 2029 CAPITAL PLAN

	2025	2026	2027	2028	2029
Annual Capital Expenditures (millions)					
WS	\$202.4	\$312.3	\$319.6	\$439.8	\$500.1
PD	\$282.1	\$357.4	\$304.8	\$342.4	\$445.3
Total	\$484.5	\$669.7	\$624.4	\$782.2	\$945.4

- Water Services: 144 projects in the 2025 - 2029 capital plan
- Project Delivery: 9 projects in the 2025 - 2029 capital plan
- Total: 153 projects in the 2025 - 2029 capital plan



WATER SERVICES FINANCIAL PLAN SUMMARY

Water Services

	2024	2025	2026	2027	2028	2029
Total Expenditures (\$ Millions)	\$378.9	\$408.9	\$468.2	\$516.0	\$564.8	\$611.3
% Change		7.9%	14.5%	10.2%	9.5%	8.2%
Blended Water Rate (\$/m3)	\$0.9333	\$1.0002	\$1.0655	\$1.0975	\$1.1233	\$1.1380
Total Capital Cash Flow (\$ Millions)	\$424.9	\$484.5	\$669.7	\$624.4	\$782.2	\$945.4
Household Impact (\$)	\$189	\$200	\$211	\$215	\$218	\$218
% Change		5.7%	5.5%	2.0%	1.6%	0.1%
Prior Cycle Household Impact Change (%)		7.4%	5.3%	2.4%	1.8%	N/A



Barnston Maple Ridge Pump Station



Questions?

metrovancouver

To: Water Committee

From: Vanessa Anthony, Director, Policy, Planning, and Analysis, Water Services
Lena Zordan, Community Engagement Program Manager, External Relations

Date: September 16, 2024 Meeting Date: October 2, 2024

Subject: **Drinking Water Management Plan Update and Report on Phase 1 Engagement**

RECOMMENDATION

That the GVWD Board receive for information the report dated September 16, 2024, titled “Drinking Water Management Plan Update and Report on Phase 1 Engagement.”

EXECUTIVE SUMMARY

Metro Vancouver is updating the *Drinking Water Management Plan (DWMP)*, the overarching guiding document for Metro Vancouver’s water utility, establishing priorities and setting the strategic direction for drinking water initiatives over the next 10 years. Engagement on Phase 1, establishing draft guiding principles and goals, concluded in July 2024. Local First Nations, member jurisdictions, members of the public, and interest holders were invited to provide feedback.

Key themes that emerged during engagement with First Nations include: reconciliation, conservation, environmental resilience, and water quality. Key themes from interest holders and the public include managing water for future generations, conservation, planning and future-proofing infrastructure, collaboration, environment, water quality, and water security.

Phase 2, developing the plan’s strategies and actions, is underway including ongoing engagement with the Regional Engineers Advisory Committee Water Sub-committee, and an internal working group. Planning for engagement with local First Nations on Phase 2 is also underway. Public engagement will follow in 2025.

PURPOSE

To provide the Board a progress update on the *Drinking Water Management Plan (DWMP)* update and to provide the results of Phase 1 engagement on the draft guiding principles and goals.

BACKGROUND

The DWMP update is listed as a priority action for Water Services in the *Board Strategic Plan 2022-2026* and is also identified in the Water Committee 2024 Work Plan.

DWMP UPDATE

Metro Vancouver is updating its *Drinking Water Management Plan*, the guiding document for Metro Vancouver’s drinking water utility. The plan is being updated through a phased approach:

- Phase 1: Conduct technical review and develop guiding principles and goals (2020-2024)
- Phase 2: Develop strategies and actions (2024-2025)
- Phase 3: Finalize for Board endorsement (2025-2026)

Since the last progress update to the Board in May 2023, Metro Vancouver staff has been working concurrently on advancing Phase 1 and 2. Phase 1 concluded in July 2024 following public and local First Nations engagement on the draft guiding principles and goals. A summary of engagement results is provided in the following section.

For Phase 2, Metro Vancouver staff has been developing draft strategies and actions that detail how Metro Vancouver will achieve the plan's draft goals. To assist in this, an internal working group was formed consisting of representatives from each Water Services division in addition to representatives from Project Delivery, Liquid Waste Services, Regional Planning, Regional Parks, Air Quality and Climate Action, and Indigenous Relations. Three of five internal workshops have been held to date. Internal development of the draft strategies and actions will continue through to early 2025.

Metro Vancouver staff has also held three workshops with the Regional Engineers Advisory Committee Water Sub-Committee (REAC WSC) to discuss barriers and possible solutions to advance drinking water conservation and metering in their jurisdictions. This work was supported by a panel discussion held during Metro Vancouver's Conference Day on June 7 that addressed the barriers to residential water metering raised by member jurisdictions during the workshops. Additional workshops with REAC WSC are planned for later this year and through to mid-2025.

Currently, staff are preparing for Phase 2 engagement with local First Nations with public engagement to follow in 2025.

ENGAGEMENT SUMMARY

The purpose of Phase 1 engagement was to gather feedback on the draft guiding principles and goals for the updated plan.

Activities by Audience

Metro Vancouver Advisory Committees

In addition to providing updates at regular meetings, staff hosted three technical workshops with REAC WSC in May, October, and December 2022 and conducted an online survey open to sub-committee members in May 2022. Metro Vancouver staff also delivered a report to REAC and the Regional Administrative Advisory Committee (RAAC) at their regular April 2023 meetings.

First Nations

In the summer of 2023, a letter providing background information was sent to 29 First Nations. Additionally, further correspondence to organize meetings took place later that summer with 10 local First Nations:

- ǰǰǰǰ (Katzie First Nation)
- ǰǰǰǰǰǰ (Kwantlen First Nation)
- kǰǰǰǰǰǰ (Kwikwetlem First Nation)
- máthxwi (Matsqui First Nation)
- xǰǰǰǰǰǰǰǰ (Musqueam Indian Band)

- qiqéyt (Qayqayt First Nation)
- se'mya'me (Semiahmoo First Nation)
- Skwxwú7mesh Úxwumixw (Squamish Nation)
- scə́waθən məsteyəx^w (Tsawwassen First Nation)
- sə́lilwətał (Tsleil-Waututh Nation)

Feedback and input were received from six First Nations during meetings held in between fall 2023 and spring 2024 through a series of nine separate meetings.

Staff will continue to invite local First Nations to upcoming engagement opportunities.

Public and Interest Holders

- One online questionnaire (April 24 – July 26, 2024), 215 participants with 6,224 data points collected
- Two online webinars for member jurisdictions, public, and interest holders (June 18 and June 25, 2024) with 31 participants
- Two public events and pop-ups (April – July 2024)
- One meeting with Metro Vancouver's Youth and Education Advisory Panel (April 30, 2024)

COMMUNICATIONS

The following communication tools were used to raise awareness about the plan update and encourage member jurisdictions, the public, and interest holder participation:

- 2,226 visits to the project webpage
- 78 posters and signs at water infrastructure sites and regional parks
- 21 social media posts (organic and paid) on Facebook, Instagram, and X (formerly Twitter) with 1,920 link clicks, and 274 reactions, comments, shares, and saves
- Four e-newsletters sent to 250 subscribers of the Drinking Water Management Plan update mailing list including member jurisdictions, the public, industry and business associations
- Two public events (Party for the Planet and the 100 Year Anniversary Celebration of the Greater Vancouver Water District)
- Three print media ads
- One Metro Vancouver Newsletter article featuring the plan update shared with more than 3,900 subscribers

SUMMARY OF FEEDBACK

Overall, the draft goals and guiding principles reflected the concerns and interests of engagement participants. Most respondents agreed that all ten draft guiding principles and five draft goals were important to them.

First Nations Engagement

In the spring of 2023, six out of the ten local First Nations participated in discussions with Metro Vancouver. Key themes of what we heard are summarized below.

- Reconciliation – incorporate cultural and traditional knowledge into plans
- Water conservation – reduce per capita consumption and universally meter water consumption across the region
- Environment – preserve and improve the health and well-being of ecosystems, specifically related to fish habitat and migration routes
- Water quality – ensure high-quality drinking water

Member Jurisdictions, Interest Holders, and Public Engagement

Feedback from member jurisdictions was captured and reported on in the May 2023 Water Committee report. Key themes of what we heard from interest holders and the public are summarized below.

- Managing water for future generations - ensuring sufficient drinking water storage capacity to meet future demand.
- Advancing conservation - inspiring water stewardship through public education and awareness and developing guidelines and offering tools for water reuse and recycling. As well as implementing water metering to improve leak detection and introduce equitable billing for water use.
- Planning and future-proofing infrastructure - increasing resiliency of infrastructure through robust asset management, upgrades, and repairs to aging infrastructure. Additionally, increasing transparency and financial efficiency when planning and implementing major capital projects. Furthermore, building and maintaining infrastructure and diversifying our water sources to manage the demands of a rapidly growing region.
- Improving collaboration by bringing municipalities and organizations together to collaborate on drinking water management across the region.
- Preserving and improving the health and well-being of ecosystems.
- Guaranteeing the quality and security of our drinking water supply, even in the event of a natural disaster or extreme weather.

First Nations engagement activities and results appear in Attachment 1: Phase 1 First Nations Engagement Summary. The detailed Phase 1 Public Engagement Summary Report appears in Attachment 2.

ALTERNATIVES

This is an information report. No alternatives are presented.

FINANCIAL IMPLICATIONS

The costs required to develop the Drinking Water Management Plan are included in annual GVWD program budgets.

CONCLUSION

Metro Vancouver is updating the *Drinking Water Management Plan*. The first phase of the plan's development, establishing draft guiding principles and goals, concluded in July 2024 following the engagement with local First Nations and the public. Member jurisdictions, First Nations, the public, and interest holders were invited to provide input and share feedback by participating in workshops, webinars, and completing an online survey. Key themes include managing water for future generations, advancing conservation, planning and future-proofing infrastructure, collaboration among member jurisdictions and organizations, environmental considerations, and water quality and security.

Work on Phase 2 is currently underway to develop draft strategies and actions that detail how Metro Vancouver will achieve the plan's goals. The development process includes ongoing collaboration with an internal working group and the REAC WSC, as well as planned engagement with local First Nations and the public through to mid-2025. Phase 3, finalizing the plan, is planned for late 2025 – 2026.

ATTACHMENTS

1. Drinking Water Management Plan Update – Phase 1 First Nations Engagement Summary
2. Drinking Water Management Plan Update – Phase 1 Public Engagement Summary

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Drinking Water Management Plan Update

Phase 1: First Nations Engagement Summary Report



Table of Contents

1. About the Drinking Water Management Plan	4
2. Executive Summary	5
3. About the Engagement Process	5
4. Outreach	6
5. How We Engaged	6
6. Engagement Feedback	8
7. What's Next	10



Adult Coho in Seymour Water Supply Area

1. About the Drinking Water Management Plan

High-quality drinking water is essential for human life and a healthy environment. By 2040, close to four million residents will rely on Metro Vancouver’s high-quality drinking water supply. Using water wisely now will help us ensure we have enough for future generations.

Metro Vancouver is updating its Drinking Water Management Plan to establish the strategic direction for the region’s drinking water utility over the next 10 years. The Drinking Water Management Plan sets priorities for drinking water initiatives such as managing watersheds as natural assets, advancing drinking water conservation and metering, and preparing for the impacts of climate change.

The plan sets out goals, strategies, and actions for Metro Vancouver and its member jurisdictions to help ensure the delivery of high-quality drinking water, the sustainable use of water, and the efficient supply of water.

Since the last plan update in 2011, the Metro Vancouver region has been proactively addressing population growth, seismic events, and climate change. These efforts have focused on ensuring we can adapt and manage the supply and demand for drinking water in the face of these changes. By updating this plan, Metro Vancouver and its members can realign priorities and prepare to address current and upcoming challenges.

The updated Drinking Water Management Plan will:

- Establish goals, strategies, and actions to ensure Metro Vancouver can continue to supply high-quality drinking water in the face of population growth, seismic events, and climate change
- Outline how Metro Vancouver and its members plan to work together to align priorities and implement actions
- Incorporate First Nations’ interests and priorities
- Provide a strong rationale to support decision-making

2. Executive Summary

In the initial phase of engagement, Metro Vancouver sought input from First Nations, the public, and interest holders to provide feedback on the draft vision and goals of the Drinking Water Management Plan update.

