

**METRO VANCOUVER REGIONAL DISTRICT  
LIQUID WASTE COMMITTEE**

**MEETING**

**October 10, 2024**

**09:00 am**

**28<sup>th</sup> Floor Committee Room, 4515 Central Boulevard, Burnaby, British Columbia**

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

**REVISED AGENDA<sup>1</sup>**

**A. ADOPTION OF THE AGENDA**

**1. October 10, 2024 Meeting Agenda**

That the Liquid Waste Committee adopt the agenda for its meeting scheduled for October 10, 2024 as circulated.

**B. ADOPTION OF THE MINUTES**

**1. September 11, 2024 Meeting Minutes**

That the Liquid Waste Committee adopt the minutes of its meeting held September 11, 2024 as circulated.

*pg 4*

**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 8*

**2. 2025 - 2029 Financial Plan – Liquid Waste Services**

That the Liquid Waste Committee endorse the 2025 - 2029 Financial Plan for Liquid Waste Services as presented in the report dated October 3, 2024, titled “2025 - 2029 Financial Plan – Liquid Waste Services”, and forward it to the Metro Vancouver Board Budget Workshop on October 16, 2024 for consideration.

*pg 24*

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<sup>1</sup> Note: Recommendation is shown under each item, where applicable.

That the GVS&DD Board:

- a) approve the amendments to the *Greater Vancouver Sewerage and Drainage District Cost Apportionment Bylaw No. 283, 2014* as presented in the report dated October 3, 2024 titled “2025 - 2029 Financial Plan – Liquid Waste Services”;
- b) give first, second and third reading to *Greater Vancouver Sewerage and Drainage District Cost Apportionment Amendment Bylaw No. 384, 2024*; and
- c) pass and finally adopt *Greater Vancouver Sewerage and Drainage District Cost Apportionment Amendment Bylaw No. 384, 2024*.

That the GVS&DD Board:

- a) approve the *Greater Vancouver Sewerage and Drainage District North Shore Wastewater Treatment Plant Reserve Funds Bylaw No. 385, 2024* as presented in the report dated October 3, 2024 titled “2025 - 2029 Financial Plan – Liquid Waste Services”;
- b) give first, second and third reading to *Greater Vancouver Sewerage and Drainage District North Shore Wastewater Treatment Plant Reserve Funds Bylaw No. 385, 2024*; and
- c) pass and finally adopt *Greater Vancouver Sewerage and Drainage District North Shore Wastewater Treatment Plant Reserve Funds Bylaw No. 385, 2024*.

**3. Award of RFP No. 23-404 for Supply and Delivery of Standby Diesel Generators for Iona Island Wastewater Treatment Plant Projects** pg 88

That the GVS&DD Board:

- a) approve the award of RFP 23-404 for Supply and Delivery of Standby Diesel Generators for Iona Island Wastewater Treatment Plant Projects in the amount of up to \$14,052,914 (exclusive of taxes) to Finning (Canada) a division of Finning International Inc., for a one time-time purchase, 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.

**4. Annacis Island Wastewater Treatment Plant Digester No. 5 – Stage Gate 0 Approval** pg 91

That the GVS&DD Board approve the Annacis Island Wastewater Treatment Plant Digester No. 5 advancing from the Initiation phase to the Definition phase (Stage Gate 0), as described in the report dated September 26, 2024, titled “Annacis Island Wastewater Treatment Plant Digester No. 5 – Stage Gate 0 Approval”.

**5. Manager’s Report** pg 95

That the Liquid Waste Committee receive for information the report dated September 16, 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.*

**Added** That the Liquid Waste Committee close its meeting scheduled for October 10, 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.

**I. ADJOURNMENT**

That the Liquid Waste Committee adjourn its meeting of October 10, 2024.

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Membership:

Hurley, Mike (C) – Burnaby

Knight, Megan (VC) – White Rock

Albrecht, Paul – Langley City

Cassidy, Christine – West Vancouver

Elford, Doug – Surrey

Ferguson, Steve – Langley Township

Kim, Steve – Coquitlam

Kirby-Yung, Sarah – Vancouver

Kruger, Dylan – Delta

Little, Mike – North Vancouver District

Loo, Alexa – Richmond

MacDonald, Nicole – Pitt Meadows

Nakagawa, Nadine – New Westminster

West, Brad – Port Coquitlam

Yousef, Ahmed – Maple Ridge

**METRO VANCOUVER REGIONAL DISTRICT  
LIQUID WASTE COMMITTEE**

Minutes of the Regular Meeting of the Metro Vancouver Regional District (MVRD) Liquid Waste Committee held at 9:00 am on Wednesday, September 11, 2024 in the 28<sup>th</sup> Floor Committee Room, 4515 Central Boulevard, Burnaby, British Columbia.

**MEMBERS PRESENT:**

- Chair, Director Mike Hurley, Burnaby
- Vice Chair, Director Megan Knight, White Rock\*
- Director Paul Albrecht, Langley City (arrived at 9:01 am)
- Councillor Christine Cassidy, West Vancouver
- Councillor Doug Elford, Surrey (arrived at 9:07 am)
- Director Steve Ferguson, Langley Township (arrived at 9:10 am)
- Councillor Steve Kim, Coquitlam
- Director Sarah Kirby-Yung, Vancouver\* (arrived at 9:01 am)
- Director Dylan Kruger, Delta\*
- Mayor Mike Little, North Vancouver District (arrived at 9:01 am)
- Councillor Alexa Loo, Richmond
- Councillor Nadine Nakagawa, New Westminister\*
- Director Brad West, Port Coquitlam\* (arrived at 9:19 am)
- Councillor Ahmed Yousef, Maple Ridge\*

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

**MEMBERS ABSENT:**

- Director Nicole MacDonald, Pitt Meadows

**STAFF PRESENT:**

- Peter Navratil, General Manager, Liquid Waste Services
- Jacque Killawee, Deputy Corporate Officer, Board and Information Services
- Andjela Knezevic-Stevanovic, Director Environmental Management and Quality Control, Liquid Waste Services
- Carol Nicolls, Communications Specialist, External Relations
- Dana Zheng, Program Manager, Source Control Plan and Management, Liquid Waste

**A. ADOPTION OF THE AGENDA**

**1. September 11, 2024 Meeting Agenda**

**It was MOVED and SECONDED**

That the Liquid Waste Committee adopt the agenda for its meeting scheduled for September 11, 2024 as circulated.

**CARRIED**

9:01 am Director Albrecht, Director Kirby Yung and Mayor Little arrived at the meeting.

**B. ADOPTION OF THE MINUTES**

**1. July 10, 2024 Meeting Minutes**

**It was MOVED and SECONDED**

That the Liquid Waste Committee adopt the minutes of its meeting held July 10, 2024 as circulated.

**CARRIED**

**C. DELEGATIONS**

No items presented.

**D. INVITED PRESENTATIONS**

No items presented.

**E. REPORTS FROM COMMITTEE OR CHIEF ADMINISTRATIVE OFFICER**

**1. 2023 GVS&DD Environmental Management and Quality Control Annual Report**

Report dated July 18, 2024, from Andjela Knezevic-Stevanovic, Director, Environmental Management and Quality Control, Liquid Waste Services, providing the committee with a summary of the 2023 GVS&DD Environmental Management & Quality Control Annual Report

Andjela Knezevic-Stevanovic, provided members with a presentation titled “2023 GVS&DD Environmental Management and Quality Control” noting that the annual report shows that the discharge water quality met regulatory requirements and provided the committee with an analysis of the water quality issues in 2023.

9:07 am Councillor Elford arrived at the meeting.

9:10 am Director Ferguson arrived at the meeting.

In response to questions, Peter Navratil, General Manager, Liquid Waste Services, and Andjela Knezevic-Stevanovic informed the committee:

- about the reasons for the 2023 acute toxicity events;
- that testing on waterways managed by Metro Vancouver occurs on a five-year cycle; and
- that in the October budget report some previous years metrics will be provided.

9:19 am Director West arrived at the meeting.

**It was MOVED and SECONDED**

That the Liquid Waste Committee receive for information the report dated July 18, 2024, titled “2023 GVS&DD Environmental Management & Quality Control Annual Report”.

**CARRIED**

**2. 2024 Unflushables Campaign Results**

Report dated July 24, 2024, from Carol Nicolls, Communications Specialist, External Relations, providing the committee with a report on the 2024 regional Unflushables campaign that ran from April 15 to June 16, 2024.

Carol Nicolls provided a presentation “2024 Unflushables Campaign - Results” providing an overview and results of the campaign, and changes that are being considered for 2025.

**It was MOVED and SECONDED**

That the Liquid Waste Committee receive for information the report dated July 24, 2024 titled “2024 Unflushables Campaign Results”.

**CARRIED**

**3. *Greater Vancouver Sewerage and Drainage District Sewerage and Drainage Areas Boundaries Amendment Bylaw No. 382, 2024 – Fraser Sewerage Area – Langley (1525 200 Street)***

Report dated July 18, 2024, from Maria Edwards, Project Engineer, Policy Planning & Analysis, Liquid Waste Services, seeking GVS&DD Board approval to amend the *Greater Vancouver Sewerage and Drainage District Sewerage and Drainage Areas Boundaries Bylaw No. 310, 2018* by adding the property at 1525 200 Street in the Township of Langley to the FSA.

**It was MOVED and SECONDED**

That the GVS&DD Board:

- a) give first, second and third reading to the *Greater Vancouver Sewerage and Drainage District Sewerage and Drainage Areas Boundaries Amendment Bylaw No. 382, 2024*; and
- b) pass, and finally adopt the *Greater Vancouver Sewerage and Drainage District Sewerage and Drainage Areas Boundaries Amendment Bylaw No. 382, 2024*.

**CARRIED**

**4. Appointment of Enforcement Officers**

Report dated July 25, 2024, from Maari Hirvi Mayne, Program Manager, Enforcement and Regulation Liquid Waste, Environmental Regulation and Enforcement, seeking GVS&DD Board appoint and rescind appointments of Metro Vancouver employees as Board-designated officers.

**It was MOVED and SECONDED**

That the GVS&DD Board:

- a) pursuant to the *Greater Vancouver Sewerage and Drainage District Sewer Use Bylaw No. 299, 2007* and the *Environmental Management Act*:
  - i. rescind the appointment of Metro Vancouver employee Dave Ferguson as an officer; and
  - ii. appoint Metro Vancouver employees Loretta Tang and Sean Hronsky as officers.
- b) pursuant to section 28 of the *Offence Act* for the purpose of serving summons for alleged violations under the *Greater Vancouver Sewerage and Drainage District Sewer Use Bylaw No. 299, 2007*
  - i. rescind the appointment of former Metro Vancouver employee Dave Ferguson; and
  - ii. appoint Metro Vancouver employees Loretta Tang and Sean Hronsky.

**CARRIED**

**5. Manager's Report**

Report dated September 3, 2024, from Peter Navratil, General Manager, Liquid Waste Services, informing the committee that the 2024 Microfibres Reduction Campaign will begin September 16, 2024 and updating the committee workplan.

**It was MOVED and SECONDED**

That the Liquid Waste Committee receive for information the report dated September 4, 2024 titled "Manager's Report".

**CARRIED**

**F. INFORMATION ITEMS**

No items presented.

**G. OTHER BUSINESS**

No items presented.

**H. RESOLUTION TO CLOSE MEETING**

No items presented.

**I. ADJOURNMENT**

**It was MOVED and SECONDED**

That the Liquid Waste Committee adjourn its meeting of September 11, 2024.

**CARRIED**

(Time: 9:51 am)

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Jacque Killawee,  
Deputy Corporate Officer  
70513314

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Mike Hurley,  
Chair

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To: Liquid Waste Committee

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

Date: September 26, 2024 Meeting Date: October 10, 2024

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

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

**ATTACHMENT**

1. 2025 - 2029 Financial Plan Overview Presentation

70912922



ATTACHMENT 1



E1

Metro Vancouver Region

# 2025 – 2029 Financial Plan Overview

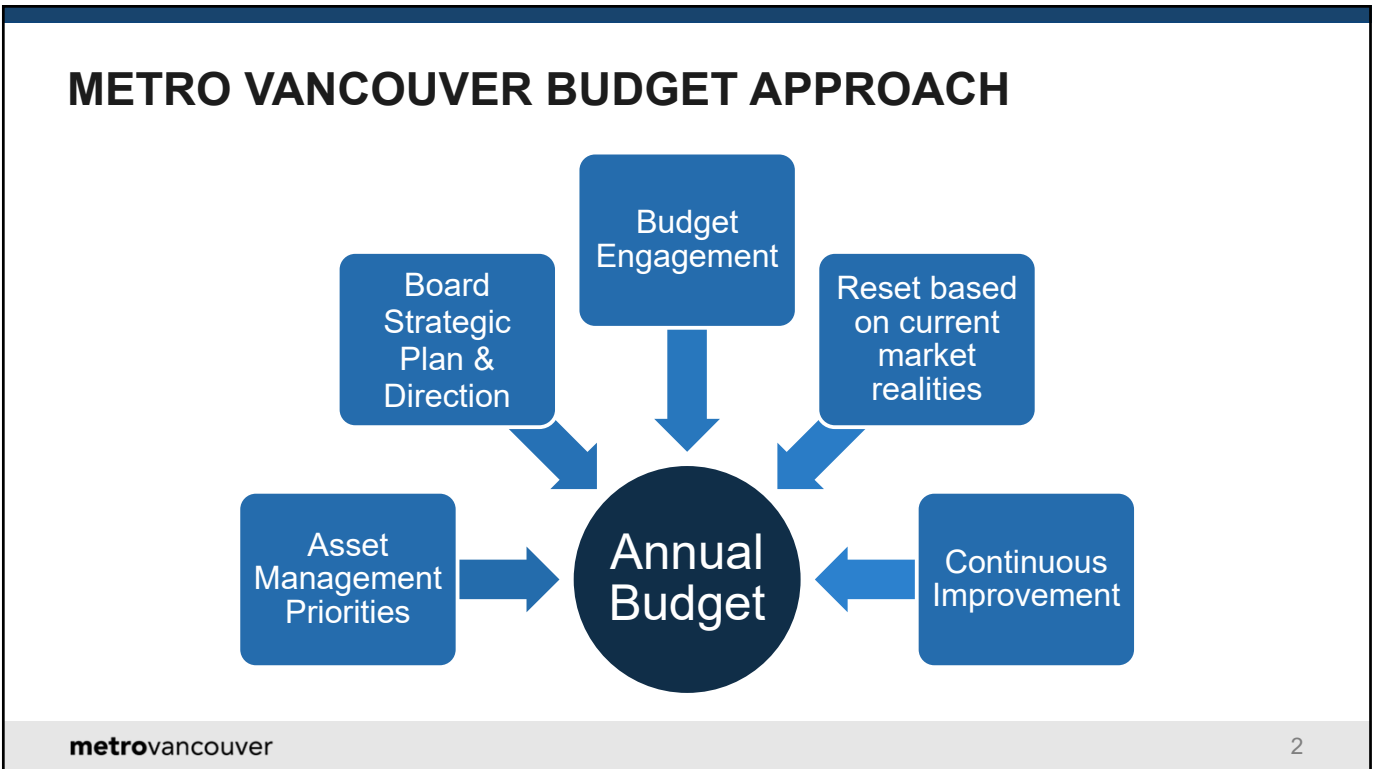
Jerry W. Dobrovolny, P. Eng, MBA  
Commissioner / Chief Administrative Officer

Harji Varn  
GM Financial Services / Chief Finance Officer

**metro**vancouver

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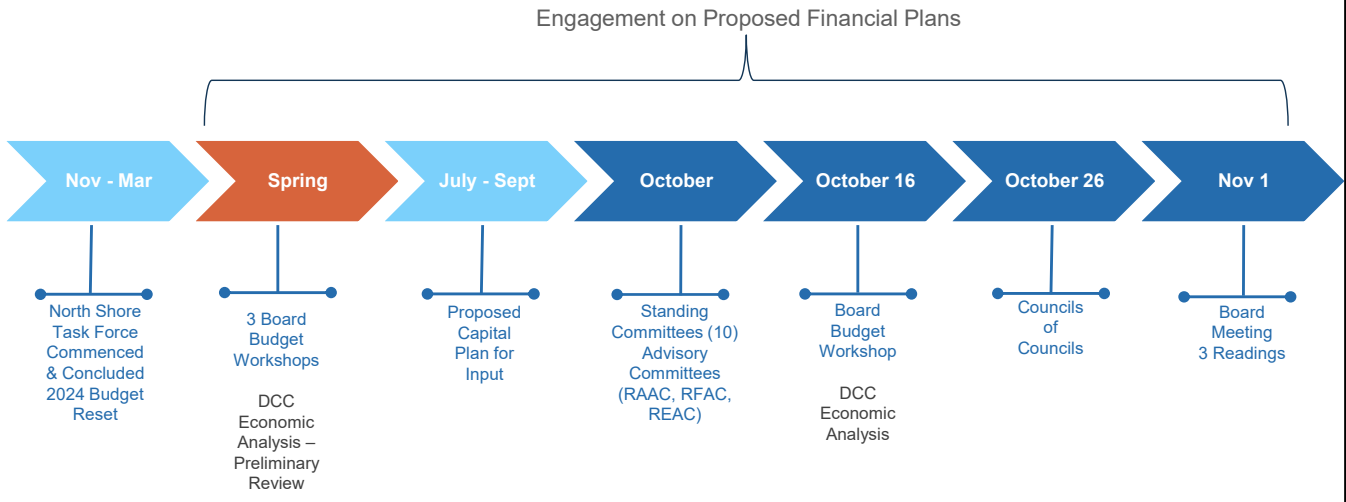
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# 2025 BUDGET CYCLE TIMELINE

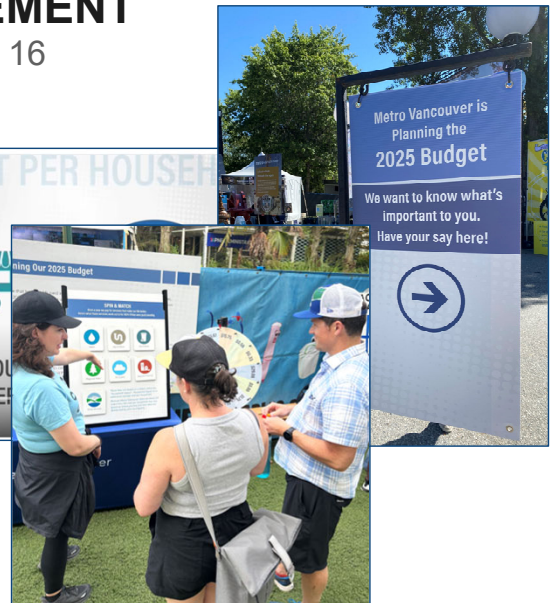


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# COMMUNICATIONS AND ENGAGEMENT

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



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# 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 displays the Metro Vancouver Budget 2024 Overview webpage. The page includes a 'Financial Plan Overview' section, a '2024 Budget at a Glance' section with bullet points, and an 'Approximate average cost per household' table. A video player is overlaid on the page, showing a 'PUBLIC WORKSHOP' video titled 'Metro Vancouver Budget Process'.