Letters inviting First Nations to participate in meetings and to share their input were sent to 29 First Nations. Six First Nations provided comments during workshops and via email correspondence. Key themes heard during engagement include:

- **Reconciliation** – incorporate cultural and traditional knowledge into plans
- **Water conservation** – lowering water consumption and meter water usage across the region
- **Environment** – preserve and improve the health and well-being of ecosystems, specifically related to fish habitat and migration routes

- **Water quality** – ensure high quality of our drinking water supply

Ideas and priorities shared by First Nations during this phase of engagement, along with advice from technical experts, the public, and interest holders, will be incorporated to refine the draft goals and guiding principles. Feedback will also inform the plan’s strategies, actions, and performance measures. First Nations will be invited to participate in future phases of the Drinking Water Management Plan update over the next two years.

To view the Drinking Water Management Plan update Phase 1 Public Engagement Summary Report, www.metrovancouver.org and search “Drinking Water Management Plan update.”

3. About the Engagement Process

There will be three phases of engagement for the Drinking Water Management Plan update. The first phase of engagement sought to understand First Nations’ preferred ways to participate in the update process as well as their values, interests, and priorities for managing drinking water in our region. Engagement opportunities were also available to member jurisdictions, the public, and interest holders.

Phases 2 and 3 of engagement will involve developing strategies and actions and finalizing the plan.



4. Outreach

In the summer of 2023, a letter providing background information was sent to 29 First Nations. Additionally, further correspondence to organize meetings took place later that summer with 10 local First Nations:

- qíćǎy (Katzie)
- q̣ʷɑ:ńłǎń (Kwantlen)
- ḳʷíḳʷǎłǎm (Kwikwetlem)
- máthxwi (Matsqui)
- x̣ʷmǎθḳʷǎyǎm (Musqueam)
- qíqéỵt (Qayqayt)
- sémya'me (Semiahmoo)
- Ṣḳẉx̣ẉú7mesh Úxwumixw (Squamish)
- scǎwǎθǎn mǎsteyǎx̣ʷ (Tsawwassen)
- sǎlilwǎtǎł (Tsleil-Waututh).

5. How We Engaged

First Nations were invited to share feedback on the plan update with Metro Vancouver in the following ways:

- In-person meetings
- Virtual meetings
- Submitting input in writing

Nine meetings were held between fall 2023 and spring 2024. Six of the 10 local First Nations met with Metro Vancouver staff to engage and discuss the Drinking Water Management Plan update. At each of the meetings, staff presented on the update, challenges facing the drinking water system, and draft guiding principles and goals. These meetings resulted in follow-up questions, comments, and requests for further information about the plan update.








Draft Guiding Principles

To guide decision-making at every step of the plan update, Metro Vancouver developed a list of draft guiding principles:

 <p>Value water as a precious resource that must be conserved</p>	 <p>Work collaboratively and engage people in planning and implementation</p>	 <p>Advance reconciliation with local First Nations</p>	 <p>Act in a financially responsible manner</p>	 <p>Prioritize conservation over water supply expansion</p>
 <p>Make the drinking water system resilient to changing environmental conditions and natural disasters</p>	 <p>Make the drinking water system and operations carbon neutral</p>	 <p>Promote an equitable drinking water system</p>	 <p>Rely on science-based evidence to make decisions</p>	 <p>Emphasize continuous improvement</p>

Draft Goals

The Drinking Water Management Plan update is guided by a vision to deliver high-quality drinking water in a reliable and environmentally sensitive manner to meet the needs of a growing region. To realize this vision, Metro Vancouver has developed a set of draft goals.

 <p>Goal 1 Provide high-quality drinking water</p>	 <p>Goal 2 Provide uninterrupted drinking water service</p>	 <p>Goal 3 Manage the drinking water system in a cost-effective way</p>	 <p>Goal 4 Manage water to protect and enhance the environment for all</p>	 <p>Goal 5 Develop and attract a skilled workforce to manage drinking water region-wide</p>
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First Nations were invited to ask questions, engage in discussions, and provide input on the draft guiding principles and goals. Following each meeting, participants were invited to share additional feedback with the project team.

6. Engagement Feedback

The table below summarizes what we heard during discussions and subsequent correspondence from participating First Nations. The column on the right provides an overview of how Metro Vancouver is planning to incorporate the ideas shared with us into the Drinking Water Management Plan update.

WHAT WE HEARD	HOW WE'RE RESPONDING
<p>Reconciliation</p> <p>Work closely with local First Nations to incorporate cultural and traditional knowledge into management planning</p>	<p>Metro Vancouver will continue to work with First Nations in all upcoming phases of the Drinking Water Management Plan update. We will identify ways to continue advancing and strengthening reconciliation and include Indigenous cultural and traditional knowledge in the plan's strategies and actions.</p>
<p>Environment</p> <p>Maintain and improve fish habitats and migration patterns, particularly for the salmon population</p>	<p>Environmental considerations are incorporated in the goal of managing water to protect and enhance the environment for all.</p> <p>Beyond the Drinking Water Management Plan, Metro Vancouver has been actively engaged in salmon restoration initiatives to support fish and fish habitat restoration through several initiatives and collaborations, including:</p> <ul style="list-style-type: none"> • The 10-Year Salmon Enhancement Action Plan, which will identify, prioritize, and coordinate salmon enhancement activities on the land, features, facilities, and infrastructure that Metro Vancouver manages. • Several collaborations with the federal and provincial governments and First Nations on fish and fish habitat restoration initiatives. • Supporting the restoration of water supply area fisheries populations including trapping and trucking fish around dam facilities. • Supporting fish hatcheries located downstream of the primary Metro Vancouver water supply dams.

Water conservation

Explore opportunities for recycling water, such as rainwater harvesting and explore ways of replenishing and reusing water

Increase emphasis on conservation through water metering and reducing the use of potable water over expanding drinking water infrastructure

Water conservation is incorporated in the draft guiding principle of **valuing water as a precious resource that must be conserved**.

Metro Vancouver has undertaken a [Non-Potable Water Use Project](#) in collaboration with industry interest holders to identify and investigate solutions to region-specific challenges associated with building-scale non-potable water systems.

The Non-Potable Water Use Project produced a [guidebook](#) and [companion document](#) that provides guidance to those within the existing regional regulatory framework who are considering or implementing a building-scale non-potable water system.

Metro Vancouver will continue to explore non-potable water opportunities during the upcoming phases of the Drinking Water Management Plan update.

As part of the Drinking Water Management Plan update, Metro Vancouver is focused on advancing region-wide water conservation, recognizing that successful water conservation across the region is necessary for the sustainable delivery of high-quality drinking water to the region's growing population.

In 2021, Metro Vancouver updated its [Drinking Water Conservation Plan](#) (DWCP), which sets the regional watering restrictions. Stage 1 restrictions under the DWCP, which are activated at the start of the high demand season, are one of the strictest in Canada.

Metro Vancouver will continue to support water metering as a utility best management practice and encourages member jurisdictions in the region to move towards universal water metering. Generally, all industrial, commercial, and institutional water users are now metered in Metro Vancouver.

Water quality

Ensure robust testing and treatment to provide high quality drinking water

Water quality is captured in the goal of providing **high-quality drinking water**.

Metro Vancouver conducts daily tests on our drinking water— more than 166,000 tests were completed in 2023. Results are public and found in annual Water Quality Control reports. The [Water Quality and Testing](#) webpage offers data and answers to common questions about drinking water quality.

Other concerns and ideas raised include:

- The region's high per capita drinking water demand
- Low downstream water flow due to dam infrastructure interrupting salmon migration patterns
- Operational concerns related to low-pressure volume impacting homes, plumbing fixtures, and hot water tanks
- Suggestion to revise the vision to include social and environmental responsibility

It was also emphasized that water is and always has been important to the history, culture, and well-being of First Nations. Listening, sharing, and talking together have created opportunities for reflection and awareness that will continue to inform Metro Vancouver's work beyond the Drinking Water Management Plan update.

7. What's Next

Staff will continue to incorporate, where possible, First Nations' unique interests and priorities into the updated plan. Metro Vancouver appreciates the knowledge, expertise, and perspectives shared by each First Nation that participated in Phase 1.

In the second phase of engagement, First Nations will be invited to provide input in the plan's strategies and actions.

Contact Us

Metro Vancouver Information Centre: 604-432-6200
(Monday to Friday from 8:00 am to 4:30 pm)

Email: dwmp@metrovancover.org
(Please include, "*Drinking Water Management Plan Update*" in the subject line)

Website: metrovancover.org and search "Drinking Water Management Plan Update"

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Drinking Water Management Plan Update

Phase 1: Public Engagement Summary Report



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Seymour Reservoir During Fall 2022

1. About the Drinking Water Management Plan

High quality drinking water is essential for human life and a healthy environment. By 2040, approximately four million residents will rely on Metro Vancouver’s high-quality drinking water supply. Using water wisely now will help us ensure we have enough for future generations.

Metro Vancouver is updating its Drinking Water Management Plan to establish the strategic direction for the region’s drinking water utility over the next 10 years. The Drinking Water Management Plan sets priorities for drinking water initiatives such as, managing watersheds as natural assets, advancing drinking water conservation and metering, and preparing for the impacts of climate change.

The plan sets out goals, strategies, and actions for Metro Vancouver and its member jurisdictions to help ensure the delivery of high-quality drinking water, the sustainable use of water, and the efficient supply of water.

Since the last plan update in 2011, the Metro Vancouver region has been proactively addressing population growth, seismic events, and climate change. These efforts have focused on ensuring we can adapt and manage the supply and demand for drinking water in the face of these changes. By updating this plan, Metro Vancouver and its members can realign priorities and prepare to address current and upcoming challenges.

The updated Drinking Water Management Plan will:

- Establish goals, strategies, and actions to ensure Metro Vancouver can continue to supply high-quality drinking water in the face of population growth, seismic events, and climate change
- Outline how Metro Vancouver and its members plan to work together to align priorities and implement actions
- Incorporate First Nations’ interests and priorities
- Provide a strong rationale to support decision-making

2. Executive Summary

In this initial phase of public engagement, Metro Vancouver sought input from the public and interest holders to provide feedback on the draft vision, guiding principles, and goals of the Drinking Water Management Plan update. This phase of engagement invited public participation through two online webinars (31 attendees) and an online survey (200+ respondents) open from April 26 to July 26, 2024. Feedback was also received at several public events held across the region. Metro Vancouver also engaged separately with First Nations to understand their unique interests and priorities for the plan.

The majority of public engagement feedback was received from online survey participants. Overall, the draft goals and guiding principles reflected the concerns and interests of engagement participants. Most respondents agreed that all draft guiding principles were important. Nearly 90% of respondents shared strong agreement with the principle of valuing water as a precious resource that must be conserved and ensuring that the drinking water system is resilient to changing environmental conditions. Most survey participants also feel that all five draft goals are important to them. Survey respondents valued the goal of having high-quality drinking water available during times of extreme weather the most (87%).

Engagement participants also offered additional comments and ideas for consideration. Key themes that emerged during the first phase of engagement include:

- **Managing water for future generations** – ensuring sufficient drinking water storage capacity to meet future demand

- **Conservation** – inspiring water stewardship through public education and awareness and developing guidelines and offering tools for water reuse and recycling. As well as implementing water metering to improve leak detection and introduce equitable billing for water use
- **Planning and future-proofing infrastructure** – increasing resiliency of infrastructure through robust asset management, upgrades, and repairs to aging infrastructure; increasing transparency and financial efficiency when planning and implementing major capital projects; building and maintaining infrastructure and diversifying our water sources to manage the demands of a rapidly growing region
- **Collaboration** – bringing municipalities and organizations together to collaborate on drinking water management across the region
- **Environment** – preserving and improving the health and well-being of ecosystems
- **Water quality and security** – guaranteeing the quality and security of our drinking water supply, even in the event of a natural disaster or extreme weather

Ideas and priorities shared by respondents during this phase of engagement, along with advice from technical experts, will be incorporated into refining the draft goals and guiding principles. Feedback will also inform the plan's strategies, actions, and performance measures.

3. About the Engagement Process

There will be three phases of engagement in for the Drinking Water Management Plan update.

The first phase of engagement took place between April 26 and July 26, 2024. Member jurisdictions, the public, businesses, and other interest holders were asked about their values, interests, and priorities for managing drinking water in our region, now and in the future. During this time, Metro Vancouver held two

online webinars, four public events, and hosted an online survey. This report summarizes what we heard and how feedback will inform the next engagement phase, where we will ask for input about the plan’s strategies and actions.