Service	The Year	Per Month
Regional Planning	\$4	\$0.33
Air Quality Management	\$7	\$0.58
Regional Parks	\$6	\$0
Solid Waste Services	\$48	\$3.68
Drinking Water Services	\$109	\$15.75
Liquid Waste Services	\$388	\$29.08

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# 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



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## CONTINUOUS IMPROVEMENT – 2024 COMPLETED OR ONGOING

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

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## CONTINUOUS IMPROVEMENT – 2025 NEW

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

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# 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 2024-2026 CAPITAL PLAN' and the bottom one is 'GREATER VANCOUVER SEWERAGE AND DRAINAGE DISTRICT CAPITAL BUDGET AND 2024-2026 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

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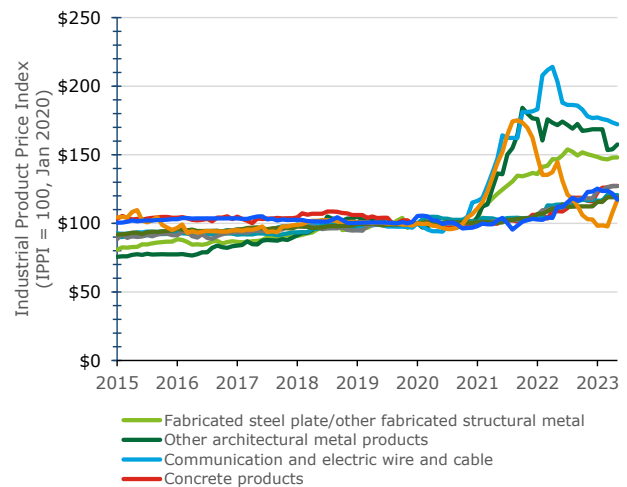
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# MAJOR DRIVERS – INFLATION AND COST ESCALATION

## WHAT WE ARE DOING

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



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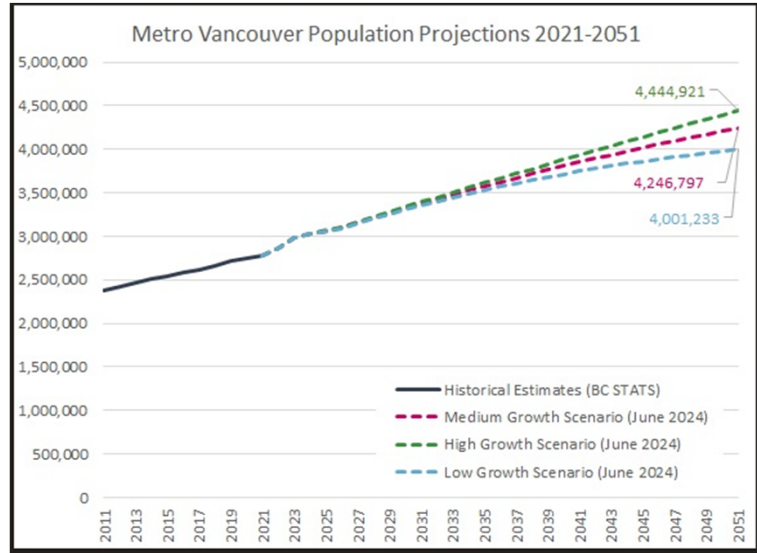
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## MAJOR DRIVERS - POPULATION GROWTH

### WHAT WE ARE DOING

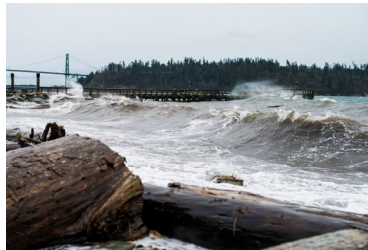
- Examining impacts to infrastructure
- Regular updates and review of DCCs
- Alignment with Province and member jurisdictions



## MAJOR DRIVERS - CLIMATE CHANGE AND RESILIENCE

### WHAT WE ARE DOING

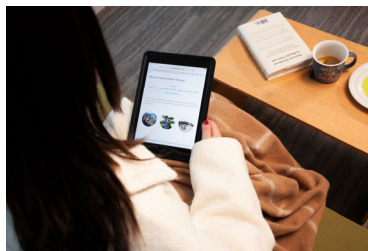
- Infrastructure resilience
- Metro 2050 Policy
- Climate action strategies and programs



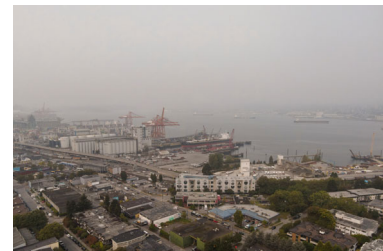
King tide in West Vancouver



Minnehada fire



Climate Literacy Program

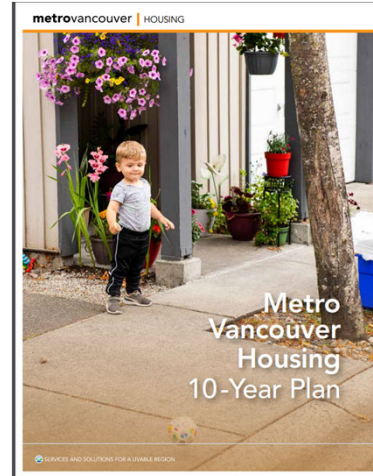


Smoky conditions in Metro Vancouver

## 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	-	-	-	-

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## 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

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## OVERALL AVERAGE HOUSEHOLD IMPACT 2025–2029

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

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## VSA TOTAL AVERAGE HOUSEHOLD IMPACT 2025–2029

	2024	NSWWTP Amended	2025	2026	2027	2028	2029
<b>Water Services</b>	\$189	\$189	\$200	\$211	\$215	\$218	\$218
<b>Liquid Waste Services</b>	\$432	\$582	\$650	\$706	\$755	\$799	\$869
<b>Solid Waste Services</b>	\$68	\$68	\$71	\$74	\$78	\$82	\$86
<b>Regional District Services</b>	\$92	\$92	\$94	\$84	\$85	\$86	\$87
<b>Total Household Impact</b>	<b>\$781</b>	<b>\$931</b>	<b>\$1,015</b>	<b>\$1,075</b>	<b>\$1,133</b>	<b>\$1,185</b>	<b>\$1,260</b>

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### NSSA TOTAL AVERAGE HOUSEHOLD IMPACT 2025–2029

	2024	NSWWTP Amended	2025	2026	2027	2028	2029
<b>Water Services</b>	\$189	\$189	\$200	\$211	\$215	\$218	\$218
<b>Liquid Waste Services</b>	\$464	\$582	\$782	\$980	\$1,123	\$1,262	\$1,401
<b>Solid Waste Services</b>	\$68	\$68	\$71	\$74	\$78	\$82	\$86
<b>Regional District Services</b>	\$92	\$92	\$94	\$84	\$85	\$86	\$87
<b>Total Household Impact</b>	<b>\$813</b>	<b>\$931</b>	<b>\$1,147</b>	<b>\$1,349</b>	<b>\$1,501</b>	<b>\$1,648</b>	<b>\$1,792</b>

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### LIWSA TOTAL AVERAGE HOUSEHOLD IMPACT 2025–2029

	2024	NSWWTP Amended	2025	2026	2027	2028	2029
<b>Water Services</b>	\$189	\$189	\$200	\$211	\$215	\$218	\$218
<b>Liquid Waste Services</b>	\$295	\$375	\$418	\$464	\$496	\$505	\$515
<b>Solid Waste Services</b>	\$68	\$68	\$71	\$74	\$78	\$82	\$86
<b>Regional District Services</b>	\$92	\$92	\$94	\$84	\$85	\$86	\$87
<b>Total Household Impact</b>	<b>\$644</b>	<b>\$724</b>	<b>\$783</b>	<b>\$833</b>	<b>\$874</b>	<b>\$891</b>	<b>\$906</b>

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## FSA TOTAL AVERAGE HOUSEHOLD IMPACT 2025–2029

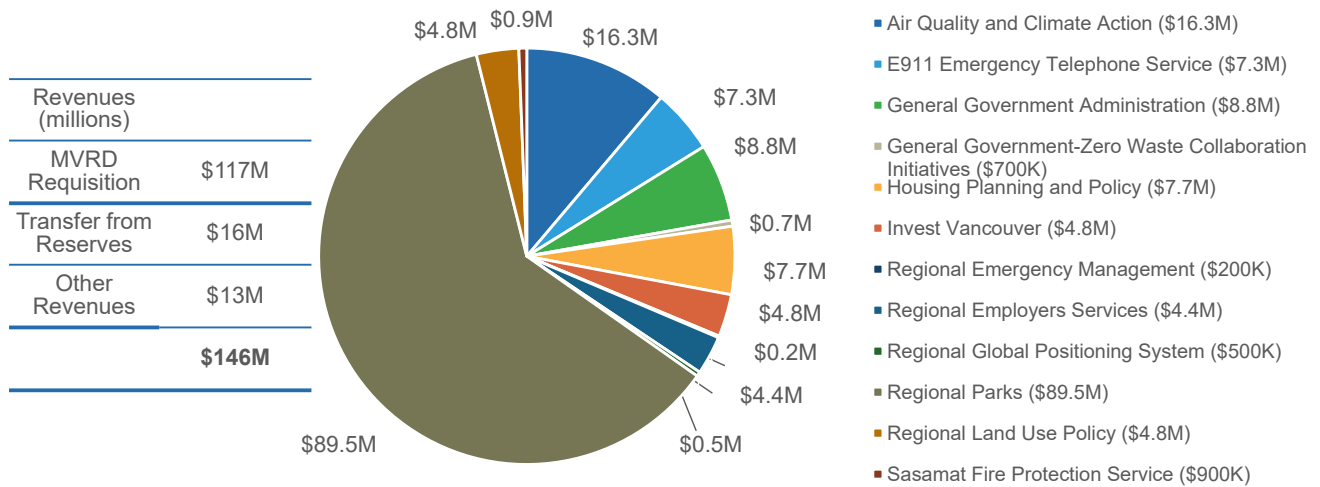
	2024	NSWWTP Amended	2025	2026	2027	2028	2029
<b>Water Services</b>	\$189	\$189	\$200	\$211	\$215	\$218	\$218
<b>Liquid Waste Services</b>	\$301	\$391	\$421	\$434	\$454	\$485	\$512
<b>Solid Waste Services</b>	\$68	\$68	\$71	\$74	\$78	\$82	\$86
<b>Regional District Services</b>	\$92	\$92	\$94	\$84	\$85	\$86	\$87
<b>Total Household Impact</b>	<b>\$650</b>	<b>\$740</b>	<b>\$786</b>	<b>\$803</b>	<b>\$832</b>	<b>\$871</b>	<b>\$903</b>

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## BUDGET OVERVIEW

2025 MVRD Budget

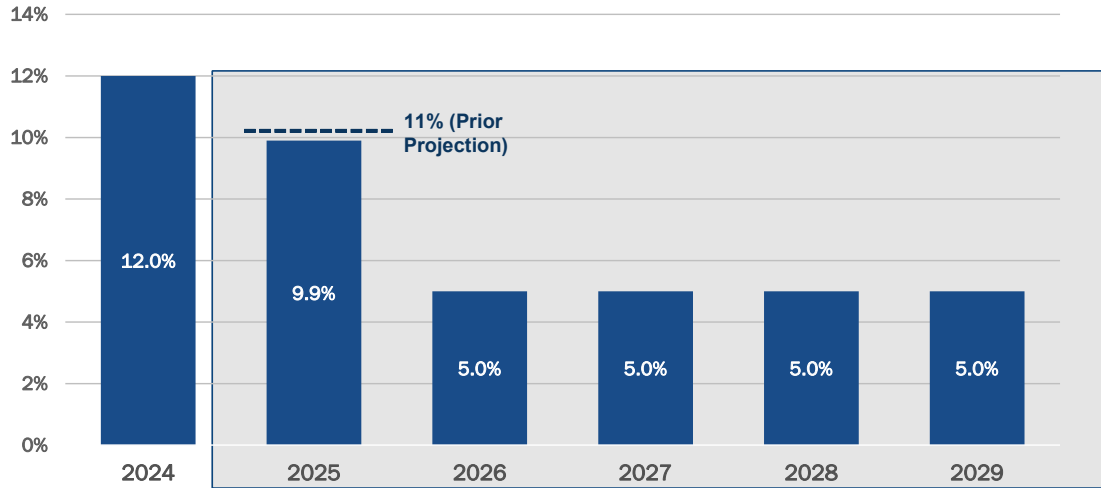
### Expenditure by Department



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# METRO VANCOUVER HOUSEHOLD IMPACT % CHANGE

Proposed 2025–2029 Financial Plan



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# METRO VANCOUVER OPERATING BUDGET

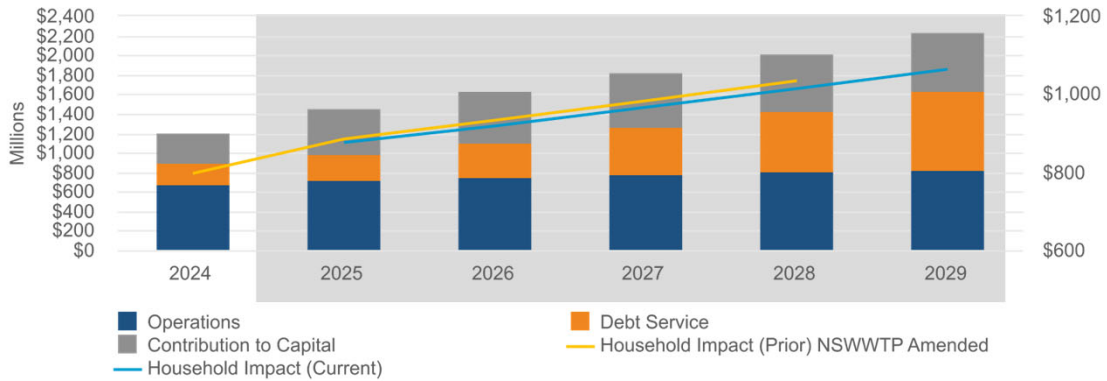
## Expenditures

### 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

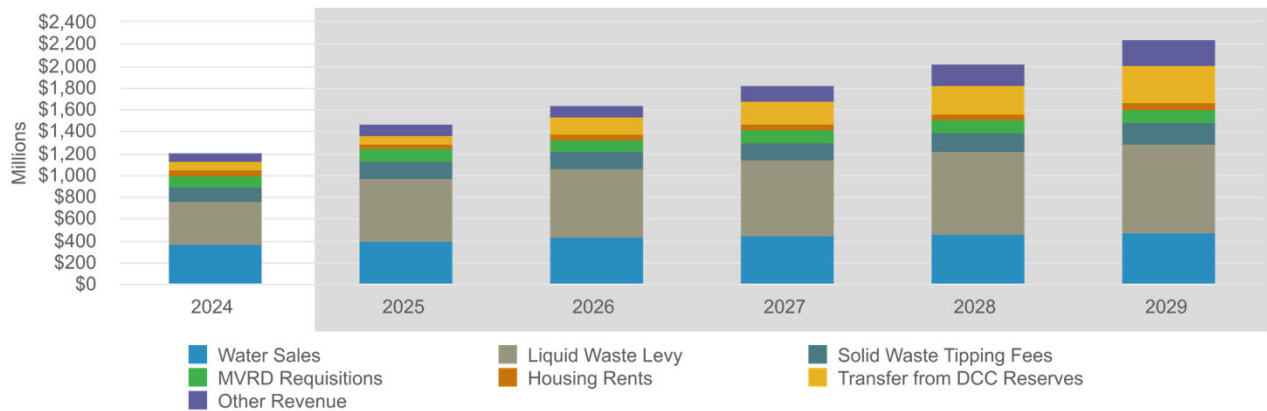
## Revenues

### 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

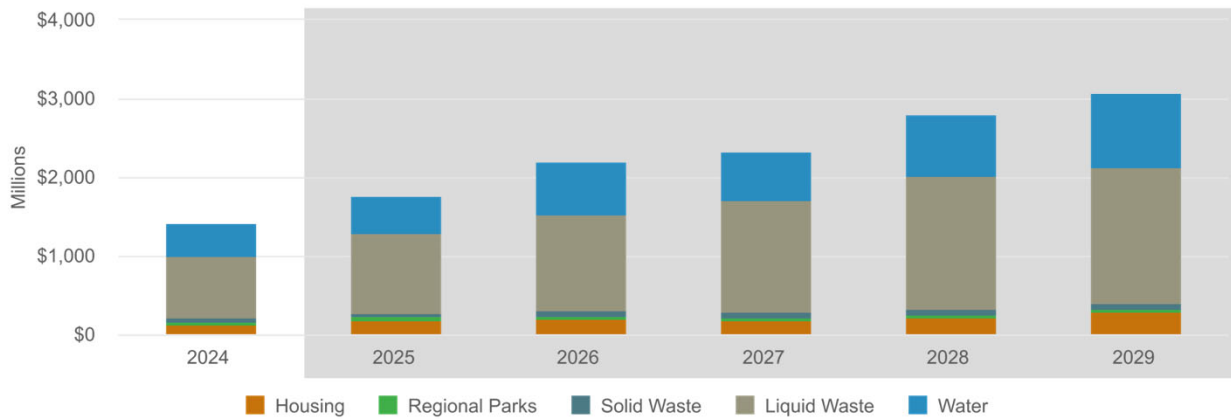
## Expenditures

### 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: Liquid Waste Committee

From: Peter Navratil, General Manager, Liquid Waste Services

Date: October 3, 2024 Meeting Date: October 10, 2024

Subject: **2025 - 2029 Financial Plan – Liquid Waste Services**

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### RECOMMENDATION

That the Liquid Waste Committee endorse the 2025 - 2029 Financial Plan for Liquid Waste Services as presented in the report dated October 3, 2024, titled “2025 - 2029 Financial Plan – Liquid Waste Services”, and forward it to the Metro Vancouver Board Budget Workshop on October 16, 2024 for consideration.

That the GVS&DD Board:

- a) approve the amendments to the *Greater Vancouver Sewerage and Drainage District Cost Apportionment Bylaw No. 283, 2014* as presented in the report dated October 3, 2024 titled “2025 - 2029 Financial Plan – Liquid Waste Services”;
- b) give first, second and third reading to *Greater Vancouver Sewerage and Drainage District Cost Apportionment Amendment Bylaw No. 384, 2024*; and
- c) pass and finally adopt *Greater Vancouver Sewerage and Drainage District Cost Apportionment Amendment Bylaw No. 384, 2024*.

That the GVS&DD Board:

- a) approve the *Greater Vancouver Sewerage and Drainage District North Shore Wastewater Treatment Plant Reserve Funds Bylaw No. 385, 2024* as presented in the report dated October 3, 2024 titled “2025 - 2029 Financial Plan – Liquid Waste Services”;
  - b) give first, second and third reading to *Greater Vancouver Sewerage and Drainage District North Shore Wastewater Treatment Plant Reserve Funds Bylaw No. 385, 2024*; and
  - c) pass and finally adopt *Greater Vancouver Sewerage and Drainage District North Shore Wastewater Treatment Plant Reserve Funds Bylaw No. 385, 2024*.
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### 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. The overall consolidated household impact for 2025 is 9.9%, down from the 11.0% projected for 2025 in the prior financial planning cycle.

In 2025, the operating budget for Liquid Waste Services is proposed to increase by \$194.0 million. \$121.2 million is related to the Board approved North Shore Wastewater Treatment Plant (NSWWTP) budget amendment on March 2024. The remaining proposed increase is \$72.8 million for a total of \$681.9 million.



The report also includes a cost apportionment bylaw amendment as well as an establishment of reserve funds for the NSWWTP Program budget to reflect the direction received by the Board at the Board Budget Workshop on May 31, 2024 which reduces borrowing over the five years, and results in an estimated \$60 million savings in debt servicing.

#### **PURPOSE**

To present the 2025 - 2029 Financial Plan for Liquid Waste 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 Liquid Waste Services function including both operating and capital budget elements for 2025 to 2029.

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

#### **LIQUID WASTE SERVICES**

The Liquid Waste Services function is comprised of 19 member jurisdictions within Metro Vancouver, serving a population of approximately 2.7 million residents. The wastewater collection and treatment system consists of over 530 kilometers of trunk sewers, 34 pump stations, three storage tanks and 5 treatment plants that transport and treat an average of 1.2 billion litres of wastewater per day. The urban drainage function is comprised of the Still Creek/Brunette, Port Moody/Coquitlam and University Drainage Areas.

Liquid Waste Services initiatives planned over the next five years are guided by direction provided in the *2022 - 2026 Board Strategic Plan*, and the *2010 Integrated Liquid Waste and Resource Management Plan*, specifically:

##### 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.

*Integrated Liquid Waste and Resource Management Plan:*

- Protect public health and the environment
- Use liquid waste as a resource
- Effective, affordable and collaborative management

Metro Vancouver also recognizes the history of Indigenous Peoples and aims to build meaningful and enduring relationships with First Nations. As part of its work, Liquid Waste Services is committed to engaging First Nation communities through information sharing, engagement and ongoing communication.

**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 Liquid Waste Services are presented in this report. Within the Liquid Waste Services Work Plans, 23 performance indicators have been developed and are being tracked. These include:

- Operating cost per million litres collected and treated;
- Compliance with treatment plant Operational Certificates;
- Annual combined sewage overflow (CSO) volume;
- Annual number of wet weather related sanitary sewer overflows (SSO);
- Percentage of assets not meeting capacity or regulation within 10 years;
- Percent of biosolids beneficially used;
- Energy use in the collection and treatment of liquid waste per million litres processed;
- Percentage of digester gas used at the Wastewater Treatment Plants (WWTP); and
- Number of days swimming advisories posted by Health Authorities.

The trend in these performance measures indicates that the regional Liquid Waste treatment plants have performed well in complying with existing treatment plant operational certificates, although the North Shore Sewerage Area continues to be out of compliance with Federal regulations since January 1, 2021 and will remain so until the NSWWTP commences secondary treatment of wastewater from the North Shore municipalities. Wet weather sanitary sewer overflows have reduced because of reduced rainfall and member actions to reduce at-source I&I. Progress on key projects and initiatives must continue to ensure that needed infrastructure is delivered to comply with regulatory requirements, meet demands resulting from growth and to allow progress on climate change mitigation actions.

## CONTINUOUS IMPROVEMENT

Several continuous improvement initiatives have resulted in the following achievements:

- An in-house construction crew for liquid waste infrastructure has been established, resulting in a reduction of labor costs of 20% for projects completed this year. This will also reduce costs associated with management of assignments; reduced procurement costs and improve ability to adapt to changing construction scheduling demands and urgent emergency or high-priority projects
- In collaboration with member jurisdictions, shifting the strategy for I&I management to address the source of I&I instead of adding downstream infrastructure to manage the resulting increased wastewater flows. This initiative will involve the sharing of best practices, management tools, experiences and public communications to reduce I&I into private laterals. Source management of I&I has the potential to allow the cancellation of long-term plans to construct 17 regional storage tanks across the region.
- Installation of an interactive display at Science World that highlights the connection between household wastewater and our aquatic environment, focusing on the role of wastewater treatment, environmental monitoring, and actions that residents can take.
- Installation of nanobubble aeration technology on primary effluent at Lions Gate WWTP to improve overall effluent quality. This is the first application of this technology for this purpose and initial results have shown a significant improvement in effluent quality.
- Creation of on-line tools to streamline project management processes, improve forecasting of project progress and provide up-to-date information on projects, reducing resource demands for reporting.
- Increased productivity of field staff by developing tools to provide on-line remote access to sewer model data allowing engineering and operating staff to access key information in the field. This provides timely information and reduces demands on modelling staff, allowing them to focus on future infrastructure needs.
- Secured provincial funding to support the development of green biomethane generation at the Northwest Langley WWTP.

For 2025 the following activities will commence or continue, resulting in future improvements:

- Initiation of work to establish a Hydrogen Pilot at Lulu Island WWTP that will capture nuisance ammonia and convert this to hydrogen which can be exported for transportation fuel. Full potential for this technology at LIWWTP is the production of 128 tonnes of hydrogen per year which is enough to drive a hydrogen fueled truck to and from Kelowna five times each day of the year.
- Trials of low-carbon hauling vehicles for short to medium haul routes, which has the potential to reduce hauling GHG emissions by 130 tonnes per year.
- Structured Customer Service Excellence training for staff who work in public-serving and public-facing roles to improve skills for interacting with community members more effectively.
- Continue design and construction of the Effluent Heat Recovery project at Lulu Island WWTP, to increase the volume of digester gas available for conversion to Renewable Natural Gas. This will increase revenue from RNG sales by \$415,000 per year and reduce regional GHG emissions by 1,000 tonnes per year.

- Continue working with the Cities of Richmond, Surrey and New Westminster, and the City of North Vancouver on the development of sewer heat-based district energy systems. These projects have the potential to reduce regional greenhouse gas emissions by 35,000 tonnes per year.
- Continue to improve effluent quality at Lions Gate WWTP by extending operation of chemically enhanced primary treatment.
- Continue testing alternative innovative sludge digestion processes such that may result in increased conversion of organics to digester gas, such as thermophilic (high temperature) digestion, staged mesophilic / thermophilic digestion and Volatile Fatty Acid-rich stream digestion.
- Continue to identify and develop additional possible opportunities for green biomethane generation.
- Continue to develop advanced technologies such as hydrothermal liquefaction to increase options for wastewater solids beneficial use and increased resource recovery.

### **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.

Attached are the 2025 - 2029 Liquid Waste Services Financial Plan Operating Budget Summary (Attachment 1) and the 2025 - 2029 Liquid Waste Services Capital Budget Summary (Attachment 2).

The 2025 Annual Work Plans for the Liquid Waste Services budget presented in this report are included in Attachment 3 and the “What’s Happening” highlights for Liquid Waste Services for the years 2025 - 2029 are included in Attachment 4.

### **Operating Budget Highlights**

The Liquid Waste Services operating budget is separated into operating programs and funding required to support the expanding capital program (debt service and contribution to capital) for each sewerage area. The total proposed increase is \$194.0 million of which \$121.2 million is related to the NSWWTP budget amendment with the net proposed increase being \$72.8 million (12.0%) for a total of \$681.9 million (Attachment 1). A significant portion of the net increase can be attributed to increases in debt servicing, \$22.2 million, and contributions to capital, \$32.8 million, to support the major capital infrastructure investments required to meet service requirements and growth demands. The balance of the increase can essentially be attributed to a net proposed increase in

operating costs, \$17.8 million, largely due to price escalation; an increase in the base lease for the Lions Gate WWTP; additional sampling and testing required to meet regulatory changes, monitoring of new infrastructure, support of environmental monitoring initiatives; and increased usage of chemicals.

The 2025 operating budget includes the following key actions:

- Continue decommissioning of the Iona Island WWTP biosolids lagoons.
- Coordinate overflow working groups with member municipalities to develop targeted sewer overflow plans and reduce wet weather flows through action on public and private infrastructure.
- Initiate the development of short and long-range servicing plans for the collection system and each wastewater treatment plant that identify the scope, scale, budget and timing of future infrastructure needs. This will begin with a Facility Plan for Annacis Island WWTP.
- Complete the update of the *Integrated Liquid Waste and Resource Management Plan* in accordance with a provincially approved review strategy.
- Continue development of the in-house construction crew to expand scope and breadth of technical work that can be performed, including pipeline construction.
- Develop and implement digital checklists for Field Services preventive maintenance work orders.
- Continuation of implementation of a comprehensive Maintenance Reliability Program to increase asset resilience.
- Continue operation of a Membrane Bioreactor pilot plant at Iona Island WWTP to evaluate this secondary treatment technology.
- Conduct Annacis Island WWTP dye tracer study.
- Perform False Creek water quality monitoring and assessment in collaboration with Friends of False Creek, Raincoast Conservation Foundation and the City of Vancouver.
- Develop and accredit analytical methods for the identification of pharmaceuticals and personal care products in marine water, and for non-ionic and cationic surfactants in wastewater.
- Secure agreement for provision of sewer heat for Richmond Oval district energy system.

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:

- Iona Island WWTP sludge lagoon dewatering, biosolids hauling and beneficial use projects.
- Projects funded from the Sustainability Innovation Fund including Advanced Resource Recovery from Sludge and Handheld Microbial DNA Monitor.
- Monitoring programs for Iona Island WWTP and Strait of Georgia; Lions Gate WWTP and Burrard Inlet; Fraser River and the Fraser River WWTPs.
- Additional assignments that are regularly contracted for highly specialized functions, including: effluent toxicity testing, dye tracer studies, combined sewer overflow characterization and risk assessments, wastewater and biosolids characterization for CECs and toxics, development of environmental management system, maintenance hole monitoring and assessment.

Over the next five years, the Liquid Waste Services budget is projected to increase an average of \$108.7 million or 16.2% per year net of the NSWWTW Amendment. Of this overall increase, one of the major drivers is the funding related to the expanding capital program (debt servicing and contributions to capital) which is increasing an average of \$92.6 million or 25.0% per year. The operating programs expenditures are increasing by \$16.1 million or 5.5% per year on average which is largely inflationary, to address core operating and facility commissioning requirements.

### **Capital Budget Highlights**

The Liquid Waste Services capital budget for 2025 approval is \$10.6 billion (Attachment 2). This amount includes all capital projects underway or planned in 2025. The capital program is funded by a combination of long-term debt, contributions from the operating budget, some external (interagency and senior level government grant) contributions and development cost charges (DCCs).

The projected capital cash flow for 2025 - 2029 totals \$7.1 billion, an average of \$1,411.9 million per year. The largest six projects (\$100 million and greater cash flow between 2025 - 2029) make up approximately 79% of the capital spending over the next five years. In addition to the six projects, there are a further 145 projects on the plan.

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

- North Shore WWTP Advanced Treatment Upgrade;
- Northwest Langley WWTP Expansion;
- Iona Island WWTP Secondary Upgrade;
- Gilbert / Brighthouse Trunk Pressure Sewer;
- Annacis Island WWTP Stage 5 Expansion and Outfall System;
- Annacis Island WWTP Refurbishment of the fourth and final Trickling Filter;
- Burnaby Lake North Interceptor - Winston Section;
- South Surrey Interceptor - Johnston Section;
- Jervis and Chilco Pump Station Backup Power facilities;
- Gleneagles Pump Stations 4 and 5;
- Crescent Beach Forcemain Replacement Project;
- New Westminster Interceptor West Branch and Columbia Extension Rehabilitation.

### **Reserve Funds**

The application of reserve funding in Liquid Waste Services is primarily made through the Sustainability Innovation Fund Reserve, Drainage Area General Reserve and the Laboratory Equipment Reserve. To reflect the direction received by the Board at the Board Budget Workshop on May 31, 2024 the establishment of four reserve funds (one for each sewerage area) for the NSWWTW Program budget is required which will reduce borrowing over the five years resulting in an estimated \$60 million in debt service savings. The bylaw to create these reserves is provided in Attachment 8.

In 2025, the financial plan includes the application of \$1.8 from the Drainage Area General Reserve for several Drainage Area initiatives and capital projects and an application of \$27.8 for the

NSWWTP Program. The 2025 - 2029 Projected Reserves for Liquid Waste Services is included in Attachment 5.

### **Wet Weather Cost Allocation**

To address the increasing challenge of managing I&I of rainwater into the regional sewer systems and to ensure that costs for services are equitably allocated, wet weather pricing for liquid waste collection and transportation will be adopted. The first year of a 10-year gradual transition period commenced in 2024. The transition to the wet weather pricing apportionment will move to 20% in 2025. Questions from member jurisdictions regarding the methodology to be used for measuring wet weather flows have all been addressed.

### **ADDITIONAL COST ALLOCATION FOR THE NORTH SHORE WWTP PROGRAM**

At the May 31, 2024 Special Joint Board Meeting, the Board directed staff to amend the allocation of the additional costs for the NSWWTP Program to reflect an adjusted regional share.