Phases 2 and 3 of engagement will involve developing strategies and actions, and finalizing the plan.



THE TABLE BELOW SUMMARIZES PHASE 1 ENGAGEMENT ACTIVITIES INCLUDING INTENDED AUDIENCE(S).

ACTIVITY	AUDIENCE	TIMING	MEDIUM
Public events and pop-ups: City of Surrey Party for the Planet, 100th Anniversary Celebration of the Greater Vancouver Water District	Public	April to July 2024	In-person
Youth and Education Advisory Panel presentation	Youth and Education Advisory Panel members	April 30, 2024	In-person
Public webinars	Public, member jurisdictions, industry and business associations	June 18 and June 25, 2024	Virtual
Online survey	Public	April to July 2024	Virtual

4. Engagement Promotion

Opportunities to provide feedback about the Drinking Water Management Plan update were promoted in various ways. The following section provides an overview of promotional activities.

Website

A dedicated project webpage offered information about the Drinking Water Management Plan update. Visitors were invited to engage on the draft goals and guiding principles. The engagement opportunity was also featured on the Metro Vancouver website home page and posted on the featured initiatives section.

Social Media

The engagement opportunity was promoted on social media via Instagram, X (formerly Twitter), and Facebook. The social media strategy was implemented through a series of organic and paid posts to build awareness of the project, encourage feedback, and social sharing. Many respondents (34%) heard about the survey on social media.

Information Card Distribution

An information card in the form of a bookmark was distributed at public events across the region between April 26 and July 26, 2024. The bookmark was available at the City of Surrey's Party for the Planet, the 100th Anniversary Celebration of the Greater Vancouver Water District, Water Wagon events, watershed tours, and at various regional events.

E-newsletters

The engagement opportunity was highlighted in e-newsletters to Metro Vancouver Water Services database subscribers and sent to partner associations such as the BC Water and Waste Association. The engagement was featured in the June editions of the Metro Vancouver Update newsletter, the Metro Vancouver Regional Update newsletter, and the BC Water and Waste Association (BCWWA) *Waterline* newsletter.

Posters

Posters were put up in water supply areas that are accessible to the public (Lower Seymour Conservation Reserve and Capilano River Regional Park). They were also shared at park kiosks.

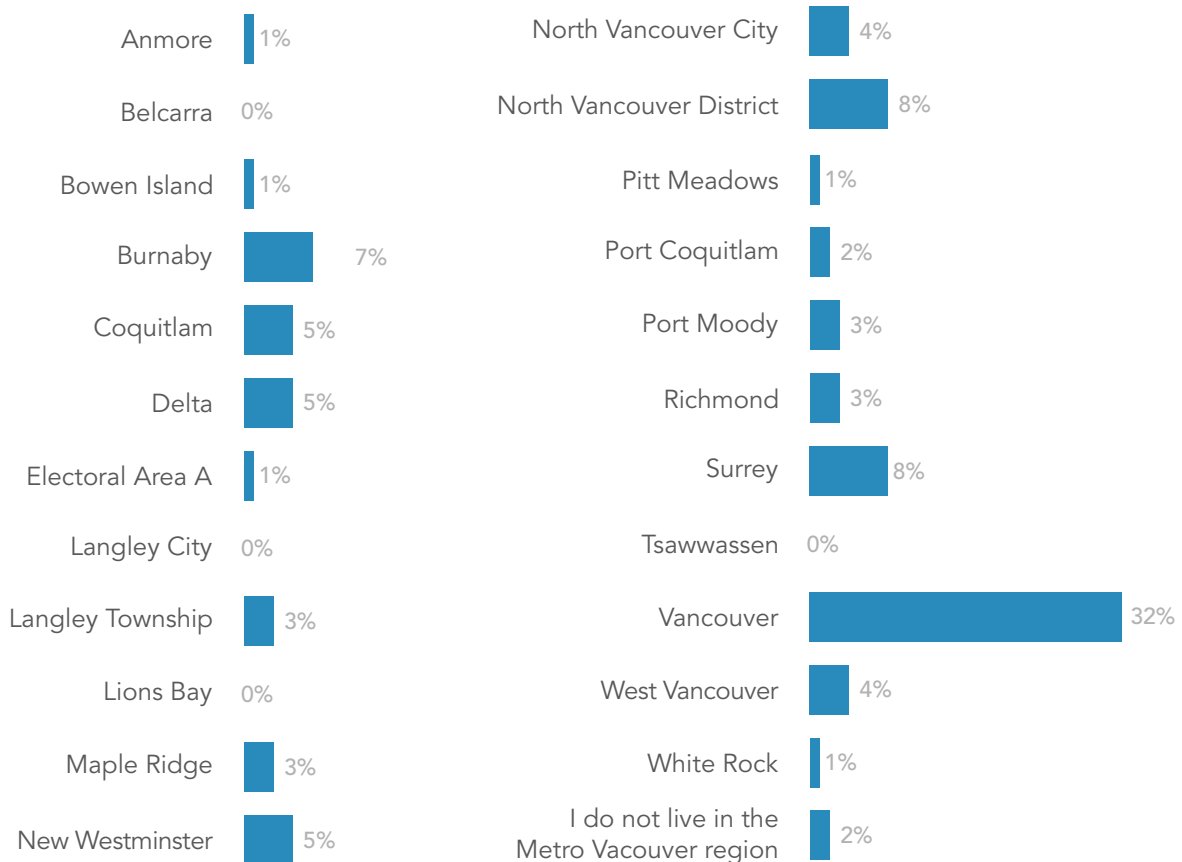
Print Ads

Print ads ran in the Surrey Now Leader, North Delta Reporter, and North Shore News.

ENGAGEMENT OPPORTUNITIES WERE PROMOTED IN THE FOLLOWING WAYS:

OUTREACH	
<ul style="list-style-type: none"> • 4 in-person and online public events 	<ul style="list-style-type: none"> • 78 posters and signs at water infrastructure sites and regional parks
<ul style="list-style-type: none"> • 4 e-newsletters sent to 250 subscribers of the Drinking Water Plan update mailing list and Metro Vancouver Water Services database 	<ul style="list-style-type: none"> • 21 social media posts (organic and paid) on Facebook, Instagram, and Twitter • 1,920 link clicks, and 274 reactions, comments, shares, and saves
<ul style="list-style-type: none"> • 250 survey invitation bookmarks distributed at regional events 	<ul style="list-style-type: none"> • 3 print media ads
<ul style="list-style-type: none"> • 1 article sent to more than 3,900 subscribers of the Metro Vancouver Newsletter 	<ul style="list-style-type: none"> • 2,226 visits to the project webpage

Respondent Locations



5. Engagement Participation

The graphic and table below outline the participation in each of the engagement opportunities.

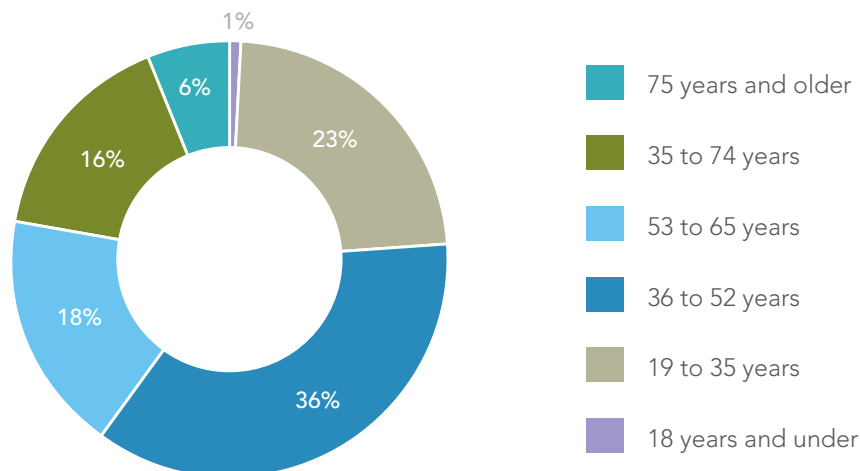
ENGAGEMENT PARTICIPATION
<ul style="list-style-type: none"> • 331 page visits to Phase 1 engagement survey • 215 survey responses with more than 6,200 pieces of feedback collected
<ul style="list-style-type: none"> • 250 people subscribed to the project mailing list
<ul style="list-style-type: none"> • 31 participants at two webinars
<ul style="list-style-type: none"> • 20 attendees at the Youth and Education Advisory Panel presentation

A total of 31 participants joined the webinars on June 18 and June 25, 2024 to learn about the draft goals and guiding principles for the Drinking Water Management Plan update and provide feedback. The Youth and Education Advisory Panel presentation on April 30 was attended by 20 participants. At each meeting, representatives from Water Services shared information about the Metro Vancouver drinking water system, the challenges facing drinking water in our region, and the update of the Drinking Water Management Plan. Participants were invited to share

their feedback and priorities for the draft goals and guiding principles, and Metro Vancouver staff answered questions from those in attendance.

During the online engagement period, a total of 215 survey participants from across the region completed the questionnaire. A total of 6,224 responses and comments were captured. Most respondents were from Vancouver, Surrey, and District of North Vancouver. The majority of respondents fell between the ages of 36 to 52 years old.

What is your age?



6. Engagement Feedback

The following sections summarize the feedback received during webinars, the Youth and Education Advisory Panel (YEAP), and the online survey. The majority of feedback received about the Drinking Water Management Plan update was gathered in the questionnaire.

Webinar feedback

Priorities for the future of our drinking water

Webinar and YEAP panel participants were invited to share their priorities for the future of our drinking water.

Webinar participants commented about ensuring equity in access to and distribution of drinking water. Participants also highlighted the need to conserve drinking water and increase public education about water conservation. Webinar attendees also recommended Metro Vancouver work collaboratively with other organizations and individuals with an interest in drinking water management. Suggestions for collaborations included local First Nations, public health professionals, and municipal staff.

Youth and Education Advisory Panel Feedback

YEAP attendees highlighted the need for continuous equitable access to drinking water and prioritizing drinking water for human consumption over non-potable purposes. Responses included suggestions on ways Metro Vancouver can promote water collection and recycling for non-potable uses. Some attendees suggested imposing increased restrictions on using drinking water for purposes such as washing cars and watering lawns. YEAP participants were also concerned about the sustainability of our drinking water sources and supply, particularly in changing climate conditions. They advocated using technology and innovation to make conservation simple and intuitive for residents and businesses. Other concerns raised included over-expansion of infrastructure, protecting ecosystems, and drinking water quality.

Survey Feedback

The survey asked 22 questions related to the Drinking Water Management Plan update and included for respondents to provide additional comments.

Challenges to drinking water management in the region

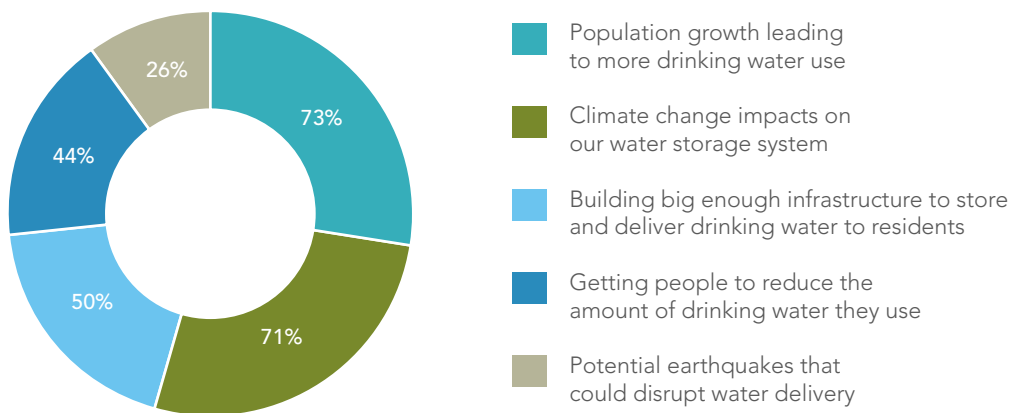
Survey respondents indicated that the three most critical challenges facing drinking water management are population growth leading to more drinking water use, climate change impacts on our water storage system, and building big enough infrastructure to store and deliver drinking water to residents.