At that meeting, the agreed-upon allocation of the additional \$2.8B costs for the NSWWTP program were listed in terms of Household Impact:

- North Shore Sewerage Area Incremental HHI: \$590
- Vancouver Sewerage Area Incremental HHI: \$150
- Fraser Sewerage Area Incremental HHI: \$90
- Lulu Island West Sewerage Area Incremental HHI: \$80

*The Greater Vancouver Sewerage and Drainage District Cost Apportionment Bylaw No. 283, 2014 (the “Apportionment Bylaw”)* defines the method used to apportion the Liquid Waste Services levy to the GVS&DD members. The necessary amendments to the Apportionment Bylaw to reflect the direction provided by the Board are contained within Attachment 7, the proposed *Greater Vancouver Sewerage and Drainage District Cost Apportionment Amendment Bylaw No. 384, 2024*.

The Board also directed staff to phase in the cost increases for the additional NSWWTP Program costs over a 5-year period for the members of the North Shore Sewerage Area only.

The amortization period of borrowing for the North Shore Sewerage Area members will be 30 years.

### **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 Liquid Waste Committee endorse the 2025 - 2029 Financial Plan for Liquid Waste Services as presented in the report dated October 3, 2024, titled “2025 - 2029 Financial Plan – Liquid Waste Services”, and forward it to the Metro Vancouver Board Budget Workshop on October 16, 2024 for consideration.

That the GVS&DD Board:

- a) approve the amendments to the *Greater Vancouver Sewerage and Drainage District Cost Apportionment Bylaw No. 283, 2014* as presented in the report dated October 3, 2024 titled “2025 - 2029 Financial Plan – Liquid Waste Services”;
- b) give first, second and third reading to *Greater Vancouver Sewerage and Drainage District Cost Apportionment Amendment Bylaw No. 384, 2024*; and
- c) pass and finally adopt *Greater Vancouver Sewerage and Drainage District Cost Apportionment Amendment Bylaw No. 384, 2024*.

That the GVS&DD Board:

- a) approve the *Greater Vancouver Sewerage and Drainage District North Shore Wastewater Treatment Plant Reserve Funds Bylaw No. 385, 2024* as presented in the report dated October 3, 2024 titled “2025 - 2029 Financial Plan – Liquid Waste Services”;
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- c) pass and finally adopt *Greater Vancouver Sewerage and Drainage District North Shore Wastewater Treatment Plant Reserve Funds Bylaw No. 385, 2024*.

2. That the Liquid Waste Committee amend the 2025 – 2029 Financial Plan for Liquid Waste Services as follows: \_\_\_\_\_; and forward the amended Financial Plan to the Metro Vancouver Board Budget Workshop on October 16, 2024 for consideration.

That the GVS&DD Board:

- a) approve the amendments to the *Greater Vancouver Sewerage and Drainage District Cost Apportionment Bylaw No. 283, 2014* as presented in the report dated October 3, 2024 titled “2025 - 2029 Financial Plan – Liquid Waste Services”;
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- c) pass and finally adopt *Greater Vancouver Sewerage and Drainage District Cost Apportionment Amendment Bylaw No. 384, 2024*.

That the GVS&DD Board:

- a) approve the *Greater Vancouver Sewerage and Drainage District North Shore Wastewater Treatment Plant Reserve Funds Bylaw No. 385, 2024* as presented in the report dated October 3, 2024 titled “2025 - 2029 Financial Plan – Liquid Waste Services”;
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3. That the Liquid Waste Committee amend the 2025 – 2029 Financial Plan for Liquid Waste Services as follows: \_\_\_\_\_; and forward the amended Financial Plan to the Metro Vancouver Board Budget Workshop on October 16, 2024 for consideration.

That the GVS&DD Board receive for information the proposed amendments to the *Greater Vancouver Sewerage and Drainage District Cost Apportionment Amendment Bylaw No. 384, 2024*.

That the GVS&DD Board receive for information the proposed *Greater Vancouver Sewerage and Drainage District North Shore Wastewater Treatment Plant Reserve Funds Bylaw No. 385, 2024*.

### **FINANCIAL IMPLICATIONS**

If the GVS&DD Board approves the 2025 Budget and endorses the 2025 - 2029 Financial Plan for Liquid Waste Services, as presented under Alternative 1, in 2025 the revenue from the annual levy for the system will increase to \$575.6 million which will generate the majority of the \$681.9 million in total revenue required to offset total expenditures. This increase in the levy represents a \$63 increase, relative to the household impact that takes into account the amended NSWWTP program costs, bringing the household impact to a total of \$510.

Over the term of the five-year Financial Plan, the Liquid Waste Services annual levy is projected to increase by an average of \$85.7 million per year to provide the required revenue to offset projected expenditures. It is anticipated that the cost to the average regional household over the next five years will rise from \$510 in 2025 to \$672 in 2029 representing an average annual increase of \$45.

Under Alternative 2, the Committee may wish to consider recommending amendments to the 2025 Budget and Five-Year Financial Plan for consideration at the Metro Vancouver Board Budget Workshop. Any changes to the plan may have an impact on the provision of liquid waste services for the region and actions underway to meet the directions provided in the Board Strategic Plan.

Under Alternative 3, the adjusted apportionment of the additional costs for the NSWWTP program as directed by the Board at the May 31, 2024 Special Joint Board Meeting will not be implemented and these costs will be apportioned as per the existing *Greater Vancouver Sewerage and Drainage District Cost Apportionment Bylaw No. 283, 2014*. The 2025 – 2029 Financial Plan for Liquid Waste Services presented in this report must be revised accordingly.

### **CONCLUSION**

The Liquid Waste Services 2025 Budget and Five-Year Financial Plan has been prepared following direction received at the May 31, 2024 Metro Vancouver Board Budget Workshop and to respond to direction provided in the *Board Strategic Plan*. It is presented to Committee and Board members to provide an overview of activities and financial impacts for the years 2025 to 2029 for Liquid Waste Services.

The presentation of the 2025 Budget and Five-Year Financial Plan for Liquid Waste 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 Liquid Waste 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 requirements.

Staff recommend endorsing the 2025 - 2029 Financial Plan and Annual Work Plans for Liquid Waste Services, Board approval of the *Greater Vancouver Sewerage and Drainage District Cost Apportionment Amendment Bylaw No. 384, 2024*, and Board approval of the *Greater Vancouver Sewerage and Drainage District North Shore Wastewater Treatment Plant Reserve Funds Bylaw No. 385, 2024* as presented under Alternative 1.

**ATTACHMENTS:**

1. 2025 - 2029 Liquid Waste Services Financial Plan
2. 2025 - 2029 Liquid Waste Services Capital Budget Summary
3. 2025 Liquid Waste Services Work Plans
4. 2025 - 2029 “What’s Happening”
5. 2025 - 2029 Projected Reserves – Liquid Waste Services
6. 2025 - 2029 Liquid Waste Services Financial Plan Presentation
7. *Greater Vancouver Sewerage and Drainage District Cost Apportionment Amendment Bylaw 384, 2024*
8. *Greater Vancouver Sewerage and Drainage District North Shore Wastewater Treatment Plant Reserve Funds Bylaw No. 385, 2024*

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**GREATER VANCOUVER SEWERAGE AND DRAINAGE DISTRICT  
LIQUID WASTE SERVICES  
2025 BUDGET REVIEW  
2025 - 2029 FINANCIAL PLAN**

	2024	2025	%	2026	%	2027	%	2028	%	2029	%
	BUDGET	BUDGET	CHANGE	FORECAST	CHANGE	FORECAST	CHANGE	FORECAST	CHANGE	FORECAST	CHANGE
<b>REVENUES</b>											
Liquid Waste Services Levy	\$ 389,498,103	\$ 575,550,267	47.8%	\$ 630,676,135	9.6%	\$ 687,272,027	9.0%	\$ 748,600,165	8.9%	\$ 817,846,127	9.3%
User Fees	5,399,457	9,713,849		11,051,642		12,691,404		14,700,253		17,173,645	
Transfer from DCC Reserves	72,994,744	77,468,636		119,373,175		143,648,817		164,445,354		216,307,340	
Liquid Waste Industrial Charges	13,169,057	13,655,992		14,044,413		14,465,746		14,827,389		15,198,073	
Other External Revenues	1,986,884	2,399,840		2,411,840		2,188,361		1,980,883		2,010,883	
Transfer from Sustainability Innovation Fund Reserves	2,537,635	-		-		-		-		-	
Transfer from Reserves	2,331,007	3,090,083		19,477,228		55,032,789		98,007,462		134,352,802	
<b>TOTAL REVENUES</b>	<b>\$ 487,916,887</b>	<b>\$ 681,878,667</b>	<b>39.8%</b>	<b>\$ 797,034,433</b>	<b>16.9%</b>	<b>\$ 915,299,144</b>	<b>14.8%</b>	<b>\$1,042,561,506</b>	<b>13.9%</b>	<b>\$1,202,888,870</b>	<b>15.4%</b>
<b>EXPENDITURES</b>											
Operating Programs:											
Policy Planning and Analysis											
Contribution to Sustainability Innovation Fund Reserve	\$ 1,127,000	\$ 1,127,000		\$ 1,127,000		\$ 1,127,000		\$ 1,127,000		\$ 1,127,000	
Utility Analysis and Infrastructure	3,217,058	3,530,958		4,322,304		4,444,560		4,119,290		4,246,941	
Utility Policy and Planning	3,854,351	3,777,189		4,090,041		4,599,874		4,964,482		5,130,545	
Wastewater Research and Innovation	3,828,100	1,674,892		1,924,127		1,981,459		2,072,135		2,168,750	
Wastewater Facilities Planning	870,969	730,081		1,138,018		1,356,830		1,276,156		1,396,053	
	<u>12,897,478</u>	<u>10,840,120</u>	(16.0%)	<u>12,601,490</u>	16.2%	<u>13,509,723</u>	7.2%	<u>13,559,063</u>	0.4%	<u>14,069,289</u>	3.8%
Management Systems and Utility Services											
Annacis Research Centre	525,741	589,535		592,888		610,280		626,894		654,861	
Dispatch	168,597	179,871		185,345		190,989		195,720		201,338	
Energy Management	364,251	504,930		521,692		539,955		558,663		578,050	
Engineers in Training	823,862	822,041		847,908		874,578		902,050		930,453	
Management Systems Utility Services	1,311,325	1,331,118		1,350,595		1,386,201		1,423,029		1,461,279	
Records Management	189,518	201,224		207,520		214,007		220,688		227,588	
Utility Voice Radio	142,589	147,254		153,436		159,869		166,507		170,600	
	<u>3,525,883</u>	<u>3,775,973</u>	7.1%	<u>3,859,384</u>	2.2%	<u>3,975,879</u>	3.0%	<u>4,093,551</u>	3.0%	<u>4,224,169</u>	3.2%
Environmental Management and Quality Control											
Environmental Management and Quality Control	15,573,512	17,946,660		18,786,707		18,941,172		21,089,418		20,979,186	
Source Compliance Monitoring	438,745	523,092		702,331		553,227		570,754		585,416	
Contribution to Reserve	108,399	109,835		113,062		116,264		119,501		125,476	
	<u>16,120,656</u>	<u>18,579,587</u>	15.3%	<u>19,602,100</u>	5.5%	<u>19,610,663</u>	0.0%	<u>21,779,673</u>	11.1%	<u>21,690,078</u>	(0.4%)
Engineering, Design & Construction											
Minor Capital Projects	9,706,543	9,900,367		10,292,324		10,514,000		10,812,815		11,053,101	
	<u>9,706,543</u>	<u>9,900,367</u>	2.0%	<u>10,292,324</u>	4.0%	<u>10,514,000</u>	2.2%	<u>10,812,815</u>	2.8%	<u>11,053,101</u>	2.2%
Operations and Maintenance											
Lake City Operations	1,058,982	455,619		468,684		556,337		572,448		581,060	
Liquid Waste Residuals	42,152,634	41,741,733		46,024,377		47,877,050		48,892,653		52,110,203	
Maintenance	38,457,280	40,320,712		42,243,278		43,841,564		45,546,900		49,252,903	
SCADA Control Systems	1,373,250	1,559,069		1,660,986		1,736,398		1,813,250		1,864,006	
Urban Drainage	2,106,676	2,270,768		2,322,503		2,522,976		2,608,229		2,715,411	
Wastewater Collection	18,560,488	20,165,785		21,277,120		22,745,727		23,509,972		24,646,652	
Wastewater Treatment	63,322,632	71,339,119		78,526,027		76,253,174		79,245,602		83,787,536	
	<u>167,031,942</u>	<u>177,852,805</u>	6.5%	<u>192,522,975</u>	8.2%	<u>195,533,226</u>	1.6%	<u>202,189,054</u>	3.4%	<u>214,957,771</u>	6.3%
Administration and Department Support											
Communications Program	503,500	527,064		537,606		548,359		559,326		570,513	
Environmental Regulation and Enforcement	2,432,995	2,517,369		2,650,917		2,717,453		2,800,721		2,891,593	
Allocation of Centralized Support Costs	39,923,864	44,752,933		48,498,840		53,100,476		56,405,554		59,598,868	
Total Operating Programs	<u>255,112,397</u>	<u>271,890,424</u>	6.6%	<u>293,941,121</u>	8.1%	<u>303,198,809</u>	3.1%	<u>316,146,146</u>	4.3%	<u>333,472,455</u>	5.5%
Allocation of Project Delivery Cost											
Debt Service	7,265,724	8,246,594	13.5%	8,446,402	2.4%	8,823,784	4.5%	9,175,031	4.0%	9,515,209	3.7%
Contribution to Capital	126,907,374	149,116,775	17.5%	215,662,186	44.6%	295,821,788	37.2%	393,770,768	33.1%	523,258,839	32.9%
	<u>98,631,392</u>	<u>252,624,874</u>	156.1%	<u>278,984,724</u>	10.4%	<u>307,454,763</u>	10.2%	<u>323,469,561</u>	5.2%	<u>336,642,367</u>	4.1%
<b>TOTAL EXPENDITURES</b>	<b>\$ 487,916,887</b>	<b>\$ 681,878,667</b>	<b>39.8%</b>	<b>\$ 797,034,433</b>	<b>16.9%</b>	<b>\$ 915,299,144</b>	<b>14.8%</b>	<b>\$1,042,561,506</b>	<b>13.9%</b>	<b>\$1,202,888,870</b>	<b>15.4%</b>