Respondents were invited to contribute additional challenges Metro Vancouver may face in managing drinking water over the next 10 years. The following concerns were raised by several respondents:

- Widespread use of drinking water for non-potable purposes, particularly lawn watering and industrial uses
- Impacts of the drinking water system and infrastructure on ecosystems and the natural environment
- Educating the public, particularly young people and newcomers to Canada, about water conservation in our region and offering practical advice for sustainable water use
- High costs associated with building and maintaining infrastructure
- Robust asset management planning to upgrade and replace aging infrastructure
- Water quality issues; including pollution, contaminants, and microplastics
- Impacts to the whole region (beyond the drinking water system) caused by droughts, wildfires, and other extreme weather events

- Developing stronger relationships with First Nations and integrating an understanding of traditional land management practices at drinking water supply areas
- Collecting data about water usage to inform equitable billing and provide rate incentives that encourage conservation
- Build more drinking water infrastructure and explore other water source options to meet the demand of population growth

What do you believe are the most critical challenges we face regarding drinking water management? (select top three that apply)

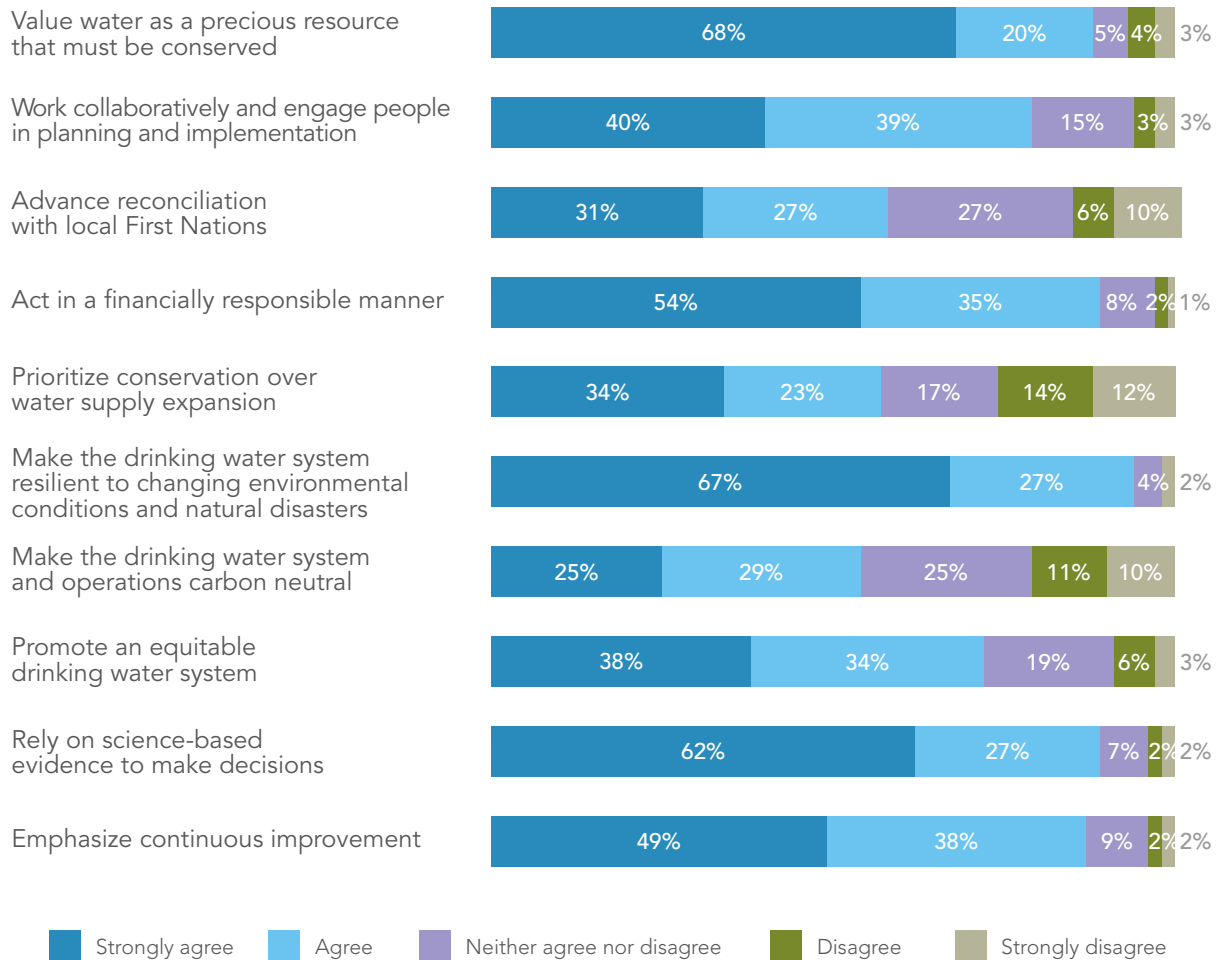


Draft Guiding Principles

To guide decision-making at every step of the plan update, Metro Vancouver developed a list of draft guiding principles:

<p>Value water as a precious resource that must be conserved</p>	<p>Work collaboratively and engage people in planning and implementation</p>	<p>Advance reconciliation with local First Nations</p>	<p>Act in a financially responsible manner</p>	<p>Prioritize conservation over water supply expansion</p>
<p>Make the drinking water system resilient to changing environmental conditions and natural disasters</p>	<p>Make the drinking water system and operations carbon neutral</p>	<p>Promote an equitable drinking water system</p>	<p>Rely on science-based evidence to make decisions</p>	<p>Emphasize continuous improvement</p>

For each draft guiding principle below, to what extent does it reflect your values for drinking water management?



Survey respondents were asked how well each of the 10 draft guiding principles reflected their values for drinking water management. The principle of valuing water as a precious resource that must be conserved received the strongest level of agreement (68%). This was followed by the principle of making the drinking water system resilient to changing environmental conditions and natural disasters (67%) and relying on science-based evidence to make decisions (62%). While there was comparatively less support for the other guiding principles, more people agreed with all 10 principles than disagreed.

Many respondents suggested that although conservation is important, building more water supply and storage areas will be necessary to meet the needs of our rapidly growing region. However, other respondents expressed that conservation efforts should take precedence over building new infrastructure.

When invited to contribute additional guiding principles that Metro Vancouver should consider, most respondents built upon the existing draft principles. For






example, some survey participants expressed support for increasing water supply through infrastructure development and diversifying drinking water sources.

Many responses to this question focused on reducing non-potable use of drinking water. Survey participants offered diverse suggestions for managing drinking water, including:

- Implement additional restrictions and enforcement for excessive non-potable use of drinking water
- Increase public education about how our drinking water is used
- Introduce financial penalties and increased rates for excessive water usage
- Develop viable alternatives to drinking water for non-potable water use. Suggestions included rainwater collection, greywater and stormwater reuse, and providing residential options for water storage and collection.

Draft Goals

The Drinking Water Management Plan update is guided by a vision to deliver high-quality drinking water in a reliable and environmentally sensitive manner to meet the needs of a growing region. To realize this vision, Metro Vancouver has developed a set of draft goals.

 <p>Goal 1 Provide high-quality drinking water</p>	 <p>Goal 2 Provide uninterrupted drinking water service</p>	 <p>Goal 3 Manage the drinking water system in a cost-effective way</p>	 <p>Goal 4 Manage water to protect and enhance the environment for all</p>	 <p>Goal 5 Develop and attract a skilled workforce to manage drinking water region-wide</p>
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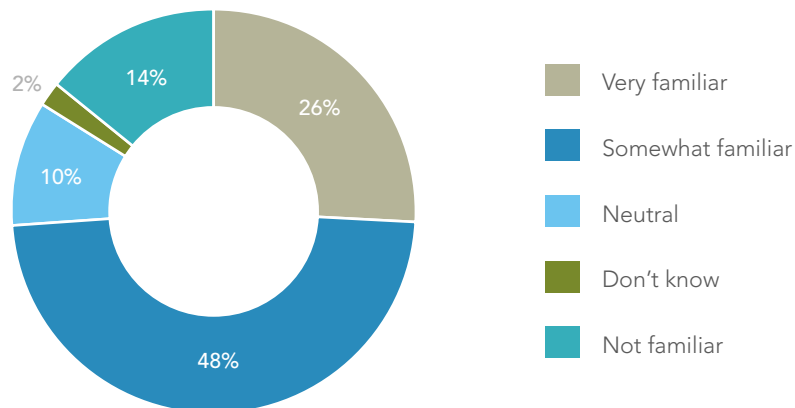
Goal 1: Provide high-quality drinking water

In relation to Goal 1, respondents were asked about their familiarity with Metro Vancouver's drinking water system. Many survey respondents had prior background knowledge, with 73% of participants indicating they were very or somewhat familiar with the drinking water system infrastructure.

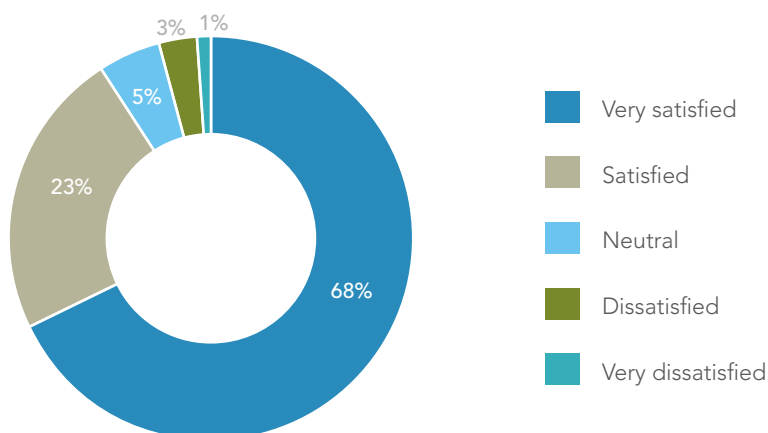
Most people (91%) said they were satisfied or very satisfied with the quality of drinking water in Metro Vancouver. When asked for suggestions for improvement to drinking water quality, many people offered positive comments about the high quality of

water in our region. Some respondents requested the addition of fluoride and a reduction in the levels of chlorine in the water supply. Several people expressed concern about wasting high-quality drinking water for non-potable purposes. There were also several requests for transparency around the makeup of Metro Vancouver's water, including information about levels of microplastics and other contaminants. Linked to this, others highlighted the importance of protecting water sources and supply areas, and preserving the diverse ecosystems in our watersheds to maintain water quality.

How familiar are you with Metro Vancouver's water system infrastructure?



How satisfied are you with the quality of drinking water provided by Metro Vancouver?



Goal 2: Provide uninterrupted drinking water service

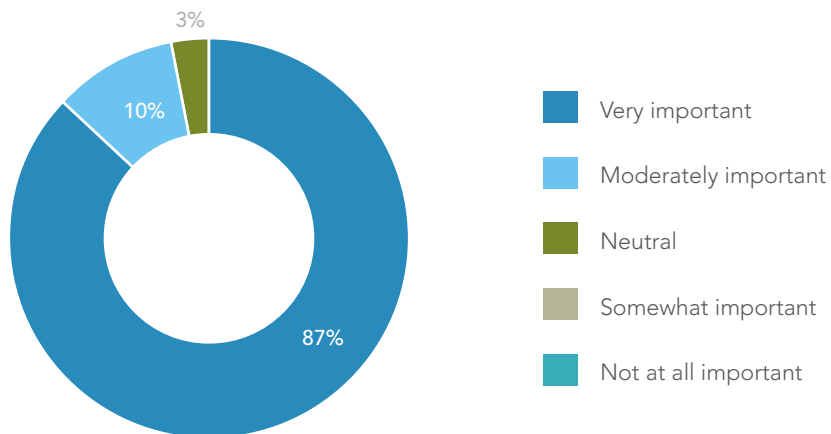
In relation to providing uninterrupted drinking water service, 97% of survey respondents said that the availability of high-quality drinking water during extreme weather was very important or moderately important to them.

Respondents were also asked whether they think Metro Vancouver's water system is resilient enough to withstand the impacts of climate change. This question highlighted an area of concern for many people, as only 7% of respondents said they thought our infrastructure was very resilient. However, some

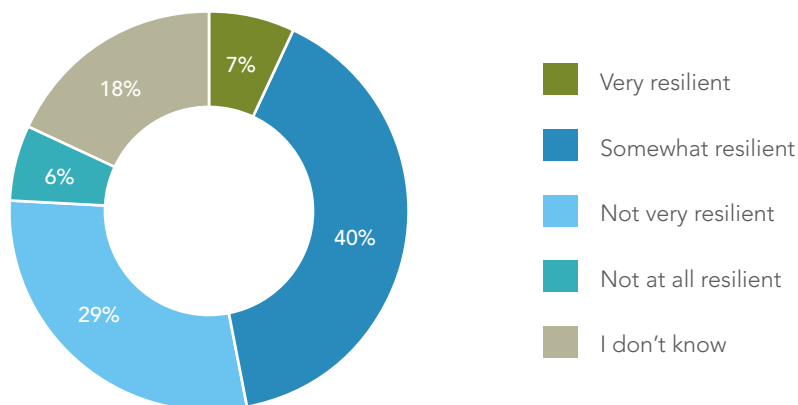
people also indicated they did not have sufficient information about the region's drinking water infrastructure to answer this question accurately.

Survey respondents were also invited to contribute additional circumstances they thought may compromise Metro Vancouver's ability to supply uninterrupted drinking water. While many responses were closely linked to climate change and extreme weather, others shared concerns related to water system security, water storage capacity, drinking contaminated wastewater, reduced snowpack, and aging infrastructure.

How important is it to you that high-quality drinking water is available even in times of extreme weather?



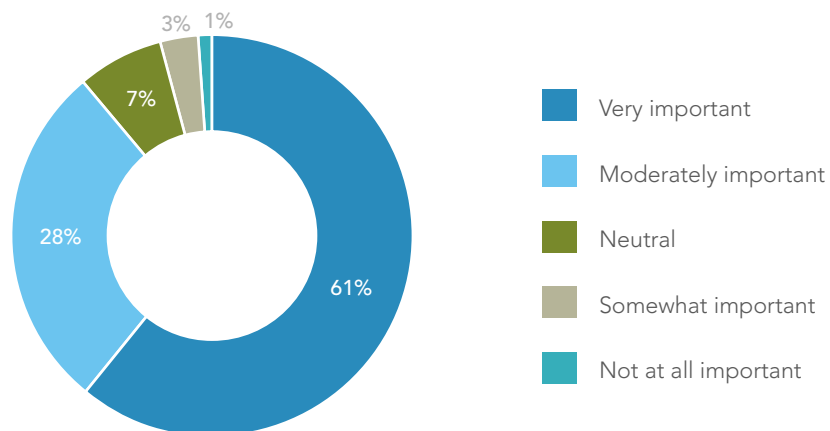
Do you think that Metro Vancouver's water system is resilient to withstand the impacts of climate change?



Goal 3: Manage the drinking water system in a cost-effective way

Many respondents agreed that Goal 3 was important, with 89% of survey participants indicating that cost-effective and efficient management of the water system is important to them.

How important do you think it is for Metro Vancouver to manage the water system efficiently in a cost-effective way?



Many survey respondents contributed ideas for Metro Vancouver to strengthen conservation measures or think differently about how we use drinking water. Suggestions were offered around the following themes:

- **Restrictions and enforcement:** banning the use of drinking water for lawn watering, implementing clearer methods for reporting water restriction violations, increasing fines and monitoring violations, requiring permits for non-potable uses of drinking water, and extending summer watering restrictions
- **Water reuse:** introducing incentives for water reuse including rainwater capture, wastewater recycling, stormwater harnessing, and greywater systems
- **Demand management:** expanding reservoirs, using water supplies from other areas that have excess, targeting industries with high water usage, and increasing overall water conservation during the summer
- **Water-efficient landscaping:** encouraging efficient irrigation systems for home and commercial use, replacing grass with hardier native species, replacing lawns with pollinator-friendly and drought-tolerant plants
- **Water reuse and resource recovery:** investigating the reuse of residuals from water treatment plants as fertilizer for gardens and lawns
- **Increasing public information and education:** integrating water conservation education in school curriculums, helping newcomers learn about water in our region, providing simple and effective ways for people to conserve water, offering more education about our water and where it comes from, and information about how water conservation helps reduce capital infrastructure costs

- **Rate incentives:** increasing costs for high water consumers and implementing incentivized rates that prioritize essential drinking and hygiene and charge more for discretionary usage
- **Metering:** responses demonstrated support for implementing universal metering. Suggestions linked to this included imposing restrictions on municipalities that have not introduced metering, offering residents transparent data so they recognize the true cost of water, using data from metering to reduce leaks and waste, and recognizing the long-term benefits of metering and appropriate data-based pricing
- **Technology and appliances:** introducing rebates for purchasing water-saving devices and efficient appliances, investing in advanced leak detection technologies, and encouraging residents to retrofit inefficient appliances
- **Water supply expansion:** prioritizing investment in increased capacity for water supply and storage, and exploring additional drinking water sources

In addition to contributing the ideas above, respondents also provided ideas related to cost-effective drinking water provision, such as:

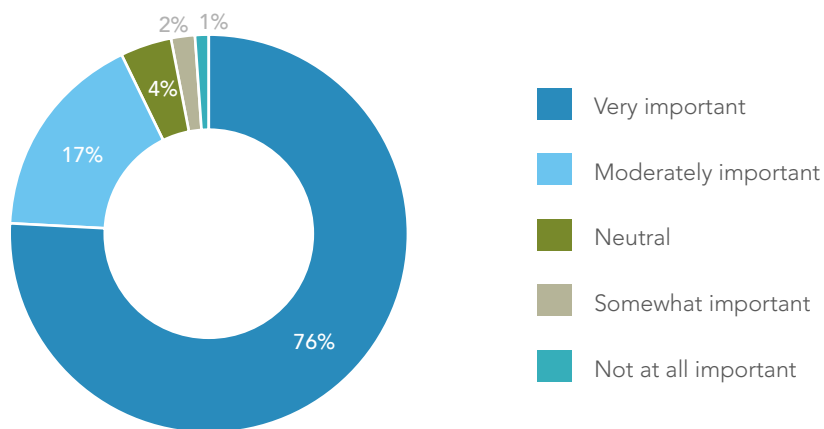
- Reducing infrastructure costs by exploring alternate water sources for communities further from the current reservoirs, increasing storage capacity to harness excess water during the rainy seasons, and developing robust asset management practices
- Using science and data-driven innovation to improve efficiencies, detect and fix leaks, and investigate new treatment technologies
- Improving Metro Vancouver’s fiscal responsibility by offering increased transparency about spending and decision-making, holding contractors accountable for project management issues, revising the procurement process, and working with industry partners to secure cost-effective long-term material contracts

Respondents identified other challenges to cost-effectiveness, including urban sprawl and inconsistent population density across the region, adaptability to fluctuations in weather patterns due to climate change, and ensuring equity in the distribution and pricing of drinking water.

Goal 4: Manage water to protect and enhance the environment for all

Most survey respondents (76%) agreed that this goal was important, with most identifying it very important to continuing to protect and enhance the environment.

How important is it to you that Metro Vancouver continue to protect and enhance the environment?



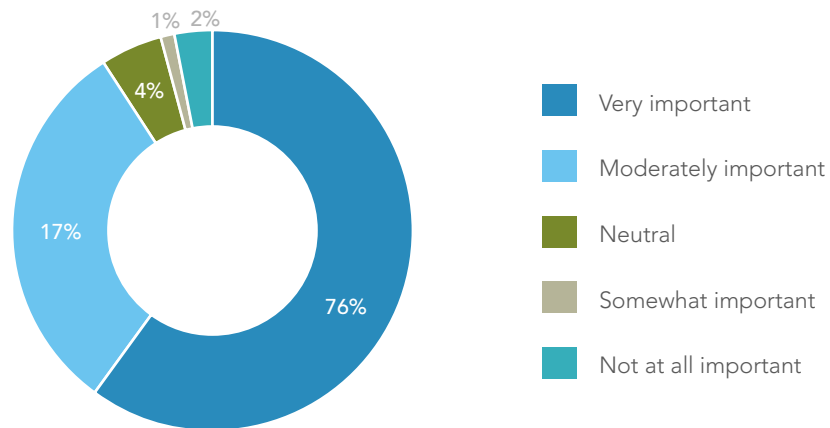
Respondents also offered suggestions about what Metro Vancouver should consider when it comes to managing water to protect and enhance the environment. Ideas include:

- Learning from partnerships, both local and international, including other countries that have developed successful drinking water management strategies
- Using technology and data to measure the impact of the drinking water system on the natural environment
- Increasing public information and education to encourage shared responsibility for protecting the watersheds and the region's natural environment
- Building relationships with local First Nations to develop ways of working that honour traditional knowledge and practices
- Listening to new ideas and suggestions for ecological preservation, including from grassroots environmental organizations and community advocates
- Encouraging biodiversity through wetland conservation and restoration and by planting local species
- Using vegetation and forest management practices to stabilize slopes in water supply areas, minimize landslides and reduce the risk of wildfires
- Employing planning methods that consider the water needs of other plants and animals in our region
- Maintaining and enforcing restrictions to human activity, development, and access in the watersheds and in riparian zones to minimize impact on wildlife and ecosystems

Goal 5: Develop and attract a skilled workforce to manage drinking water

Most respondents (60%) agreed that developing and attracting a skilled workforce to manage drinking water is very important.

How important is it to you that Metro Vancouver develop and attract a skilled workforce to manage drinking water?



Respondents offered a range of suggestions for Metro Vancouver to develop and attract a skilled workforce, which include:

- Increasing public information about the roles available at Metro Vancouver and opportunities available in emerging areas
- Partnering with local education institutions to offer programs and develop employment pathways for graduates, such as internships and work experience opportunities
- Engaging and inspiring local youth through targeted programming, such as watershed or facility tours
- Offering subsidized or affordable housing options and adequate compensation in recognition of the high cost of living in the region
- Promoting a positive workplace culture to increase staff retention, such as encouraging work-life balance, and offering opportunities for professional development and career advancement
- Reviewing hiring practices to ensure recruitment is based on competence, experience, and suitability for the role
- Revising procurement policies to support local First Nations in accessing procurement opportunities
- Ensuring staff salaries are competitive and comparable to similar opportunities in the region
- Providing on-the-job staff training to develop the existing workforce
- Targeting recruitment to attract professionals looking to move away from working in less sustainable industries such as oil and gas, mining, and logging
- Attracting local talent and providing opportunities for people who live in the region
- Finding ways to incorporate fresh perspectives, including hiring industry experts as consultants and working alongside Immigration, Refugees and Citizenship Canada to develop immigration policies that attract skilled workers from other countries

While many suggestions were shared, other respondents mentioned that they did not feel equipped with enough information about Metro Vancouver's workforce development practices to accurately respond to this goal.

7. What We Heard and How We Are Responding

The following priorities were raised frequently by survey respondents, and at webinars and presentations during the Phase 1 public engagement period.