**GREATER VANCOUVER SEWERAGE AND DRAINAGE DISTRICT**

**LIQUID WASTE SERVICES**

**2025 BUDGET REVIEW**

**2025 - 2029 FINANCIAL PLAN**

**VANCOUVER SEWERAGE AREA**

	2024	2025	%	2026	%	2027	%	2028	%	2029	%
	BUDGET	BUDGET	CHANGE	FORECAST	CHANGE	FORECAST	CHANGE	FORECAST	CHANGE	FORECAST	CHANGE
<b>REVENUES</b>											
Liquid Waste Services Levy	\$125,868,534	\$190,295,659	51.2%	\$209,508,774	10.1%	\$228,863,031	9.2%	\$246,949,227	7.9%	\$274,102,265	11.0%
User Fees	1,528,984	3,005,568		3,452,859		4,002,628		4,677,692		5,510,500	
Transfer from DCC Reserves	7,342,921	7,743,983		10,355,416		13,654,894		17,378,956		25,218,490	
Liquid Waste Industrial Charges	3,386,906	3,522,382		3,628,053		3,736,895		3,830,317		3,926,075	
Other External Revenues	237,127	166,697		166,697		166,697		166,697		166,697	
Transfer from Sustainability Innovation Fund Reserves	974,959	-		-		-		-		-	
Transfer from Reserves	1,921,267	696,704		4,609,217		13,126,074		23,700,430		32,586,482	
<b>TOTAL REVENUES</b>	<b>\$141,260,698</b>	<b>\$205,430,993</b>	<b>45.4%</b>	<b>\$231,721,016</b>	<b>12.8%</b>	<b>\$263,550,219</b>	<b>13.7%</b>	<b>\$296,703,319</b>	<b>12.6%</b>	<b>\$341,510,509</b>	<b>15.1%</b>
<b>EXPENDITURES</b>											
Operating Programs:											
Policy Planning and Analysis											
Contribution to Sustainability Innovation Fund Reserve	\$ 432,993	\$ 432,993		\$ 432,993		\$ 432,993		\$ 432,993		\$ 432,993	
Utility Analysis and Infrastructure	1,168,759	1,282,647		1,585,100		1,631,826		1,545,728		1,594,516	
Utility Policy and Planning	1,461,632	1,395,481		1,514,122		1,704,198		1,842,562		1,905,008	
Wastewater Research and Innovation	1,470,756	640,144		735,401		757,314		791,970		828,896	
Wastewater Facilities Planning	334,626	279,037		434,950		518,580		487,747		533,571	
	<u>4,868,766</u>	<u>4,030,302</u>	(17.2%)	<u>4,702,566</u>	16.7%	<u>5,044,911</u>	7.3%	<u>5,101,000</u>	1.1%	<u>5,294,984</u>	3.8%
Management Systems and Utility Services											
Annacis Research Centre	201,990	225,320		226,602		233,249		239,599		250,288	
Dispatch	49,654	51,759		53,335		54,959		56,320		57,937	
Energy Management	107,277	145,297		150,122		155,377		160,759		166,337	
Engineers in Training	316,519	314,184		324,070		334,264		344,763		355,619	
Management Systems Utility Services	386,198	383,029		388,634		398,879		409,477		420,483	
Records Management	55,816	57,904		59,716		61,582		63,505		65,490	
Utility Voice Radio	51,196	52,872		55,091		57,402		59,785		61,254	
	<u>1,168,650</u>	<u>1,230,365</u>	5.3%	<u>1,257,570</u>	2.2%	<u>1,295,712</u>	3.0%	<u>1,334,208</u>	3.0%	<u>1,377,408</u>	3.2%
Environmental Management and Quality Control											
Environmental Management and Quality Control	5,774,470	6,644,043		6,947,699		7,000,079		7,815,366		7,765,766	
Source Compliance Monitoring	168,566	199,926		268,431		211,443		218,142		223,746	
Contribution to Reserve	41,647	41,979		43,212		44,436		45,673		47,957	
	<u>5,984,683</u>	<u>6,885,948</u>	15.1%	<u>7,259,342</u>	5.4%	<u>7,255,958</u>	0.0%	<u>8,079,181</u>	11.3%	<u>8,037,469</u>	(0.5%)
Engineering, Design & Construction											
Minor Capital Projects	2,815,821	2,512,000		2,631,419		2,691,241		2,772,033		2,842,159	
	<u>2,815,821</u>	<u>2,512,000</u>	(10.8%)	<u>2,631,419</u>	4.8%	<u>2,691,241</u>	2.3%	<u>2,772,033</u>	3.0%	<u>2,842,159</u>	2.5%
Operations and Maintenance											
Lake City Operations	406,867	174,138		179,132		212,632		218,790		222,081	
Liquid Waste Residuals	25,227,925	23,929,059		25,799,511		26,794,869		27,558,715		29,019,818	
Maintenance	10,278,917	10,743,314		11,529,667		11,865,797		12,361,155		12,824,965	
SCADA Control Systems	378,739	435,324		463,777		484,803		506,230		520,397	
Wastewater Collection	5,534,858	6,060,775		6,368,914		6,710,282		6,959,762		7,187,968	
Wastewater Treatment	17,159,736	18,966,142		19,488,466		20,689,153		21,417,241		22,142,358	
	<u>58,987,042</u>	<u>60,308,752</u>	2.2%	<u>63,829,467</u>	5.8%	<u>66,757,536</u>	4.6%	<u>69,021,893</u>	3.4%	<u>71,917,587</u>	4.2%
Administration and Department Support											
Communications Program	874,558	904,745	3.5%	971,296	7.4%	1,061,518	9.3%	1,135,573	7.0%	1,271,013	11.9%
Environmental Regulation and Enforcement	193,445	201,444	4.1%	205,473	2.0%	209,583	2.0%	213,774	2.0%	218,050	2.0%
Allocation of Centralized Support Costs	456,916	478,804	4.8%	504,204	5.3%	516,860	2.5%	532,697	3.1%	549,981	3.2%
Total Operating Programs	<u>11,703,180</u>	<u>13,011,078</u>	11.2%	<u>14,093,389</u>	8.3%	<u>15,089,333</u>	7.1%	<u>16,138,167</u>	7.0%	<u>17,029,252</u>	5.5%
Allocation of Project Delivery Cost	2,338,649	2,441,970	4.4%	2,501,137	2.4%	2,612,886	4.5%	2,716,897	4.0%	2,817,630	3.7%
Debt Service	15,036,345	18,723,691	24.5%	30,446,380	62.6%	50,713,920	66.6%	77,876,317	53.6%	117,453,187	50.8%
Contribution to Capital	36,832,643	94,701,894	157.1%	103,318,773	9.1%	110,300,761	6.8%	111,781,579	1.3%	112,701,789	0.8%
<b>TOTAL EXPENDITURES</b>	<b>\$141,260,698</b>	<b>\$205,430,993</b>	<b>45.4%</b>	<b>\$231,721,016</b>	<b>12.8%</b>	<b>\$263,550,219</b>	<b>13.7%</b>	<b>\$296,703,319</b>	<b>12.6%</b>	<b>\$341,510,509</b>	<b>15.1%</b>

**GREATER VANCOUVER SEWERAGE AND DRAINAGE DISTRICT**  
**LIQUID WASTE SERVICES**  
**2025 BUDGET REVIEW**  
**2025 - 2029 FINANCIAL PLAN**  
**NORTH SHORE SEWERAGE AREA**

	2024	2025	%	2026	%	2027	%	2028	%	2029	%
	BUDGET	BUDGET	CHANGE	FORECAST	CHANGE	FORECAST	CHANGE	FORECAST	CHANGE	FORECAST	CHANGE
<b>REVENUES</b>											
Liquid Waste Services Levy	\$ 37,993,285	\$ 64,272,761	69.2%	\$ 81,372,399	26.6%	\$ 94,730,042	16.4%	\$108,013,468	14.0%	\$121,688,824	12.7%
User Fees	60,893	69,812		71,494		73,218		74,985		76,796	
Transfer from DCC Reserves	2,470,796	2,857,776		4,876,304		6,534,874		8,162,956		10,522,056	
Liquid Waste Industrial Charges	942,527	960,435		978,683		1,008,043		1,033,244		1,059,075	
Other External Revenues	27,405	27,577		27,577		27,577		27,577		27,577	
Transfer from Sustainability Innovation Fund Reserves	159,871	-		-		-		-		-	
Transfer from Reserves	18,900	1,184,948		7,095,160		20,094,892		35,242,697		48,060,309	
<b>TOTAL REVENUES</b>	<b>\$ 41,673,677</b>	<b>\$ 69,373,309</b>	<b>66.5%</b>	<b>\$ 94,421,617</b>	<b>36.1%</b>	<b>\$122,468,646</b>	<b>29.7%</b>	<b>\$152,554,927</b>	<b>24.6%</b>	<b>\$181,434,637</b>	<b>18.9%</b>
<b>EXPENDITURES</b>											
Operating Programs:											
Policy Planning and Analysis											
Contribution to Sustainability Innovation Fund Reserve	\$ 71,001	\$ 71,001		\$ 71,001		\$ 71,001		\$ 71,001		\$ 71,001	
Utility Analysis and Infrastructure	191,650	214,110		264,598		272,398		258,026		266,170	
Utility Policy and Planning	239,674	232,945		252,750		284,479		307,576		318,000	
Wastewater Research and Innovation	241,171	106,858		122,759		126,417		132,202		138,366	
Wastewater Facilities Planning	54,871	46,579		72,606		86,566		81,419		89,068	
	<u>798,367</u>	<u>671,493</u>	(15.9%)	<u>783,714</u>	16.7%	<u>840,861</u>	7.3%	<u>850,224</u>	1.1%	<u>882,605</u>	3.8%
Management Systems and Utility Services											
Annacis Research Centre	33,122	37,612		37,826		38,936		39,996		41,780	
Dispatch	15,406	15,364		15,829		16,310		16,716		17,196	
Energy Management	33,287	43,121		44,552		46,112		47,710		49,365	
Engineers in Training	51,897	52,446		54,097		55,798		57,551		59,363	
Management Systems Utility Services	119,829	113,677		115,341		118,382		121,527		124,793	
Records Management	17,317	17,186		17,723		18,277		18,848		19,437	
Utility Voice Radio	13,572	14,016		14,605		15,217		15,849		16,238	
	<u>284,430</u>	<u>293,422</u>	3.2%	<u>299,973</u>	2.2%	<u>309,032</u>	3.0%	<u>318,197</u>	3.0%	<u>328,172</u>	3.1%
Environmental Management and Quality Control											
Environmental Management and Quality Control	1,095,946	1,264,156		1,327,204		1,340,901		1,481,209		1,478,315	
Source Compliance Monitoring	27,641	33,373		44,809		35,296		36,414		37,350	
Contribution to Reserve	6,829	7,007		7,213		7,418		7,624		8,005	
	<u>1,130,416</u>	<u>1,304,536</u>	15.4%	<u>1,379,226</u>	5.7%	<u>1,383,615</u>	0.3%	<u>1,525,247</u>	10.2%	<u>1,523,670</u>	(0.1%)
Engineering, Design & Construction											
Minor Capital Projects	301,847	1,982,000		1,993,437		2,001,768		2,010,458		2,017,965	
	<u>301,847</u>	<u>1,982,000</u>	556.6%	<u>1,993,437</u>	0.6%	<u>2,001,768</u>	0.4%	<u>2,010,458</u>	0.4%	<u>2,017,965</u>	0.4%
Operations and Maintenance											
Lake City Operations	66,715	29,069		29,902		35,495		36,523		37,072	
Liquid Waste Residuals	1,011,097	970,279		1,101,409		1,147,801		1,162,141		1,257,291	
Maintenance	4,301,122	4,347,185		4,669,598		4,932,709		5,115,913		5,329,545	
SCADA Control Systems	212,682	225,967		240,754		251,774		263,008		270,377	
Wastewater Collection	3,605,297	3,945,188		4,164,585		4,355,015		4,498,990		4,689,927	
Wastewater Treatment	7,974,484	10,717,690		10,912,838		11,211,400		11,627,936		12,869,504	
	<u>17,171,397</u>	<u>20,235,378</u>	17.8%	<u>21,119,086</u>	4.4%	<u>21,934,194</u>	3.9%	<u>22,704,511</u>	3.5%	<u>24,453,716</u>	7.7%
Administration and Department Support											
Communications Program	31,721	33,627		34,299		34,985		35,685		36,399	
Environmental Regulation and Enforcement	135,518	146,259		154,018		157,884		162,722		168,002	
Allocation of Centralized Support Costs	3,626,724	3,791,902		4,948,550		5,714,460		6,508,133		7,255,856	
Total Operating Programs	<u>23,751,776</u>	<u>28,727,132</u>	20.9%	<u>31,000,569</u>	7.9%	<u>32,691,842</u>	5.5%	<u>34,452,199</u>	5.4%	<u>37,043,603</u>	7.5%
Allocation of Project Delivery Cost											
Debt Service	493,754	1,362,710	176.0%	1,395,728	2.4%	1,458,088	4.5%	1,516,130	4.0%	1,572,343	3.7%
Contribution to Capital	7,688,674	11,163,036	45.2%	23,959,440	114.6%	39,695,131	65.7%	57,383,559	44.6%	72,778,284	26.8%
	<u>9,739,473</u>	<u>28,120,431</u>	188.7%	<u>38,065,880</u>	35.4%	<u>48,623,585</u>	27.7%	<u>59,203,039</u>	21.8%	<u>70,040,407</u>	18.3%
<b>TOTAL EXPENDITURES</b>	<b>\$ 41,673,677</b>	<b>\$ 69,373,309</b>	<b>66.5%</b>	<b>\$ 94,421,617</b>	<b>36.1%</b>	<b>\$122,468,646</b>	<b>29.7%</b>	<b>\$152,554,927</b>	<b>24.6%</b>	<b>\$181,434,637</b>	<b>18.9%</b>

**GREATER VANCOUVER SEWERAGE AND DRAINAGE DISTRICT**

**LIQUID WASTE SERVICES**

**2025 BUDGET REVIEW**

**2025 - 2029 FINANCIAL PLAN**

**LULU ISLAND WEST SEWERAGE AREA**

	2024	2025	%	2026	%	2027	%	2028	%	2029	%
	BUDGET	BUDGET	CHANGE	FORECAST	CHANGE	FORECAST	CHANGE	FORECAST	CHANGE	FORECAST	CHANGE
<b>REVENUES</b>											
Liquid Waste Services Levy	\$ 32,235,087	\$ 46,147,331	43.2%	\$ 51,949,296	12.6%	\$ 56,443,199	8.7%	\$ 58,577,937	3.8%	\$ 60,787,178	3.8%
User Fees	134,132	137,365		140,728		144,175		147,708		151,330	
Transfer from DCC Reserves	2,427,028	2,345,261		3,176,583		3,990,095		4,773,240		6,618,754	
Liquid Waste Industrial Charges	953,991	972,117		990,587		1,020,305		1,045,813		1,071,958	
Other External Revenues	705,059	717,489		729,489		741,489		769,489		799,489	
Transfer from Sustainability Innovation Fund Reserves	175,351	-		-		-		-		-	
Transfer from Reserves	20,730	122,528		949,402		2,713,846		4,896,950		6,737,330	
<b>TOTAL REVENUES</b>	<b>\$ 36,651,378</b>	<b>\$ 50,442,091</b>	<b>37.6%</b>	<b>\$ 57,936,085</b>	<b>14.9%</b>	<b>\$ 65,053,109</b>	<b>12.3%</b>	<b>\$ 70,211,137</b>	<b>7.9%</b>	<b>\$ 76,166,039</b>	<b>8.5%</b>
<b>EXPENDITURES</b>											
Operating Programs:											
Policy Planning and Analysis											
Contribution to Sustainability Innovation Fund Reserve	\$ 77,876	\$ 77,876		\$ 77,876		\$ 77,876		\$ 77,876		\$ 77,876	
Utility Analysis and Infrastructure	210,206	238,609		294,873		303,566		287,549		296,625	
Utility Policy and Planning	262,881	259,599		281,669		317,029		342,769		354,385	
Wastewater Research and Innovation	264,522	119,085		136,805		140,882		147,329		154,198	
Wastewater Facilities Planning	60,184	51,909		80,913		96,471		90,735		99,259	
	875,669	747,078	(14.7%)	872,136	16.7%	935,824	7.3%	946,258	1.1%	982,343	3.8%
Management Systems and Utility Services											
Annacis Research Centre	36,329	41,916		42,154		43,391		44,572		46,561	
Dispatch	13,766	13,488		13,898		14,322		14,676		15,098	
Energy Management	29,744	37,863		39,119		40,489		41,892		43,346	
Engineers in Training	56,931	58,447		60,286		62,182		64,136		66,155	
Management Systems Utility Services	107,070	99,821		101,281		103,951		106,713		109,581	
Records Management	15,475	15,089		15,561		16,048		16,549		17,066	
Utility Voice Radio	11,945	12,336		12,853		13,392		13,948		14,291	
	271,260	278,960	2.8%	285,152	2.2%	293,775	3.0%	302,486	3.0%	312,098	3.2%
Environmental Management and Quality Control											
Environmental Management and Quality Control	1,131,504	1,328,821		1,393,595		1,405,570		1,559,510		1,553,487	
Source Compliance Monitoring	30,317	37,192		49,936		39,334		40,581		41,623	
Contribution to Reserve	7,490	7,809		8,039		8,266		8,497		8,921	
	1,169,311	1,373,822	17.5%	1,451,570	5.7%	1,453,170	0.1%	1,608,588	10.7%	1,604,031	(0.3%)
Engineering, Design & Construction											
Minor Capital Projects	1,273,204	327,000		368,912		398,600		442,779		472,865	
	1,273,204	327,000	(74.3%)	368,912	12.8%	398,600	8.0%	442,779	11.1%	472,865	6.8%
Operations and Maintenance											
Lake City Operations	73,179	32,394		33,323		39,554		40,699		41,313	
Liquid Waste Residuals	1,937,345	2,140,066		2,433,859		2,541,473		2,562,297		2,781,239	
Maintenance	3,243,834	3,488,102		3,418,887		3,563,397		3,671,533		3,802,278	
SCADA Control Systems	37,206	40,450		43,096		45,064		47,068		48,386	
Wastewater Collection	637,548	706,822		741,247		954,540		836,877		907,235	
Wastewater Treatment	7,140,880	7,883,591		8,265,043		8,578,360		9,100,331		9,272,304	1.9%
	13,069,992	14,291,425	9.3%	14,935,455	4.5%	15,722,388	5.3%	16,258,805	3.4%	16,852,755	3.7%
Administration and Department Support											
Communications Program	242,463	235,784	(2.8%)	253,128	7.4%	276,640	9.3%	295,940	7.0%	331,236	11.9%
Environmental Regulation and Enforcement	34,792	37,474	7.7%	38,224	2.0%	38,988	2.0%	39,768	2.0%	40,563	2.0%
Allocation of Centralized Support Costs	240,867	240,912	0.0%	253,693	5.3%	260,060	2.5%	268,029	3.1%	276,725	3.2%
Total Operating Programs	3,208,381	3,349,834	4.4%	3,692,872	10.2%	3,995,943	8.2%	4,173,689	4.4%	4,179,049	0.1%
Total Operating Programs	20,385,939	20,882,289	2.4%	22,151,142	6.1%	23,375,388	5.5%	24,336,342	4.1%	25,051,665	2.9%
Allocation of Project Delivery Cost	411,218	415,612	1.1%	425,681	2.4%	444,701	4.5%	462,403	4.0%	479,547	3.7%
Debt Service	8,049,519	9,929,449	23.4%	15,492,964	56.0%	19,969,493	28.9%	23,952,046	19.9%	29,014,526	21.1%
Contribution to Capital	7,804,702	19,214,741	146.2%	19,866,298	3.4%	21,263,527	7.0%	21,460,346	0.9%	21,620,301	0.7%
<b>TOTAL EXPENDITURES</b>	<b>\$ 36,651,378</b>	<b>\$ 50,442,091</b>	<b>37.6%</b>	<b>\$ 57,936,085</b>	<b>14.9%</b>	<b>\$ 65,053,109</b>	<b>12.3%</b>	<b>\$ 70,211,137</b>	<b>7.9%</b>	<b>\$ 76,166,039</b>	<b>8.5%</b>

**GREATER VANCOUVER SEWERAGE AND DRAINAGE DISTRICT**

**LIQUID WASTE SERVICES**

**2025 BUDGET REVIEW**

**2025 - 2029 FINANCIAL PLAN**

**FRASER SEWERAGE AREA**

	2024	2025	%	2026	%	2027	%	2028	%	2029	%
	BUDGET	Budget	CHANGE	FORECAST	CHANGE	FORECAST	CHANGE	FORECAST	CHANGE	FORECAST	CHANGE
<b>REVENUES</b>											
Liquid Waste Services Levy	\$190,533,872	\$271,499,356	42.5%	\$284,422,520	4.8%	\$303,602,408	6.7%	\$331,327,099	9.1%	\$357,434,398	7.9%
User Fees	3,675,448	6,501,104		7,386,561		8,471,383		9,799,868		11,435,019	
Transfer from DCC Reserves	60,753,999	64,521,616		100,964,872		119,468,954		134,130,202		173,948,040	
Liquid Waste Industrial Charges	7,885,633	8,201,058		8,447,090		8,700,503		8,918,015		9,140,965	
Other External Revenues	1,017,293	1,488,077		1,488,077		1,252,598		1,017,120		1,017,120	
Transfer from Sustainability Innovation Fund Reserves	1,227,454	-		-		-		-		-	
Transfer from Reserves	145,110	860,903		6,598,449		18,867,977		34,037,385		46,833,681	
<b>TOTAL REVENUES</b>	<b>\$265,238,809</b>	<b>\$353,072,114</b>	<b>33.1%</b>	<b>\$409,307,569</b>	<b>15.9%</b>	<b>\$460,363,823</b>	<b>12.5%</b>	<b>\$519,229,689</b>	<b>12.8%</b>	<b>\$599,809,223</b>	<b>15.5%</b>
<b>EXPENDITURES</b>											
Operating Programs:											
Policy Planning and Analysis											
Contribution to Sustainability Innovation Fund Reserve	\$ 545,130	\$ 545,130		\$ 545,130		\$ 545,130		\$ 545,130		\$ 545,130	
Utility Analysis and Infrastructure	1,471,443	1,620,592		2,002,733		2,061,770		1,952,987		2,014,630	
Utility Policy and Planning	1,840,164	1,763,156		1,913,054		2,153,210		2,328,029		2,406,930	
Wastewater Research and Innovation	1,851,651	808,805		929,162		956,846		1,000,634		1,047,290	
Wastewater Facilities Planning	421,288	352,556		549,549		655,213		616,255		674,155	
	<u>6,129,676</u>	<u>5,090,239</u>	(17.0%)	<u>5,939,628</u>	16.7%	<u>6,372,169</u>	7.3%	<u>6,443,035</u>	1.1%	<u>6,688,135</u>	3.8%
Management Systems and Utility Services											
Annacis Research Centre	254,300	284,687		286,306		294,704		302,727		316,232	
Dispatch	88,831	98,090		101,076		104,154		106,734		109,797	
Energy Management	191,913	275,360		284,501		294,460		304,663		315,236	
Engineers in Training	398,515	396,964		409,455		422,334		435,600		449,316	
Management Systems Utility Services	690,924	725,925		736,547		755,965		776,048		796,909	
Records Management	99,854	109,735		113,169		116,706		120,350		124,113	
Utility Voice Radio	65,876	68,030		70,887		73,858		76,925		78,817	
	<u>1,790,213</u>	<u>1,958,791</u>	9.4%	<u>2,001,941</u>	2.2%	<u>2,062,181</u>	3.0%	<u>2,123,047</u>	3.0%	<u>2,190,420</u>	3.2%
Environmental Management and Quality Control											
Environmental Management and Quality Control	7,571,592	8,709,640		9,118,209		9,194,622		10,233,333		10,181,618	
Source Compliance Monitoring	212,221	252,601		339,155		267,154		275,617		282,697	
Contribution to Reserve	52,433	53,040		54,598		56,144		57,707		60,593	
	<u>7,836,246</u>	<u>9,015,281</u>	15.0%	<u>9,511,962</u>	5.5%	<u>9,517,920</u>	0.1%	<u>10,566,657</u>	11.0%	<u>10,524,908</u>	(0.4%)
Engineering, Design & Construction											
Minor Capital Projects	5,015,671	4,571,367	(8.9%)	4,782,869	4.6%	4,898,824	2.4%	5,055,902	3.2%	5,181,846	2.5%
	<u>5,015,671</u>	<u>4,571,367</u>	(8.9%)	<u>4,782,869</u>	4.6%	<u>4,898,824</u>	2.4%	<u>5,055,902</u>	3.2%	<u>5,181,846</u>	2.5%
Operations and Maintenance											
Lake City Operations	512,221	220,018		226,327		268,656		276,436		280,594	
Liquid Waste Residuals	13,976,267	14,702,329		16,689,598		17,392,907		17,609,500		19,051,855	
Maintenance	20,475,209	21,611,654		22,477,036		23,326,760		24,240,957		27,133,196	
SCADA Control Systems	718,526	829,252		883,448		923,477		964,272		991,258	
Wastewater Collection	8,782,785	9,453,000		10,002,374		10,725,890		11,214,343		11,861,522	
Wastewater Treatment	31,047,532	33,771,696		39,859,680		35,774,261		37,100,094		39,503,370	
	<u>75,512,540</u>	<u>80,587,949</u>	6.7%	<u>90,138,463</u>	11.9%	<u>88,411,951</u>	(1.9%)	<u>91,405,602</u>	3.4%	<u>98,821,795</u>	8.1%
Administration and Department Support											
Communications Program	1,564,619	1,714,694	9.6%	1,840,821	7.4%	2,011,813	9.3%	2,152,163	7.0%	2,408,851	11.9%
Environmental Regulation and Enforcement	243,542	254,519	4.5%	259,610	2.0%	264,803	2.0%	270,099	2.0%	275,501	2.0%
Allocation of Centralized Support Costs	1,599,694	1,651,394	3.2%	1,739,002	5.3%	1,782,649	2.5%	1,837,273	3.1%	1,896,885	3.2%
Total Operating Programs	<u>21,142,201</u>	<u>24,317,726</u>	15.0%	<u>25,476,908</u>	4.8%	<u>28,028,145</u>	10.0%	<u>29,317,936</u>	4.6%	<u>30,887,738</u>	5.4%
Allocation of Project Delivery Cost											
Debt Service	4,016,997	4,021,747	0.1%	4,119,190	2.4%	4,303,234	4.5%	4,474,532	4.0%	4,640,432	3.7%
Contribution to Capital	96,132,836	109,300,599	13.7%	145,763,402	33.4%	185,443,244	27.2%	234,558,846	26.5%	304,012,842	29.6%
	<u>44,254,574</u>	<u>110,587,808</u>	149.9%	<u>117,733,773</u>	6.5%	<u>127,266,890</u>	8.1%	<u>131,024,597</u>	3.0%	<u>132,279,870</u>	1.0%
<b>TOTAL EXPENDITURES</b>	<b>\$265,238,809</b>	<b>\$353,072,114</b>	<b>33.1%</b>	<b>\$409,307,569</b>	<b>15.9%</b>	<b>\$460,363,823</b>	<b>12.5%</b>	<b>\$519,229,689</b>	<b>12.8%</b>	<b>\$599,809,223</b>	<b>15.5%</b>

**GREATER VANCOUVER SEWERAGE AND DRAINAGE DISTRICT**  
**LIQUID WASTE SERVICES**  
**2025 BUDGET REVIEW**  
**2025 - 2029 FINANCIAL PLAN**  
**DRAINAGE**

	2024 BUDGET	2025 BUDGET	% CHANGE	2026 FORECAST	% CHANGE	2027 FORECAST	% CHANGE	2028 FORECAST	% CHANGE	2029 FORECAST	% CHANGE
<b>REVENUES</b>											
Liquid Waste Services Levy	\$ 2,867,325	\$ 3,335,160	16.3%	\$ 3,423,146	2.6%	\$ 3,633,347	6.1%	\$ 3,732,434	2.7%	\$ 3,833,462	2.7%
Transfer from Reserves	225,000	225,000		225,000		230,000		130,000		135,000	
<b>TOTAL REVENUES</b>	<b>\$ 3,092,325</b>	<b>\$ 3,560,160</b>	<b>15.1%</b>	<b>\$ 3,648,146</b>	<b>2.5%</b>	<b>\$ 3,863,347</b>	<b>5.9%</b>	<b>\$ 3,862,434</b>	<b>0.0%</b>	<b>\$ 3,968,462</b>	<b>2.7%</b>
<b>EXPENDITURES</b>											
Operating Programs:											
Policy Planning and Analysis											
Utility Analysis and Infrastructure	\$ 175,000	\$ 175,000		\$ 175,000		\$ 175,000		\$ 75,000		\$ 75,000	
Utility Policy and Planning	50,000	126,008		128,446		140,958		143,546		146,222	
	225,000	301,008	33.8%	303,446	0.8%	315,958	4.1%	218,546	(30.8%)	221,222	1.2%
Management Systems and Utility Services											
Dispatch	940	1,170		1,207		1,244		1,274		1,310	
Energy Management	2,030	3,289		3,398		3,517		3,639		3,766	
Management Systems Utility Services	7,304	8,666		8,792		9,024		9,264		9,513	
Records Management	1,056	1,310		1,351		1,394		1,436		1,482	
	11,330	14,435	27.4%	14,748	2.2%	15,179	2.9%	15,613	2.9%	16,071	2.9%
Engineering, Design & Construction											
Minor Capital Projects	300,000	508,000		515,687		523,567		531,643		538,266	
	300,000	508,000	69.3%	515,687	1.5%	523,567	1.5%	531,643	1.5%	538,266	1.2%
Operations and Maintenance											
Maintenance	158,198	130,457		148,090		152,901		157,342		162,919	
SCADA Control Systems	26,097	28,076		29,911		31,280		32,672		33,588	
Urban Drainage	2,106,676	2,270,768		2,322,503		2,522,976		2,608,229		2,715,411	
	2,290,971	2,429,301	6.0%	2,500,504	2.9%	2,707,157	8.3%	2,798,243	3.4%	2,911,918	4.1%
Administration and Department Support											
	16,540	20,468	23.7%	21,974	7.4%	24,016	9.3%	25,691	7.0%	28,755	11.9%
Allocation of Centralized Support Costs											
Total Operating Programs	243,378	282,393	16.0%	287,121	1.7%	272,595	(5.1%)	267,629	(1.8%)	246,973	(7.7%)
	3,087,219	3,555,605	15.2%	3,643,480	2.5%	3,858,472	5.9%	3,857,365	0.0%	3,963,205	2.7%
Allocation of Project Delivery Cost											
	5,106	4,555	(10.8%)	4,666	2.4%	4,875	4.5%	5,069	4.0%	5,257	3.7%
<b>TOTAL EXPENDITURES</b>	<b>\$ 3,092,325</b>	<b>\$ 3,560,160</b>	<b>15.1%</b>	<b>\$ 3,648,146</b>	<b>2.5%</b>	<b>\$ 3,863,347</b>	<b>5.9%</b>	<b>\$ 3,862,434</b>	<b>0.0%</b>	<b>\$ 3,968,462</b>	<b>2.7%</b>



**GREATER VANCOUVER SEWERAGE AND DRAINAGE DISTRICT  
CAPITAL PORTFOLIO  
LIQUID WASTE 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
<b>CAPITAL EXPENDITURES</b>									
<b>Collections</b>									
Ocean Park Trunk - Crescent Beach PS Section Replacement	\$ 1,200,000	\$ 400,000	\$ 800,000	\$ 700,000	\$ 4,300,000	\$ 10,400,000	\$ 16,600,000	Design	Maintenance
104th Ave PS and FM for Redirection to NLWWTP	2,000,000	100,000	1,950,000	3,000,000	8,950,000	6,000,000	20,000,000	Definition	Growth
8th Avenue Interceptor Air Treatment Facilities	500,000	-	50,000	450,000	600,000	2,600,000	3,700,000	Definition	Upgrade
Albert Street Trunk Sewer	9,950,000	50,000	-	-	-	-	50,000	Construction	Growth
Big Bend Forcemain - Gate Replacement	400,000	176,000	200,000	1,000,000	1,000,000	250,000	2,626,000	Design	Maintenance
Burnaby Lake North Interceptor Cariboo Section	-	-	500,000	1,000,000	1,500,000	1,500,000	4,500,000	Not Started	Growth
Burnaby Lake North Interceptor Winston Section	109,200,000	15,966,000	7,650,000	2,050,000	1,500,000	4,000,000	31,166,000	Construction	Growth
Burnaby South Slope Interceptor	500,000	-	-	300,000	600,000	1,150,000	2,050,000	Definition	Growth
Cloverdale Pump Station Capacity Upgrade	11,400,000	1,100,000	5,300,000	2,845,000	2,800,000	11,600,000	23,645,000	Construction	Growth
Cloverdale Trunk Sewer Capacity Upgrade	1,200,000	600,000	550,000	1,000,000	8,450,000	8,100,000	18,700,000	Design	Growth
Combined Sewer Overflow Sampling Station Enhancements	4,000,000	410,000	1,000,000	-	-	-	1,410,000	Construction	Maintenance
Crescent Beach FM - Replacement	34,350,000	100,000	40,000	20,000	20,000	20,000	200,000	Construction	Maintenance
Eagle Creek (Lower Section) Channel Restoration	750,000	500,000	250,000	-	-	-	750,000	Construction	Resilience
EMQC-Chemistry Laboratory	17,200,000	1,000,000	5,750,000	9,800,000	-	-	16,550,000	Construction	Upgrade
Fraser Sewerage Area Integrated Resource Recovery (IRR) Study	1,200,000	429,000	200,000	-	-	-	629,000	Design	Opportunity
Front Street Pressure Sewer Access Hatches Reinforcement	5,000,000	50,000	-	-	-	-	50,000	Construction	Maintenance
FSA Flow Metering Program	4,300,000	1,070,000	670,000	-	-	-	1,740,000	Construction	Maintenance
FSA River Crossing Scour Protection Program - Phase 1	3,400,000	500,000	1,230,000	-	-	-	1,730,000	Construction	Maintenance
FSA Sewer Relocations and Protections	3,100,000	1,650,000	650,000	-	-	-	2,300,000	Construction	Maintenance
FSA Statutory Right of Way Acquisitions Phase 1	35,100,000	3,500,000	6,200,000	-	-	-	9,700,000	Design	Maintenance
Gilbert/Brighthouse Trunk Pressure Sewer	180,550,000	34,887,000	9,620,000	100,000	600,000	2,400,000	47,607,000	Multiple	Maintenance
Glenbrook Combined Trunk Kingsway Sanitary Section	8,450,000	1,000,000	938,000	-	-	-	1,938,000	Construction	Growth
Glenbrook Combined Trunk Sewer Separation	4,350,000	50,000	500,000	2,450,000	1,050,000	2,000,000	6,050,000	Design	Upgrade
Glenbrook CSO Gate Replacement	5,850,000	100,000	-	-	-	-	100,000	Construction	Maintenance
Gleneagles Forcemain Replacement	17,000,000	5,007,000	5,010,000	2,450,000	-	-	12,467,000	Construction	Maintenance
Gleneagles Pump Stations Improvements	24,500,000	5,835,000	1,500,000	1,630,000	5,250,000	1,000,000	15,215,000	Construction	Maintenance
Harbour PS Air Treatment Facilities	-	-	-	-	150,000	350,000	500,000	Not Started	Upgrade
Harbour Pump Station Discharge Header Repair and Valve Replacements	4,850,000	259,000	-	-	-	-	259,000	Construction	Maintenance

**GREATER VANCOUVER SEWERAGE AND DRAINAGE DISTRICT  
CAPITAL PORTFOLIO  
LIQUID WASTE SERVICES  
2025 CAPITAL BUDGET AND 2025 - 2029 CAPITAL PLAN**