WHAT WE HEARD	HOW WE'RE RESPONDING
<p>Conservation and education</p> <p>Encourage residents and businesses to implement water-friendly landscaping</p> <p>Develop guidelines and implementation materials for expanded water reuse (e.g., rainwater harvesting and greywater)</p> <p>Inspire water stewardship through public education and awareness</p> <p>Implement water metering to improve leak detection and introduce equitable billing for water use</p>	<p>Water conservation will be incorporated in the guiding principle of valuing water as a precious resource that must be conserved.</p> <p>Additionally, Metro Vancouver will continue to implement existing short and long-term plans focused on drinking water conservation, and integrate water conservation into the updated Drinking Water Management Plan.</p> <p>We will continue to offer a variety of programs, guides, and educational campaigns to promote conservation, including:</p> <ul style="list-style-type: none"> • Promotion of water efficient lawns and landscapes on Metro Vancouver's website by offering practical tips and resources. • The Grow Green Guide which offers practical tips and easy-to-implement practices for eco-friendly and sustainable lawn and garden maintenance. • The Non-Potable Water Use Project, Metro Vancouver collaborated with interested industry parties to identify and investigate solutions to region-specific challenges associated with building-scale non-potable water systems. The project culminated in a guidebook and companion document. • Educational programs for children and youth including K-12 resources, workshops, and leadership opportunities. <p>Metro Vancouver will continue to support water metering as a utility best management practice and encourages member jurisdictions in the region to move towards universal water metering. Generally, all industrial, commercial, and institutional water users are now metered in Metro Vancouver.</p>
<p>Managing water for future generations</p> <p>Ensure drinking water storage capacity to meet future demand</p>	<p>Managing water for future generations will be incorporated in the goal of providing high-quality drinking water.</p> <p>Metro Vancouver will continue to take a two-pronged approach to planning for the future: promote water conservation through various plans and campaigns and ensure adequate water supply and appropriate infrastructure are in place to meet future drinking water demands.</p> <p>Metro Vancouver will continue work to double its capacity to draw water from Coquitlam Lake, the largest of the region's three drinking water sources, through the Coquitlam Lake Water Supply Project. Beyond the Coquitlam upgrade, we are well positioned to access water from existing water supply area in sustainable and cost-effective ways.</p>

<p>Planning and future-proofing infrastructure</p> <p>Increase transparency and financial efficiency when planning and implementing major capital projects</p> <p>Increase resiliency of infrastructure through robust asset management, and upgrades and repairs to aging infrastructure.</p>	<p>Planning and future-proofing infrastructure will be incorporated in the goals and guiding principles of emphasizing continuous improvements, acting in a financially responsible manner, and developing and attracting a skilled workforce to manage drinking water region-wide.</p> <p>The plan will reference Metro Vancouver’s process for inspecting, monitoring, maintaining, and upgrading its system to minimize impact and ensure that the region consistently receives high-quality drinking water.</p> <p>Metro Vancouver will continue to make improvements to ensure Metro Vancouver residents continue to receive reliable, high-quality, essential services at a low cost.</p> <p>We will continue to progress measures to enhance how we manage and deliver projects, particularly those of the highest value, risk, and consequence. Significant measures taken since 2020 include the establishment of a Project Delivery Department as a centre of expertise for the organization, and a restructured Procurement and Real Estate Services Department, as well as enhanced project management and permitting processes.</p>
<p>Collaboration</p> <p>Position Metro Vancouver as a regional leader, bringing municipalities and other agencies together to collaborate on drinking water management across the region</p>	<p>Collaboration will be reflected in the guiding principle of working collaboratively and engage people in planning and implementation.</p> <p>Metro Vancouver is a partnership of 21 municipalities, one electoral area and one treaty First Nation that collaboratively plans for and delivers regional-scale services. Metro Vancouver will continue to work with its members on the Drinking Water Management Plan update to align priorities, work together to implement actions, and ensure that Metro Vancouver can continue to supply high-quality drinking water in the face of changes such as climate change, population growth, and seismic events.</p>
<p>Environmental considerations</p> <p>Preserve and improve the health and well-being of ecosystems and the natural environment</p>	<p>Environmental considerations will be incorporated in the goal of managing water to protect and enhance the environment for all.</p> <p>We will continue to protect our water supply areas from human access, urban development, and human-caused disturbances to keep our water clean. Metro Vancouver’s reservoirs and water supply areas will remain closed to the public for protection from pollution, erosion, fire, and other hazards, except for a limited number of registered tours.</p>

Water quality and security

Guarantee the quality and security of our drinking water supply, even in the event of a natural disaster or extreme weather

Water quality and security will be reflected in the principles and goals, specifically **making the drinking water system resilient to changing environmental conditions and natural disasters and providing high-quality drinking water.**

Metro Vancouver will continue to take a multi-barrier approach to ensuring high-quality water. This will include protected watersheds, water treatment, and maintenance of water quality in the system. A monitoring program will remain in place across the entire system from the treatment facilities, through the distribution system to residents across the region.

Metro Vancouver will continue to conduct daily tests on our drinking water — more than 166,000 tests were completed in 2023. Results will continue to be public and published in annual Water Quality Control reports. The [Water Quality and Testing](#) webpage will continue to share data and answers to common questions about drinking water quality.

The updated plan will reflect the work that Metro Vancouver has done to evaluate future water demands and supplies under various planning scenarios, including population growth, climate change, local water supplies, and other factors. An adaptive management process will be developed to allow us to meet challenges and increase system resiliency.

8. How Feedback Will Be Used

Thank you to everyone who participated in the initial phase of engagement. Your feedback will help to refine the Drinking Water Management Plan's draft goals and guiding principles.

9. Next Steps

Metro Vancouver will continue its work on the Drinking Water Management Plan update. In the next phase, staff will be developing strategies, actions, and performance measures. The third phase of engagement will focus on revisions and finalizing the plan. All future engagement opportunities and project highlights will be posted on the project website.

Contact Us

Metro Vancouver Information Centre: 604-432-6200
(Monday to Friday from 8:00 am to 4:30 pm)

Email: dwmp@metrovancover.org
(Please include, "Drinking Water Management Plan Update" in the subject line)

Website: metrovancover.org and search "Drinking Water Management Plan Update"

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To: Water Committee

From: George Kavouras, Director, Procurement, Procurement & Real Estate Services
Bob Cheng, Director, Major Projects, Project Delivery

Date: September 10, 2024 Meeting Date: October 2, 2024

Subject: **Award of RFP 24-006A Component 1 – Program Management Services for the Coquitlam Lake Water Supply Project (CLWSP) and Consulting Engineering Services for the Treatment Pilot Testing Program**

RECOMMENDATION

That the GVWD Board:

- a) approve the award of RFP 24-006A Component 1 – Program Management Services for the CLWSP and Consulting Engineering Services for the Treatment Pilot Testing Program, in the amount of up to \$74,512,561 (exclusive of taxes) to Jacobs Consultancy Canada Inc., for an initial term of six years, with options for two additional two-year terms, subject to final review by the Commissioner; and
 - b) authorize the General Manager, Procurement and Real Estate to execute the required documentation once the General Manager, Procurement and Real Estate is satisfied that the award should proceed.
-

EXECUTIVE SUMMARY

Jacobs Consultancy Canada Inc.'s proposal ranked highest overall, provided the lowest cost, had the highest technical score, and demonstrated best value overall for Metro Vancouver.

Metro Vancouver requires Program Management and Consulting Engineering Services to deliver the next increment of regional water supply through the Coquitlam Lake Water Supply Project, which includes a new intake, tunnel and filtration treatment plant. The project will enable the doubling of capacity from the Coquitlam source, which will address growing regional water demand to the later part of the century, and also prepare for the anticipated impacts of climate change. The consultant will be integrated with the Metro Vancouver team to provide industry expertise to develop and execute work plans required to successfully deliver this critical infrastructure.

RFP 24-006A was issued on April 5, 2024 to the two prequalified respondents of RFQ No. 23-164 – Coquitlam Lake Water Supply Projects – Program Management Services. RFP 24-006A was executed in accordance with the terms and conditions of Metro Vancouver's Procurement Policy. The RFP 24-006A evaluation team considered the proposals received, and on that basis recommend that the GVWD Board award RFP 24-006A Component 1 – Program Management Services for the CLWSP and Consulting Engineering Services for the Treatment Pilot Testing Program to Jacobs Consultancy Canada Inc.

PURPOSE

Pursuant to the *GVWD Officers and Delegation Bylaw 247 (Bylaw)* and *Board Policy No. FN-031*, procurement contracts which exceed a value of \$10 million require the approval of the GVWD Board.

BACKGROUND

Metro Vancouver supplies water to over 2.8 million people and the population is expected to reach 4.2 million by 2050. This population growth, coupled with climate change impacts such as decreased snowpack and prolonged summer conditions, will place additional stress on the existing drinking water supply system. To meet these challenges, the Greater Vancouver Water District is planning the Coquitlam Lake Water Supply Project. This project includes a new intake, tunnel, and filtration treatment plant to enhance water withdrawal capacity from the Coquitlam Reservoir (See Attachments 1 and 2).

Metro Vancouver issued a Request for Proposal seeking program management and consulting engineering services to provide expertise in developing work plans to successfully deliver this critical infrastructure, ensuring the continued reliable delivery of high-quality drinking water to the growing region. The selected consultant will be integrated with the Corporation’s project management team, working together to oversee the development and implementation of the Coquitlam Lake Water Supply Project. The consultant will expand the Corporation’s capabilities by providing management and technical expertise and delivering a broad range of program management and technical services including the treatment pilot testing program.

PROCUREMENT SUMMARY

RFQ No. 23-164 was issued on November 1, 2023 to prequalify proponents to participate in RFP 24-006A. Three proponents responded to RFQ No. 23-164, of those, two were shortlisted and invited to respond to RFP 24-006A

RFP 24-006A Proposal Submissions:

Proponents	Price (excluding taxes)
Jacobs Consultancy Canada Inc.	\$62,163,579
Carollo Engineers Canada Ltd.	\$67,710,000

Metro Vancouver received two proposals. Both proposals submitted by the Proponents were deemed to be in compliance with the submission requirements. The compliant proposals were evaluated against Technical requirements (75 percent) and Commercial requirements (25 percent). Technical requirements were evaluated by Project Delivery Major Projects staff and Commercial requirements were evaluated by Procurement staff.

After a comprehensive and detailed evaluation of the proposals, the evaluation team concluded that the proposal submitted by Jacobs Consultancy Canada Inc. ranked highest overall, provided the lowest cost, had the highest technical score, and demonstrated best value overall for Metro

Vancouver. Jacobs Consultancy Canada Inc. demonstrated extensive experience with projects of similar scope and nature. Additionally, their proposed staff demonstrated extensive experience working on similar projects. Jacobs Consultancy Canada Inc. provided good detail and information to demonstrate their understanding of the scope which would be a direct benefit to Metro Vancouver, as well as providing a detail plan, well defined project methodology and schedule for the pilot testing.

Negotiations with Jacobs Canada Consultancy Inc. were completed on August 6, 2024 and the terms of the contract were agreed to and finalized. The agreed contract value is \$74,512,561. This is an increase of \$12,348,982. The increase is comprised for two components. First, the team negotiated piloting components in the amount of \$7,172,257. These piloting components will provide more robust pilot testing results which will reduce design risks and optimize costs. The additional piloting components will enable the evaluation of technologies that could make the water treatment plant site more compact, better inform the residuals management design, and optimize chemical and power use. Schedule risk is also mitigated because this critical information is obtained early in the project, reducing the potential for design and construction delays. Mitigating project delays results in substantial savings by avoiding cost escalation. Second, the team negotiated fee escalation in the amount of \$5,176,725. As per the RFP document all fees are held for the original two-year term of the contract with the additional years allowing for fee escalation based on future Consumer Price Index (CPI) adjustments. Actual fee escalation rates will be based on the actual CPI rates following the initial two-year period.

ALTERNATIVES

1. That the GVWD Board:
 - a) approve the award of RFP 24-006A Component 1 – Program Management Services for the CLWSP and Consulting Engineering Services for the Treatment Pilot Testing Program, in the amount of up to \$74,512,561 (exclusive of taxes) to Jacobs Consultancy Canada Inc., for an initial term of six years, with options for two additional two-year terms, subject to final review by the Commissioner; and
 - b) authorize the General Manager, Procurement and Real Estate Services to execute the required documentation once the General Manager, Procurement and Real Estate Services is satisfied that the award should proceed.
2. That the GVWD receive the report dated September 10, 2024, titled, Award of RFP 24-006A Component 1 – Program Management Services for the CLWSP and Consulting Engineering Services for the Treatment Pilot Testing Program for information and direct staff to report back with options for an alternate course of action

FINANCIAL IMPLICATIONS

A total approved project budget in the amount of \$160,700,000 is currently available for preliminary design, and there are sufficient funds remaining to accommodate the award of RFP No. 24-006A.

CONCLUSION

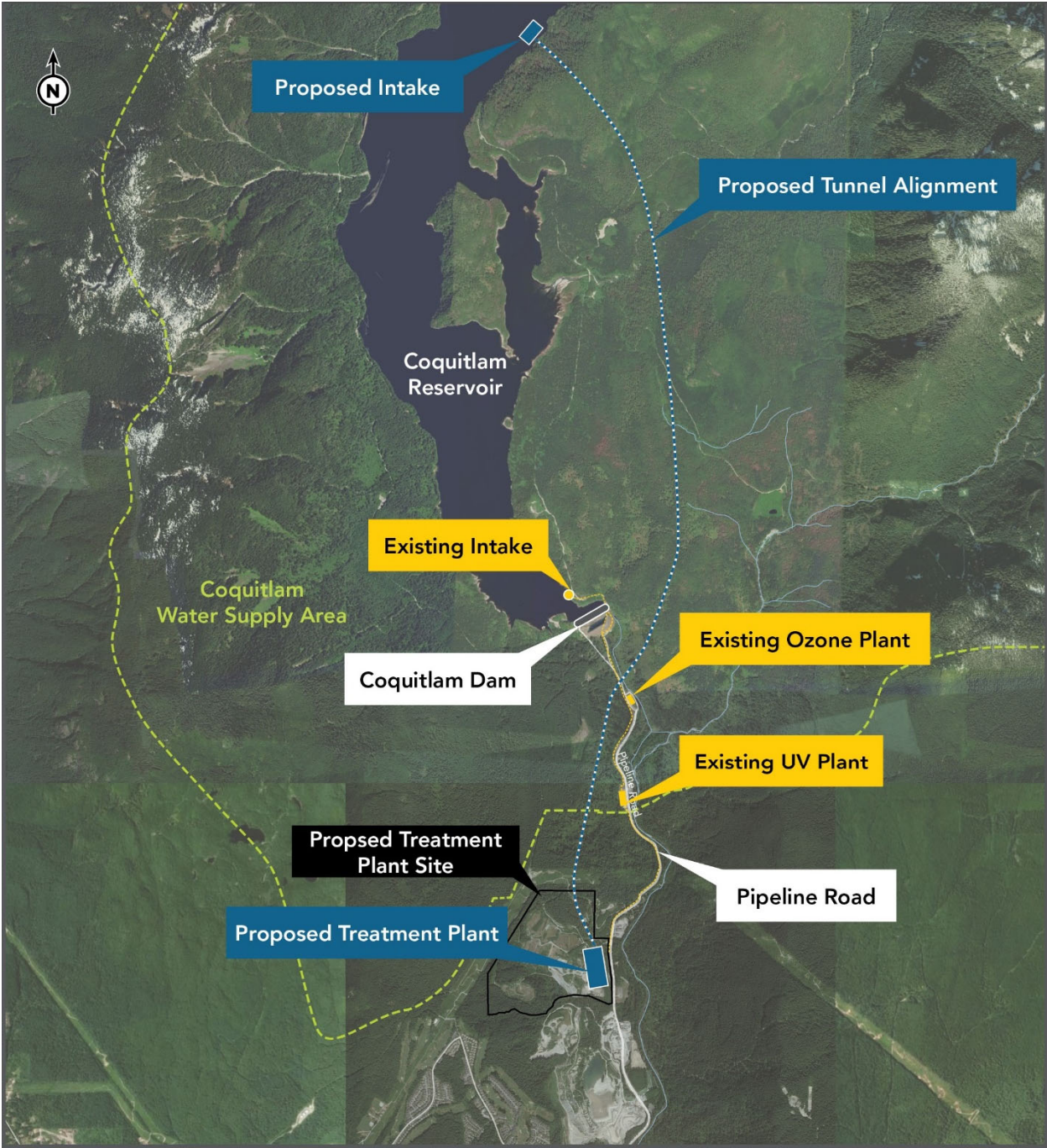
It is recommended that the GVWD Board approve the award of RFP 24-006A Component 1 – Program Management Services for the CLWSP and Consulting Engineering Services for the Treatment Pilot Testing Program, in the amount of up to \$74,512,561 (exclusive of taxes) to Jacobs Consultancy Canada Inc., subject to final review by the Commissioner; and authorize the General Manager, Procurement & Real Estate to execute the required documentation once the General Manager, Procurement & Real Estate is satisfied that the award should proceed.

ATTACHMENTS

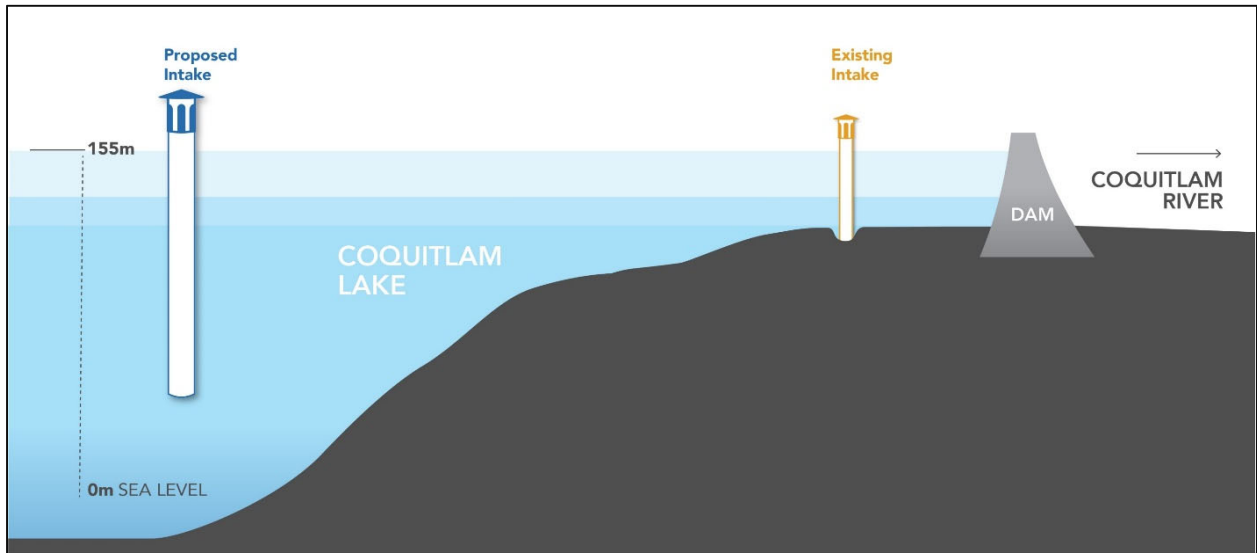
1. Coquitlam Lake Water Supply – Proposed Project Components
2. Coquitlam Lake Water Supply – Cross Section

631071

Coquitlam Lake Water Supply – Proposed Project Components



Coquitlam Lake Water Supply – Cross Section



To: Water Committee

From: George Kavouras, Director, Procurement, Procurement & Real Estate Services
Bob Cheng, Director, Major Projects, Project Delivery

Date: September 9, 2024 Meeting Date: October 2, 2024

Subject: **Award of RFP 24-006B Component 2 – Program Management and Consulting Engineering Services for Coquitlam Main No. 4 Project**

RECOMMENDATION

That the GVWD Board:

- a) approve the award of RFP 24-006B Component 2 – Program Management and Consulting Engineering Services for the Coquitlam Main No. 4 Project, in the amount of up to \$17,424,401 (exclusive of taxes) to CIMA Canada Inc., for an initial term of five years, with an option for one additional four-year term, subject to final review by the Commissioner; and
 - b) authorize the General Manager, Procurement and Real Estate to execute the required documentation once the General Manager, Procurement and Real Estate is satisfied that the award should proceed.
-

EXECUTIVE SUMMARY

CIMA Canada Inc.'s proposal ranked highest overall, provided the lowest cost, did not have the highest technical score, and demonstrated best value overall for Metro Vancouver.

Metro Vancouver requires Program Management and Consulting Engineering Services to deliver the Coquitlam Main No. 4 Project, a critical upgrade of Metro Vancouver's Coquitlam water transmission system. The project is being built in four sections with some sections being constructed concurrently. Additional resources are required to manage and coordinate the four sections to ensure efficient and timely completion of this critical regional water main.

RFP 24-006B was issued on April 5, 2024 to the two prequalified respondents of RFQ No. 23-164 – Coquitlam Lake Water Supply Projects – Program Management Services. RFP 24-006B was executed in accordance with the terms and conditions of Metro Vancouver's Procurement Policy. The RFP 24-006B evaluation team considered the proposals received, and on that basis recommend that the GVWD Board award RFP 24-006B Component 2 – Program Management and Consulting Engineering Services for Coquitlam Main No. 4 Project to CIMA Canada Inc.

PURPOSE

Pursuant to the *GVWD Officers and Delegation Bylaw 247 (Bylaw)* and *Board Policy No. FN-031*, procurement contracts which exceed a value of \$10 million require the approval of the GVWD Board.

BACKGROUND

The proposed Coquitlam Main No. 4 is a new 12 kilometre long water main that is required to optimize the conveyance capacity in Metro Vancouver’s Coquitlam supply system as well as provide additional capacity for the future expansion of the source under the Coquitlam Lake Water Supply Project. Coquitlam Main No. 4 is being delivered in four sections: Pipeline Road North, Robson to Guildford, City Centre Tunnel, and Cape Horn Sections (see Attachment 1), with some sections being constructed concurrently. Additional resources are required to manage and coordinate the four sections to ensure efficient and timely completion of this critical regional water main.

Metro Vancouver issued a Request for Proposal seeking to retain a consultant to provide program management services to support all sections of the Coquitlam Main No. 4 Project. The selected consultant will integrate with Metro Vancouver’s Project Delivery team, working together to oversee the development and implementation of the Coquitlam Main No.4 Project. The consultant will assist Metro Vancouver’s project delivery team by providing management and technical expertise while delivering a broad range of program management and technical services.

PROCUREMENT SUMMARY

RFQ No. 23-164 was issued on November 1, 2023 to prequalified proponents to participate in RFP 24-006B. Two proponents responded to RFQ No. 23-164, both were shortlisted and invited to respond to RFP 24-006B.

RFP 24-006B Proposal Submissions

Proponents	Price (excluding taxes)
CIMA Canada Inc.	\$15,967,549
Carollo Engineers Canada Ltd.	\$25,533,000

Both proposals submitted by the Proponents were deemed to be in compliance with the submission requirements. The compliant proposals were evaluated against Technical requirements (75 percent) and Commercial requirements (25 percent). The technical requirements were evaluated by Project Delivery Major Projects staff and the Commercial requirements were evaluated by Procurement staff.

After a comprehensive and detailed evaluation of the proposals, the evaluation team concluded that the proposal submitted by CIMA Canada Inc. ranked highest overall, provided the lowest cost, did not have the highest technical score, and demonstrated best value overall for Metro Vancouver. CIMA Canada Inc. demonstrated past experience on similar projects. Their proposal included personnel with significant years of experience and provided all details as requested in the RFP, which was also confirmed during the interview process. Additionally, they demonstrated a good understanding of the scope of work, methodology, detailed scope of services and well defined work plan, tasks and deliverables. Through the interview process, CIMA provided further details on their experience with similar projects, provided excellent responses to the questions, and demonstrated that the team has worked well together on past projects.

Negotiations with CIMA Canada Inc. were completed on August 21, 2024 and the terms of the contract were agreed to and finalized. The contract value agreed to is \$17,424,401. This is an increase of \$1,456,851. The amount of \$1,175,790 is due to the inclusion of a future escalation amount for years 3-5 based on future Consumer Price Index (CPI) adjustments. Actual fee escalation rates will be based on the actual CPI rates following the initial two-year term. Negotiations also included an increase of \$281,061, which confirmed minor adjustments to the distribution of effort, key personnel commitments, and confirmation of availability and personnel changes as requested by the Corporation to allow more experienced people in specific roles. Further negotiated components confirmed that the overall project schedule aligns with the project requirements.

ALTERNATIVES

1. That the GVWD Board:
 - a) approve the award of RFP 24-006B Component 2 – Program Management and Consulting Engineering Services for the Coquitlam Main No. 4 Project, in the amount of up to \$17,424,401 (exclusive of taxes) to CIMA Canada Inc., for an initial term of five years, with an option for one additional four-year term, subject to final review by the Commissioner; and
 - b) authorize the General Manager, Procurement and Real Estate Services to execute the required documentation once the General Manager, Procurement and Real Estate Services is satisfied that the award should proceed.

2. That the GVWD receive the report dated September 9, 2024, titled, Award of RFP 24-006B Component 2 – Program Management and Consulting Engineering Services for Coquitlam Main No. 4 Project for information and direct staff to report back with options for an alternate course of action.

FINANCIAL IMPLICATIONS

A total approved project budget in the amount of \$293,700,000 is currently available for design and construction, and there are sufficient funds remaining to accommodate the award of RFP No. 24-006B.

CONCLUSION

It is recommended that the GVWD Board approve the award of 24-006B Component 2 – Program Management and Consulting Engineering Services for Coquitlam Main No. 4 Project, in the amount of up to \$17,424,401 (exclusive of taxes) to CIMA Canada Inc., subject to the final review by the Commissioner; and authorize the General Manager, Procurement & Real Estate to execute the required documentation once the General Manager, Procurement & Real Estate is satisfied that the award should proceed.

ATTACHMENT

1. Coquitlam Main No. 4 Alignment

68435440

Coquitlam Main No. 4 Alignment



To: Manager's Report

From: Marilyn Towill, General Manager, Water Services

Date: September 25, 2024

Meeting Date: October 2, 2024

Subject: **Manager's Report**

RECOMMENDATION

That the Water Committee receive for information the report dated September 25, 2024, titled "Manager's Report".