	<b>CAPITAL BUDGET FOR APPROVAL</b>	<b>2025 CAPITAL CASH FLOW</b>	<b>2026 CAPITAL CASH FLOW</b>	<b>2027 CAPITAL CASH FLOW</b>	<b>2028 CAPITAL CASH FLOW</b>	<b>2029 CAPITAL CASH FLOW</b>	<b>2025 TO 2029 TOTAL CAPITAL CASH FLOW</b>	<b>ACTIVE PHASE</b>	<b>PRIMARY DRIVER</b>
Harbour Pump Station Power Distribution Equipment Replacement	3,650,000	1,524,000	962,000	–	–	–	2,486,000	Construction	Maintenance
Harbour Sewerage Pump Station - Suction Piping Replacement	5,850,000	850,000	2,000,000	1,950,000	1,000,000	–	5,800,000	Construction	Maintenance
Highbury Interceptor Diversion Junction Chamber Wall Rehabilitation	500,000	250,000	50,000	4,000,000	1,450,000	–	5,750,000	Design	Maintenance
Jervis Pump Station 25kV Voltage Conversion	1,300,000	50,000	–	–	–	–	50,000	Construction	Maintenance
Jervis Sewerage Pump Station - Suction Piping Replacement	500,000	500,000	500,000	2,000,000	500,000	–	3,500,000	Design	Maintenance
Kent Pump Station High Voltage Switchgear Replacement	3,000,000	960,000	553,000	–	–	–	1,513,000	Construction	Maintenance
Lozells Sanitary Trunk Golf Course Section	–	–	50,000	400,000	200,000	1,000,000	1,650,000	Not Started	Growth
LWS Pump Station Programmable Logic Controller Replacements	1,500,000	750,000	650,000	750,000	550,000	300,000	3,000,000	Multiple	Opportunity
Marshend Pump Station	28,500,000	1,350,000	13,250,000	9,920,000	680,000	–	25,200,000	Construction	Growth
New West Interceptor - Annacis Section 2	27,000,000	5,937,000	4,650,000	6,000,000	5,650,000	5,000,000	27,237,000	Construction	Maintenance
New West Interceptor Grit Chamber	1,250,000	250,000	650,000	4,100,000	4,000,000	–	9,000,000	Design	Maintenance
New Westminster Interceptor Annacis Channel Crossing Scour Protection	2,500,000	2,000,000	–	–	–	–	2,000,000	Construction	Resilience
New Westminster Interceptor Repair Columbia St. Section	37,100,000	200,000	1,400,000	2,000,000	316,000	–	3,916,000	Construction	Maintenance
New Westminster Interceptor West Branch and Columbia Extension Rehabilitation	37,900,000	3,000,000	10,800,000	10,000,000	8,000,000	4,000,000	35,800,000	Construction	Maintenance
North Road Trunk Sewer	23,650,000	2,500,000	4,115,000	2,000,000	530,000	–	9,145,000	Construction	Growth
North Surrey Interceptor - Port Mann Section - Odour Control	5,050,000	1,000,000	1,150,000	4,100,000	5,970,000	5,200,000	17,420,000	Construction	Upgrade
North Surrey Interceptor Improvements	107,100,000	3,550,000	14,600,000	32,350,000	33,450,000	25,600,000	109,550,000	Multiple	Maintenance
NSA Flow Metering Program	1,600,000	772,000	250,000	–	–	–	1,022,000	Construction	Maintenance
NSA Scour Protection Upgrades	3,750,000	50,000	1,750,000	1,500,000	–	–	3,300,000	Construction	Maintenance
NSI 104th Ave Extension	12,950,000	–	500,000	6,000,000	1,500,000	–	8,000,000	Construction	Growth
NSI SSO Storage	27,400,000	2,500,000	7,004,000	25,500,000	23,250,000	10,000,000	68,254,000	Construction	Upgrade
NSSA Sewer Relocations and Protections	450,000	50,000	375,000	25,000	–	–	450,000	Construction	Maintenance
NVI Lynn Branch Siphon – SSO Treatment	1,100,000	750,000	4,800,000	6,150,000	3,800,000	–	15,500,000	Design	Upgrade
NWP Dip Investigation and Repair	4,500,000	1,500,000	–	–	–	–	1,500,000	Construction	Maintenance
Ocean Park Trunk Manholes Lining	1,050,000	1,000,000	–	–	–	–	1,000,000	Construction	Maintenance
Ocean Park Trunk Sewer - Air Management Facility	2,750,000	565,000	400,000	1,200,000	3,120,000	580,000	5,865,000	Design	Upgrade
Port Coquitlam Pump Station Overflow	–	–	–	210,000	1,000,000	3,000,000	4,210,000	Not Started	Resilience
Port Coquitlam Pump Station Refurbishment	7,600,000	1,984,000	1,350,000	16,050,000	35,700,000	14,000,000	69,084,000	Design	Maintenance
Port Moody Pump Station Capacity Upgrade	3,700,000	700,000	1,000,000	1,150,000	5,250,000	10,000,000	18,100,000	Design	Growth
Port Moody South Interceptor Capacity Upgrade	200,000	–	–	150,000	150,000	2,050,000	2,350,000	Not Started	Growth
Port Moody Storm Drain Rehabilitation	1,650,000	900,000	600,000	–	–	–	1,500,000	Construction	Maintenance
Production Way Operation Centre	11,100,000	6,934,000	2,825,000	14,760,000	27,875,000	1,075,000	53,469,000	Multiple	Upgrade

**GREATER VANCOUVER SEWERAGE AND DRAINAGE DISTRICT  
CAPITAL PORTFOLIO  
LIQUID WASTE 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
Rosemary Heights Pressure Sewer Capacity Upgrade	–	–	–	350,000	500,000	700,000	1,550,000	Not Started	Growth
Royal Ave PS Rehabilitation	13,400,000	8,800,000	800,000	–	–	–	9,600,000	Construction	Maintenance
Sapperton Pump Station	96,050,000	500,000	5,000,000	–	–	–	5,500,000	Construction	Growth
Sapperton Pump Station Emergency Backup Power	5,000,000	1,895,000	1,530,000	–	–	–	3,425,000	Construction	Resilience
Sewer Heat Projects	57,000,000	14,050,000	16,100,000	9,050,000	11,500,000	15,400,000	66,100,000	Construction	Opportunity
South Surrey Interceptor Johnston Section	92,050,000	14,780,000	7,178,000	2,000,000	1,000,000	950,000	25,908,000	Construction	Growth
South Surrey Interceptor Rehabilitation	3,300,000	900,000	2,400,000	4,050,000	9,000,000	20,000,000	36,350,000	Multiple	Maintenance
SSI Delta - Air Management Facility Construction	12,950,000	1,000,000	1,000,000	500,000	–	–	2,500,000	Construction	Upgrade
SSI Influent Control Chamber Repair and Replace Gates	150,000	200,000	100,000	1,100,000	–	–	1,220,000	Design	Maintenance
Still Creek Culvert Rehabilitation - Gilmore section	200,000	100,000	50,000	1,150,000	50,000	–	1,350,000	Design	Maintenance
Stoney Creek Sanitary Trunk	12,250,000	3,650,000	4,000,000	14,450,000	30,000,000	12,000,000	64,100,000	Construction	Growth
Surrey Central Valley Capacity Upgrade	–	–	150,000	450,000	1,000,000	1,500,000	3,100,000	Not Started	Growth
Surrey Corrosion Control Facility Replacement	7,250,000	50,000	2,000,000	3,000,000	500,000	300,000	5,850,000	Construction	Maintenance
VSA Emergency Backup Power	29,300,000	2,750,000	2,850,000	150,000	5,650,000	–	11,400,000	Construction	Resilience
VSA Flow Metering Program	5,450,000	2,359,000	1,336,000	–	–	–	3,695,000	Construction	Maintenance
VSA Grit Chamber Access Improvements	2,700,000	2,000,000	675,000	–	–	–	2,675,000	Construction	Maintenance
VSA Sewer Relocations and Protections	24,050,000	500,000	5,650,000	–	–	–	6,150,000	Construction	Maintenance
VSA Statutory Right of Way Acquisitions Phase 1	16,000,000	3,000,000	4,500,000	–	–	–	7,500,000	Construction	Maintenance
Westridge FM Replacement	8,650,000	6,250,000	–	–	–	–	6,250,000	Construction	Maintenance
Westridge Pump Stations 1 & 2 Refurbishment	16,700,000	5,575,000	7,000,000	9,000,000	6,000,000	2,400,000	29,975,000	Construction	Maintenance
White Rock Forcemain Rehabilitation	14,300,000	50,000	5,000,000	5,000,000	1,450,000	1,000,000	12,500,000	Construction	Maintenance
Columbia Forcemain (CLT) Rehabilitation	13,000,000	13,000,000	–	–	–	–	13,000,000	Construction	Maintenance
<b>Total Collections</b>	<b>\$ 1,286,200,000</b>	<b>\$ 198,344,000</b>	<b>\$ 194,111,000</b>	<b>\$ 231,310,000</b>	<b>\$ 267,361,000</b>	<b>\$ 187,425,000</b>	<b>\$ 1,078,551,000</b>		
<b>Treatment Plants</b>									
AIWWTP Ammonia Removal – Sidestream	\$ 6,300,000	\$ 700,000	\$ 1,500,000	\$ 3,000,000	\$ 2,550,000	\$ 13,100,000	\$ 20,850,000	Design	Upgrade
AIWWTP Bar Screen #1 Refurbishment	300,000	300,000	1,000,000	–	–	–	1,300,000	Design	Maintenance
AIWWTP Centrifuge Schwing HPU Replacement	1,650,000	1,000,000	450,000	–	–	–	1,450,000	Construction	Maintenance
AIWWTP Chemical Lab UPS System Replacement	900,000	150,000	–	–	–	–	150,000	Construction	Maintenance
AIWWTP Cogeneration Backup Power	81,150,000	200,000	–	–	–	–	200,000	Construction	Resilience
AIWWTP Digester No. 5*	12,900,000	4,000,000	7,887,000	12,500,000	13,600,000	33,200,000	71,187,000	Design	Growth
AIWWTP Electrical Distribution System Protection Control and Monitoring	2,650,000	100,000	300,000	–	–	–	400,000	Construction	Upgrade
AIWWTP Hydrothermal Processing Pilot	39,350,000	14,500,000	3,900,000	1,450,000	–	–	19,850,000	Construction	Opportunity

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AIWWTP ICS Replacement Program	14,350,000	1,500,000	2,250,000	2,500,000	2,000,000	1,750,000	10,000,000	Construction	Maintenance
AIWWTP Influent System Remediation	86,200,000	1,395,000	750,000	9,600,000	9,200,000	400,000	21,345,000	Construction	Maintenance
AIWWTP IPS Pump Building Roof Replacement Phase 2	1,150,000	1,000,000	50,000	-	-	-	1,050,000	Construction	Maintenance
AIWWTP Lubrication Storage Facility Conversion	1,500,000	1,150,000	200,000	-	-	-	1,350,000	Construction	Maintenance
AIWWTP O&M Building Refurbishment	1,500,000	300,000	1,200,000	3,100,000	1,800,000	1,700,000	8,100,000	Design	Maintenance
AIWWTP Outfall Repair	250,000	250,000	1,150,000	400,000	-	-	1,800,000	Design	Maintenance
AIWWTP Process Waste Drain Line Refurbishment	2,350,000	1,900,000	200,000	-	-	-	2,100,000	Construction	Maintenance
AIWWTP Replacement of Protective Relays	2,550,000	50,000	-	-	-	-	50,000	Construction	Maintenance
AIWWTP Scum Pump Replacement	400,000	250,000	500,000	500,000	-	-	1,250,000	Design	Maintenance
AIWWTP Secondary Clarifier Corrosion Repair	36,300,000	600,000	1,070,000	465,000	465,000	-	2,600,000	Construction	Maintenance
AIWWTP Sludge Control Building Electrical Room HVAC Upgrade	1,600,000	900,000	185,000	34,000	-	-	1,119,000	Construction	Maintenance
AIWWTP Stage 5 Expansion*	1,004,350,000	64,400,000	83,500,000	71,000,000	82,900,000	41,200,000	343,000,000	Multiple	Growth
AIWWTP Station Battery Replacement	1,250,000	50,000	-	-	-	-	50,000	Construction	Maintenance
AIWWTP Trickling Filter Media & Distributor Arms & Ducting Replacement	90,700,000	3,520,000	8,800,000	150,000	-	-	12,470,000	Construction	Maintenance
AIWWTP UPS Condition Monitoring System	550,000	50,000	100,000	200,000	200,000	-	550,000	Construction	Resilience
Annacis Influent System Surge Control Refurbishment	22,000,000	2,200,000	1,789,000	1,789,000	1,789,000	-	7,567,000	Construction	Growth
Annacis MCC 80 051, 80 070, 80 071 Replacement	2,850,000	50,000	550,000	-	-	-	600,000	Construction	Maintenance
Annacis Outfall System*	356,050,000	26,999,000	480,000	-	-	-	27,479,000	Construction	Growth
IIWWTP - Biogas Lines Relocation	4,450,000	50,000	-	-	-	-	50,000	Construction	Resilience
IIWWTP Biosolids Dewatering Facility	61,300,000	25,000	25,000	-	-	-	50,000	Construction	Upgrade
IIWWTP CEPT Polymer Line Replacement	3,300,000	250,000	-	-	-	-	250,000	Construction	Maintenance
IIWWTP CEPT Winterization	1,500,000	325,000	-	-	-	-	325,000	Construction	Maintenance
IIWWTP ICS IPS Control Replacement	1,750,000	350,000	-	-	-	-	350,000	Construction	Maintenance
IIWWTP ICS Migration Program	4,000,000	500,000	3,000,000	4,000,000	3,000,000	1,500,000	12,000,000	Design	Maintenance
IIWWTP ICS Replacement Program	750,000	200,000	100,000	-	-	-	300,000	Construction	Maintenance
IIWWTP IPS Drive Remediation	2,300,000	570,000	700,000	250,000	550,000	-	2,070,000	Construction	Maintenance
IIWWTP MCC/Power Distribution Assess/Replace - Phase 2	1,000,000	50,000	300,000	-	-	-	350,000	Construction	Maintenance
IIWWTP Medium Pressure Sludge Gas Blowers 3 & 4 Power Supply	950,000	600,000	200,000	120,000	-	-	920,000	Construction	Resilience
IIWWTP Non-Domestic Trucked Liquid Waste Alternative	800,000	520,000	150,000	-	-	-	670,000	Construction	Maintenance
IIWWTP Outfall Refurbishment*	20,000,000	2,500,000	3,000,000	3,350,000	63,000,000	73,000,000	144,850,000	Design	Maintenance
IIWWTP PA Tanks Improvement	7,500,000	1,000,000	1,650,000	1,600,000	1,600,000	1,450,000	7,300,000	Construction	Maintenance
IIWWTP PA-Sed Tank & Gallery Wall Refurbishment	950,000	200,000	290,000	190,000	170,000	-	850,000	Construction	Maintenance
IIWWTP Replacement of CoGen Control System	2,500,000	125,000	450,000	-	-	-	575,000	Construction	Maintenance

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IWWTP Siphon Chamber Refurbishment	2,150,000	50,000	50,000	1,800,000	–	–	1,900,000	Construction	Maintenance
IWWTP Solids Handling Refurbishment	64,850,000	100,000	2,180,000	2,180,000	2,180,000	–	6,640,000	Construction	Maintenance
IWWTP Standby Diesel Generators	2,000,000	100,000	800,000	1,200,000	1,100,000	1,000,000	4,200,000	Design	Resilience
IWWTP Surge Mitigation	250,000	200,000	250,000	650,000	650,000	250,000	2,000,000	Design	Maintenance
IWWTP Waste Gas Burner Redundancy	1,250,000	1,050,000	150,000	–	–	–	1,200,000	Construction	Maintenance
Iona Island Control & Instrumentation Replacement 2011	2,750,000	200,000	–	–	–	–	200,000	Construction	Maintenance
Iona Island Wastewater Treatment Plant*	1,060,000,000	147,588,000	211,382,000	305,677,000	400,664,000	404,154,000	1,469,465,000	Construction	Upgrade
LIWWTP Admin Dewatering Building Roof Repair	800,000	675,000	75,000	–	–	–	750,000	Construction	Maintenance
LIWWTP Biogas Clean-up Project	12,950,000	50,000	–	–	–	–	50,000	Construction	Opportunity
LIWWTP Effluent Heat Recovery Project	10,000,000	5,000,000	4,300,000	–	–	–	9,300,000	Construction	Opportunity
LIWWTP Gravity Thickener Redundancy	2,650,000	150,000	2,075,000	5,000,000	8,000,000	5,650,000	20,875,000	Design	Maintenance
LIWWTP Ground Fault Detection System Replacement	2,050,000	600,000	550,000	600,000	–	–	1,750,000	Construction	Maintenance
LIWWTP High Efficiency Boiler	1,300,000	500,000	150,000	–	–	–	650,000	Construction	Maintenance
LIWWTP ICS Electrical Distribution System Migration Program	2,250,000	1,500,000	4,000,000	1,500,000	–	–	7,000,000	Design	Maintenance
LIWWTP ICS Replacement Program	6,750,000	2,000,000	400,000	–	–	–	2,400,000	Construction	Maintenance
LIWWTP PA Tank Odour Control System	250,000	75,000	175,000	1,500,000	1,800,000	1,150,000	4,700,000	Design	Upgrade
LIWWTP PA-Sed Tank Refurbishment	3,950,000	310,000	3,010,000	7,000	–	–	3,327,000	Construction	Maintenance
LIWWTP Pilot Digestion Optimization Facility	6,200,000	200,000	1,550,000	50,000	–	–	1,800,000	Construction	Opportunity
LIWWTP Power Distribution Center Replacements	750,000	50,000	500,000	300,000	3,000,000	3,000,000	6,850,000	Design	Maintenance
LIWWTP Power Reliability	12,400,000	2,017,000	4,136,000	1,120,000	–	–	7,273,000	Construction	Resilience
LIWWTP SCL Refurbishment	2,850,000	500,000	1,125,000	1,025,000	100,000	10,000,000	12,750,000	Design	Maintenance
LIWWTP Trickling Filter Refurbishment	54,450,000	716,000	13,350,000	13,000,000	13,000,000	13,000,000	53,066,000	Construction	Maintenance
NLWWTP 25 kV Substation Replacement	10,100,000	150,000	–	–	–	–	150,000	Construction	Maintenance
NLWWTP Standby Diesel Generator	1,000,000	300,000	150,000	–	–	–	450,000	Construction	Resilience
North Shore WWTP Secondary Upgrade, Conveyance and Decommissioning*	3,854,900,000	454,825,000	578,678,000	658,898,000	544,667,000	381,942,000	2,619,010,000	Construction	Upgrade
Northwest Langley Wastewater Treatment Program*	2,280,650,000	55,743,000	61,683,000	53,860,000	262,879,000	480,996,000	915,161,000	Multiple	Growth
Regional Biosolids Dryer – AIWWTP*	24,950,000	2,500,000	3,000,000	11,000,000	18,090,000	63,500,000	98,090,000	Design	Opportunity
WWTPs Electrical System Studies & Upgrades	1,900,000	150,000	150,000	250,000	650,000	–	1,200,000	Construction	Resilience
<b>Total Treatment Plants</b>	<b>\$ 9,310,500,000</b>	<b>\$ 812,078,000</b>	<b>\$1,021,545,000</b>	<b>\$1,175,815,000</b>	<b>\$1,439,604,000</b>	<b>\$1,531,942,000</b>	<b>\$5,980,984,000</b>		
<b>TOTAL CAPITAL EXPENDITURES</b>	<b>\$10,596,700,000</b>	<b>\$1,010,422,000</b>	<b>\$1,215,656,000</b>	<b>\$1,407,125,000</b>	<b>\$1,706,965,000</b>	<b>\$1,719,367,000</b>	<b>\$7,059,535,000</b>		