1. Potential Fall Water Committee Tour

Water Services is working with the Project Delivery team to secure a date in November that would be suitable for a tour of the Annacis Water Supply Tunnel (AWST) construction project.

Metro Vancouver is constructing a new water supply tunnel deep under the Fraser River, between the City of New Westminster and the City of Surrey. The AWST is one of several new marine crossings in the region being designed and constructed to withstand a major earthquake. When complete, it will help ensure the continued delivery of high-quality drinking water to the communities south of the Fraser River well into the future.

The construction phase of the AWST commenced in 2022 and is scheduled to be completed by 2028. The project involves the construction of two deep vertical shafts, one in Surrey and one in New Westminster, a 2.3 km long tunnel and two underground valve chambers near the surface to allow connection into the existing water transmission system. Tunnel excavation commenced in March 2024 and is approximately 40 percent complete. When complete, the tunnel will be the longest marine crossing tunnel in Metro Vancouver's drinking water system.

More information about the potential tour will be provided as details are finalized.

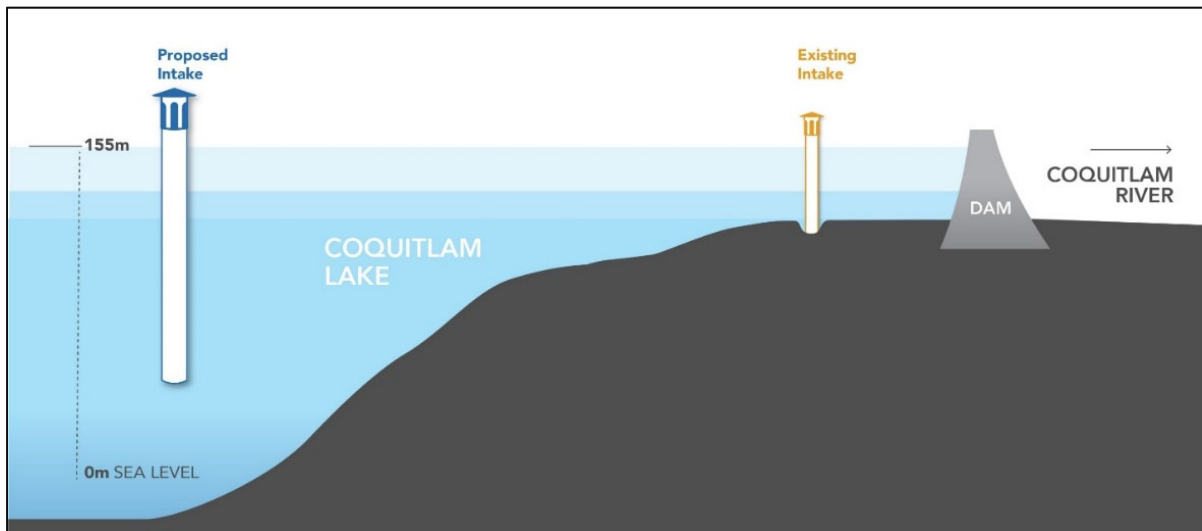
2. Coquitlam Lake Water Supply Project

Metro Vancouver is planning to increase its capacity to withdraw water from Coquitlam Lake, the largest of the three drinking water sources, through the Coquitlam Lake Water Supply Project. The Coquitlam Lake Water Supply Project consists of a new water intake, water supply tunnel, and filtration treatment plant. This new drinking water infrastructure will ensure that the available water supply will meet the drinking water needs of current and future generations and prepare for the effects of climate change, including unpredictable droughts and snowpack. Construction is expected to start in the late 2020s, with completion targeted for the late 2030s.

The proposed intake location is near the deepest point in the lake, which offers the highest quality water, minimizes potential archeological impacts and also allows Metro Vancouver to extend the service life of the existing Coquitlam Water Treatment Plant. The new filtration treatment plant will be built in phases and will provide resiliency for turbidity events, improve

drinking water quality by removing particulates, organic matter, and micro-organisms. Constructing a filtration treatment plant also anticipates regulation changes and requirements for more rigorous drinking water treatment. This will future proof the region's drinking water utility against the anticipated impacts of climate change.

The tunnel will be constructed using a boring machine to minimize environmental impacts and preserve possible archeological sites. There will be a cross-over connection from the new tunnel to the existing treatment plant to allow the two systems to operate concurrently.



Coquitlam Lake Water Supply Project Cross-Section

The Coquitlam Lake Water Supply Project has completed the technical work for the Project Definition phase and is currently in the Permitting and Regulatory phase. This phase focuses on key provincial permits and authorizations including a water licence and land acquisition for the filtration treatment plant.

As part of the Permitting and Regulatory phase, staff are also undertaking Phase 2 Geotechnical Site Investigations to confirm assumptions made in the Project Definition phase and provide supplemental information for the upcoming Preliminary Design anticipated to start in 2026. A Program Manager will be retained to work as part of an integrated team with Metro Vancouver staff to plan and execute the delivery of the Coquitlam Lake Water Supply Project. Endorsement of the award of the Program Manager services contract is being sought from the Water Committee under a separate report.

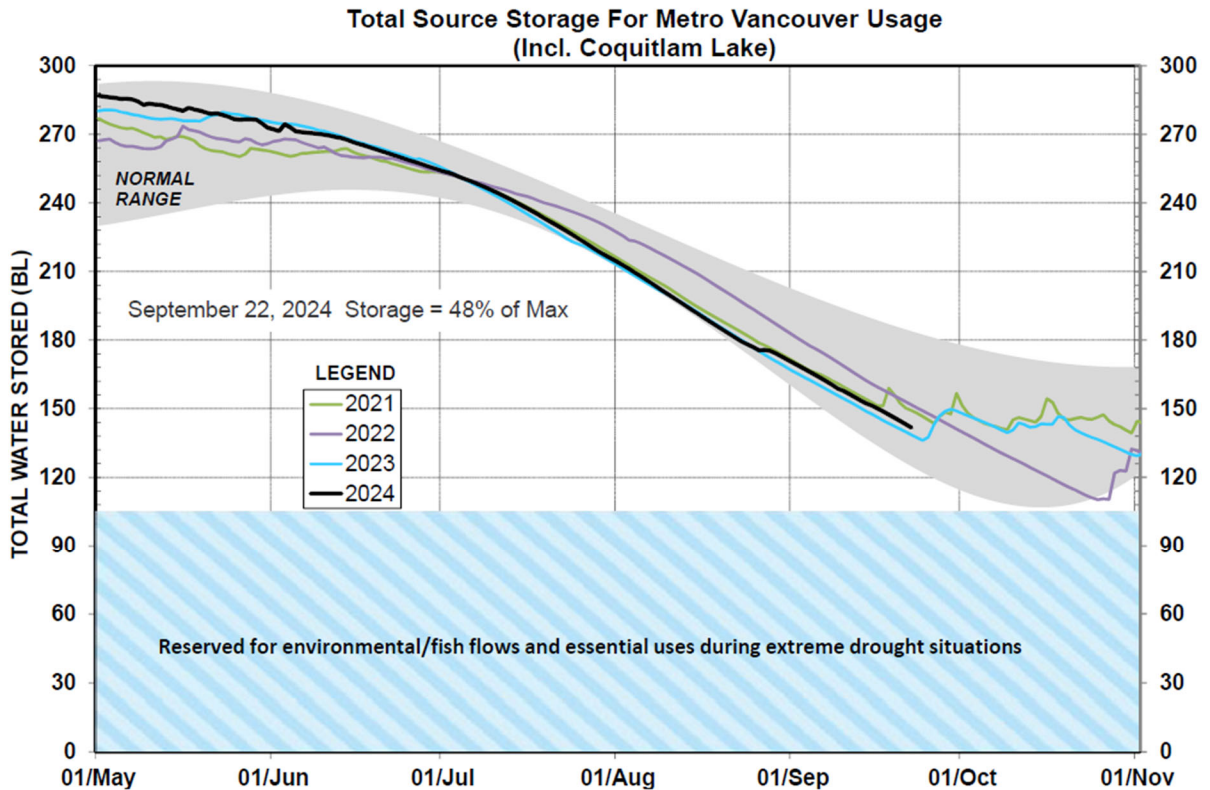
Staff are continuing to engage the Province, City of Coquitlam, and First Nations, in particular kʷikʷəłəm (Kwikwetlem First Nation), to identify and address concerns with the project. The project is located within kʷikʷəłəm core territory and Metro Vancouver has been engaging with them on the project since 2017. Staff are finalizing an agreement with kʷikʷəłəm First Nation to undertake a collaborative impact assessment co-developed by the Nation and Metro Vancouver to assess potential impacts of the project on the Nation's rights and interests. The collaborative impact assessment process is anticipated to conclude by the second half of 2025, at which

point, the application for the water licence will be submitted. Staff will bring a report to the Water Committee and GVWD Board in 2025 to provide an update on the progress of the collaborative impact assessment process.

3. Operational Update/Water Supply

The source reservoirs were proactively managed through the spring and summer to capture the incoming streamflow to ensure Capilano and Seymour Reservoirs reached their full pool elevations on July 7, 2024 and June 30, 2024, respectively. Palisade Lake was opened on May 31 to supplement Capilano Reservoir and closed on July 17 to accommodate planned maintenance work. Burwell Lake was opened on August 15, and Loch Lomond was opened on August 29 and closed on September 24 to supplement natural flows into Seymour Reservoir. The current plan is to close Burwell Lake on October 9.

As of September 22, 2024 available storage in the GVWD source reservoirs and Alpine lakes totaled 48% of maximum source storage. The following figure includes the GVWD's remaining nominated storage from Coquitlam Lake. Throughout the high demand period, when the regional drinking water use typically increases above 1.0 billion litres per day (BL/d), the total source storage levels remained within the normal range.



4. 2024 Water Committee Work Plan

ATTACHMENT

1. 2024 Water Committee Work Plan

63844554

Water Committee 2024 Work Plan

Priorities

1st Quarter	Status
Drinking Water Conservation Plan – 2023 Summer Support Program Update	Complete
GVWD 100 Year Anniversary Celebrations	Complete
GVWD 2024 Water Sustainability Innovation Fund – New Projects	Complete
GVWD Electrical Energy Use, Generation, and Management	Complete
Watershed Fisheries Initiatives Annual Update	Complete
Contract Approvals as per Procurement and Real Property Contracting Authority Policy	Complete
Water Policies (as applicable)	Complete
2nd Quarter	
GVWD 2023 Contribution Agreement Annual Reports – Seymour Salmonid Society and Coquitlam River Watershed Roundtable	Complete
GVWD 2023 Water Quality Annual Report	Complete
GVWD 2023 Water Supply System Annual Update	Complete
GVWD 2023 Year End Financial Performance Results Review	Complete
GVWD 2024 Financial Performance Reporting and Annual Forecast #1	Complete
Project Delivery Update: Coquitlam Main No. 4 Update	Complete
Water Supply Update for Summer 2024	Complete
Water Use by Sector Report 2021 Summary	Complete
Wildfire Preparedness Update	Complete
Contract Approvals as per Procurement and Real Property Contracting Authority Policy	Complete
Water Policies (as applicable) & Bylaw Updates	Complete
3rd Quarter	
2023 Dam Safety Program Annual Update	Complete
GVWD 2024 Financial Performance Reporting and Annual Forecast #2	Pending
GVWD Water Sustainability Innovation Fund Projects – Annual Update	Pending
Project Delivery Update: Coquitlam Lake Water Supply Project Update	In Progress
Protection of Submerged Pipeline Crossings	Complete
Contract Approvals as per the Procurement and Asset Disposal Authority Policy	Complete
Transaction Approvals per the Real Estate Authority Policy	Complete
Water Policies (as applicable)	Complete
4th Quarter	
DFO Capilano River Hatchery Project and Water Supply Improvements	Pending
Drinking Water Management Plan Update	In Progress
GVWD Annual Budget and 5-Year Financial Plan	In Progress
GVWD 2024 Financial Performance Reporting and Annual Forecast #3	Pending
GVWD Development Cost Charges – Update	Pending
Project Delivery Update: Water Tunneling Projects	Pending
Summer 2024 Water Supply Performance	Pending
Water Communications and Public Outreach Results	Pending
Contract Approvals as per the Procurement and Asset Disposal Authority Policy	In Progress
Transaction Approvals per the Real Estate Authority Policy	In Progress
Water Policies (as applicable)	In Progress