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	<b>CAPITAL BUDGET FOR APPROVAL</b>	<b>2025 CAPITAL CASH FLOW</b>	<b>2026 CAPITAL CASH FLOW</b>	<b>2027 CAPITAL CASH FLOW</b>	<b>2028 CAPITAL CASH FLOW</b>	<b>2029 CAPITAL CASH FLOW</b>	<b>2025 TO 2029 TOTAL CAPITAL CASH FLOW</b>	<b>ACTIVE PHASE</b>	<b>PRIMARY DRIVER</b>
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<b>CAPITAL FUNDING</b>									
New External Borrowing funded by Levy	\$ 5,854,451,000	\$ 583,149,000	\$ 674,211,000	\$ 838,202,000	\$ 984,089,000	\$ 820,592,000	\$ 3,900,243,000		
New Borrowing funded by DCC	2,757,429,000	166,763,000	258,701,000	250,296,000	493,038,000	668,205,000	1,837,003,000		
Direct DCC Application	60,734,000	40,461,000	-	-	-	-	40,461,000		
Contribution to Capital from LWS Levy	1,156,190,000	131,459,000	146,244,000	162,102,000	165,225,000	165,225,000	770,255,000		
Reserve	414,833,000	26,614,000	64,202,000	76,918,000	64,613,000	44,015,000	276,362,000		
External Funding - Interagency	353,063,000	61,976,000	72,298,000	79,607,000	-	21,330,000	235,211,000		
<b>Total</b>	<b>\$10,596,700,000</b>	<b>\$1,010,422,000</b>	<b>\$1,215,656,000</b>	<b>\$1,407,125,000</b>	<b>\$1,706,965,000</b>	<b>\$1,719,367,000</b>	<b>\$7,059,535,000</b>		

<b>SUMMARY BY DRIVER</b>									
Growth	\$ 4,088,000,000	\$ 195,638,000	\$ 207,470,000	\$ 186,214,000	\$ 425,778,000	\$ 615,946,000	\$ 1,631,046,000		
Maintenance	1,145,800,000	149,581,000	152,781,000	161,376,000	226,951,000	198,070,000	888,759,000		
Resilience	141,950,000	10,612,000	10,166,000	3,250,000	8,600,000	4,000,000	36,628,000		
Upgrade	5,067,800,000	617,112,000	815,539,000	1,033,985,000	1,015,496,000	822,151,000	4,304,283,000		
Opportunity	153,150,000	37,479,000	29,700,000	22,300,000	30,140,000	79,200,000	198,819,000		
<b>Total</b>	<b>\$10,596,700,000</b>	<b>\$1,010,422,000</b>	<b>\$1,215,656,000</b>	<b>\$1,407,125,000</b>	<b>\$1,706,965,000</b>	<b>\$1,719,367,000</b>	<b>\$7,059,535,000</b>		

\* 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.

## LIQUID WASTE SERVICES

### Policy, Planning and Analysis

#### Description of Services

Liquid Waste Services provides wastewater collection and treatment services through the Liquid Waste function under the Greater Vancouver Sewerage & Drainage District (GVS&DD). The Policy, Planning and Analysis Division includes policy development, planning for utility resilience, and technology innovation, to comply with provincial and federal legislation. The Division undertakes utility infrastructure analysis to inform growth planning with members, facility modeling and planning, scenario analysis, and scope development for capital projects. The divisional mandate includes source control activities that protect receiving environments, ensure health and safety and protect infrastructure; maintain liquid waste regulatory bylaws; expand public awareness and education; and develop strategic action on contaminants. The portfolio also includes innovation management, which plans for the utility of the future through technology evaluations and pilots, resource recovery assessments, and enhancing value via Sustainability Innovation Fund projects.

#### Strategic Directions and High Level Goals Supported

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.

Integrated Liquid Waste and Resource Management Plan:

- Goal 1 - Protect public health and the environment
- Goal 2 - Use liquid waste as a resource
- Goal 3 - Effective, affordable and collaborative management

#### Performance Indicators

Indicator	Historical and/or industry benchmark	Current performance	2025 Performance objective
Annual number of wet-weather related sanitary sewer overflow (SSO) events from Metro Vancouver sewers	MV 3-year average: 45 2023: 17 2022: 42 2021: 76	17	0

Indicator	Historical and/or industry benchmark	Current performance	2025 Performance objective
Annual CSO Volume (ML)	MV 3-year average: 29,300 2023: 20,200 2022: 29,100 2021: 38,500	20,200	29,000
Percentage of Assets not Meeting Capacity or Regulation within 10 Years	MV 3-year average: 22% 2023: 22% 2022: 22% 2021: 22%	22%	22%

**2025 Key Actions**

- Complete the review and update of the Liquid Waste Management Plan in accordance with provincial direction.
- Develop and maintain short- and long-range servicing plans for the collection system and each wastewater treatment plant that lay out the scope, scale, budget and timing.
- Coordinate overflow working groups with members to develop targeted overflow mitigation plans and reduce wet weather flows through actions on public and private works.
- Develop a policy with drainage area members to clarify jurisdictional roles within the GVS&DD mandated drainage areas.
- Refresh terms of reference of the Stormwater Interagency Liaison Group as a sub-committee under the Regional Engineer's Advisory Committee (REAC) and coordinate region-wide rainwater management.
- Strengthen source control capabilities through regulatory improvements, public awareness, and stakeholder collaboration.
- Review and update sewer use bylaws to modernize them and achieve full cost recovery.
- Continue implementing the testing plan for the Lulu Island Pilot Digestion Optimization Facility (PDOF) and finalize detailed design of the pilot-scale SEED Reactor to be tested at the PDOF.
- Initiate preliminary design of a hydrogen pilot at Lulu Island WWTP to recover ammonia and convert it to low-carbon hydrogen.
- Continue to lead the research program for the Hydrothermal Processing Demonstration Facility and begin managing the third-party operations and maintenance contract.
- Initiate a Facility Plan for Annacis Island WWTP.
- Undertake regulatory reviews including WWTP Operational Certificate amendments.



## LIQUID WASTE SERVICES

### Engineering, Design and Construction

#### Description of Services

Liquid Waste Services provides wastewater collection and treatment services to the region through the Liquid Waste function under the authority of the Greater Vancouver Sewerage and Drainage District (GVS&DD). The Engineering, Design and Construction (EDC) Division is responsible for the delivery of the core major and minor capital projects, including trunk sewers, pump stations, SSO storage and wastewater treatment facilities identified in the GVS&DD long range plan and minor operating projects.

#### Strategic Directions and High Level Goals Supported

##### 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.

##### Integrated Liquid Waste and Resource Management Plan

- Goal 1 - Protect public health and the environment
- Goal 2 - Use liquid waste as a resource
- Goal 3 - Effective, affordable and collaborative management

#### Performance Indicators <sup>1</sup>

Indicator	Historical and/or industry Benchmark	Current performance <sup>2</sup>	2025 Performance objective
Percent of Capital Program Expenditures Achieved (Projects >\$90M) (7 Projects – \$72M)	3-year average: 60% 2023: 81% 2022: 59% 2021: 39%	29%	95%
Percent of Capital Program Expenditures Achieved (Projects \$20M - \$90M) (30 Projects – \$53M)	3-year average: 62% 2023: 85% 2022: 54% 2021: 47%	29%	90%

Indicator	Historical and/or industry Benchmark	Current performance <sup>2</sup>	2025 Performance objective
Percent of Capital Program Expenditures Achieved (Projects \$5M - \$20M (36 Projects – \$57M))	3-year average: 35% 2023: 20% 2022: 25% 2021: 59%	6%	75%
Percent of Capital Program Expenditures Achieved Projects < \$5M (54 Projects – \$26M)	3-year average: 34% 2023: 32% 2022: 36% 2021: 34%	10%	75%
Percent of Minor Capital Program Expenditures (Total Budget - \$10M)	3-year average: 86% 2023: 109% 2022: 78% 2021: 70%	29%	90%

1. The Performance Indicators include projects being completed by other LWS divisions, such as utility relocates and Industrial Control System upgrades, but excluded projects being completed by the Project Delivery department
2. Current Performance is based upon Actuals for year-to-date end of May, and so is not indicative of expected year end performance

**2025 Key Actions**

- In conjunction with the PMO (Project Delivery Department), continue to support project management process improvements including the implementation of a Portfolio Management Information System (PMIS).
- Continue to support the Project Delivery Department in the delivery of the expansions and upgrades of four Wastewater Treatment Plants by providing Subject Matter Expertise on Electrical Engineering, Instrumentation and Controls services.
- Complete the review and revisions of the Minor Capital Program, including project prioritization processes and improved program level controls.
- Complete detailed design:
  - Sapperton PS Emergency Backup Power (New Westminster)
  - White Rock Forcemain Replacement and Rehabilitation (White Rock)
  - NWI West Branch and Columbia Extension Rehabilitation (New West)
  - South Surrey Interceptor-Delta Section (SSD) Twin Sewers Rehabilitation (Surrey)
  - Stoney Creek Trunk Sewer Upgrade (Burnaby Section)
  - Burnaby Lake North Interceptor Sperling Section (Burnaby)
  - Standby Diesel Generator Recommissioning at AIWWTP (Delta)
- Substantially complete:
  - North Road Trunk Sewer – Phase 2 (Burnaby and Coquitlam)
  - Gleneagles Pump Stations 4 and 5 Rehabilitation (West Vancouver)
  - Jervis Pump Station Voltage Conversion (Vancouver)
  - Burnaby Lake North Interceptor No.2 – Winston St Section Phase 2 (Burnaby)
  - Cloverdale Ferrous Chloride Dosing Facility (Surrey)
  - Gilbert Trunk Sewer No. 2 Central Section
  - Gleneagles Forcemains Replacement (West Vancouver)

- Permanent Backup Power at Jervis Pump Station (Vancouver) Westridge Forcemain Replacement and Pump Station 2 Refurbishment (Burnaby)
- Stoney Creek Trunk Sewer Upgrade (Coquitlam Section)
- Permanent Backup Power at Jervis Pump Station (Vancouver)
- Harbour PS Power Distribution System Replacement (Vancouver)
- Sludge Control Building Electrical Room HVAC Replacement at AIWWTP (Delta)

- Initiate construction:

- Last section of the South Surrey Interceptor Twinning (SSJ2 Phase IV, Surrey)
- LIWWTP Power Reliability – SDG and Building (Richmond)
- NSI SSO Storage Tank – NSI Re-alignment (Surrey)
- North Road Trunk Sewer No. 2 – Phase 1B
- NSI Manson Road Phase 1 Twinning (Surrey)
- NSI Roebuck Section Replacement 112B Ave (Surrey)
- FSA Flow Meter Program
- NSA Flow Meter Program
- VSA Flow Meter Program
- Kent PS Power Distribution System and High Voltage Switchgear Replacement (Vancouver)
- WWTP Electrical System Studies & Upgrades at AIWWTP (Delta)
- North Cogen Building Conversion to Lubrication Storage at AIWWTP (Delta)
- LIWWTP Ground Fault Detection System and Protection Relay Replacement (Richmond)
- Sludge Control Building HVAC Upgrade at AIWWTP (Delta)
- Effluent Heat Recovery and Boiler Project at LIWWTP (Richmond)
- Pre-aeration and Primary Sedimentation Tanks Refurbishment at IAWWTP (Richmond)
- Cogeneration Oil Tank Replacement at IWWTP (Richmond)

- Initiate and complete construction:

- New Westminster Interceptor Upper Sapperton Connection Rehabilitation (New Westminster)
- Crescent Beach Forcemain Serpentine River Crossing Scour Protection (Surrey)
- North Shore Scour Protection (North Vancouver)
- Port Moody Storm Drain Rehabilitation (Port Moody)
- SSI Johnston Section Phase 4
- Process Waste Drain Line Replacement at AIWWTP (Delta)
- LIWWTP Admin & Dewatering Building Roof Repair (Richmond)
- Warehouse HVAC Replacement at AIWWTP (Delta)
- C1 & C2 Line Replacement at LIWWTP (Richmond)

## LIQUID WASTE SERVICES

### Operations and Maintenance - Wastewater Collections and Drainage

#### Description of Services

Liquid Waste Services provides wastewater collection and treatment services to the region through the Liquid Waste function under the authority of the Greater Vancouver Sewerage and Drainage District (GVS&DD). The Wastewater Collection and Drainage Division is responsible for managing the operations and maintenance of the sewer collection network and providing maintenance services to Greater Vancouver Water District (GVWD) as a shared service provider. This includes day-to-day management of the infrastructure assets and supporting infrastructure. This business area is also responsible for managing the operations and maintenance of Urban Drainage areas including the Still Creek/Brunette, Port Moody/Coquitlam and UBC Drainage areas.

#### 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.

##### Integrated Liquid Waste and Resource Management Plan

- Goal 1 - Protect public health and the environment
- Goal 2 - Use liquid waste as a resource
- Goal 3 - Effective, affordable and collaborative management

#### Performance Indicators

Indicator	Historical and/or Industry Benchmark	Current Performance	2025 Performance Objective
Number of reported events of sanitary sewer overflows (SSOs): non-weather related	MV 3-year average: 12 2023: 16 2022: 14 2021: 6	13	0

Indicator	Historical and/or Industry Benchmark	Current Performance	2025 Performance Objective
Number of odour complaints received	MV 3-year average: 9.3 2023: 11 2022: 4 2021: 13	8	10

**2025 Key actions**

- Develop digital checklists for Field Services preventive maintenance work orders
- Continued development of construction crew and expansion of scope and breadth of technical work including pipeline construction
- Perform analysis of Field Services staff driving time and distances.
- Expand self-serve LWS sewer/rainfall datasets available to member municipalities
- Inspect 5% of sewer collection system
- Create PM templates for electrical and pressure vessel assets.
- Complete asset remediation pilot project of WWTP asset documentation.

## LIQUID WASTE SERVICES

### Operations & Maintenance - Wastewater Treatment & Residuals Management

#### Description of Services

Liquid Waste Services provides wastewater collection and treatment services to the region through the Liquid Waste function under the authority of the Greater Vancouver Sewerage and Drainage District (GVS&DD). The Wastewater Treatment & Residuals Management division is responsible for managing the operations and maintenance of the five regional wastewater treatment plants (WWTPs). This includes long-range facility planning and day-to-day management of the infrastructure assets and supporting infrastructure with the objective of complying with provincial and federal regulations and recovering as many resources from the wastewater as economically feasible. This business area is also responsible for the beneficial use of biosolids, and other residuals produced through the treatment process.

#### Strategic Directions and High-Level Goals Supported

##### 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.
- Provide un-interrupted service for the continuous removal of residuals from Metro Vancouver's wastewater treatment plants (WWTP) and the drinking water treatment plant.
- Find the highest and best beneficial use for the region's residuals while striving to reduce overall costs and GHG impacts.

##### Integrated Liquid Waste and Resource Management Plan

- Goal 1 - Protect public health and the environment
- Goal 2 - Use liquid waste as a resource
- Goal 3 - Effective, affordable and collaborative management

## Performance Indicators

Indicator	Historical and/or industry benchmark	Current performance	2025 Performance objective
Volume treated per year (ML)	MV 3-year average: 438,242 2023: 427,816 2022: 435,178 2021: 451,732	465,900	434,000
Percent of digester gas used at the Wastewater Treatment Plants	MV 3-year average: 62% *2023: 55% 2022: 71% 2021: 61%	66%	70%
Compliance with treatment plant Operational Certificates (%)	MV 3-year average: 99.99% 2023: 99.99% 2022: 99.99% 2021: 99.99%	99.99%	100%
Percent of biosolids beneficially used	MV 3-year average: 100% 2023: 100% 2022: 100% 2021: 100%	100%	100%
Percent of biosolids beneficially used in-region	MV 3-year average: 14.7% 2023: 11.9% 2022: 14.4% 2021: 17.9%	11%	15%

\*In 2023, Annacis Cogens were out of service from Jun 16, 2023 to December 11, 2023 due to mechanical failure of two of the units, Maintenance/Finishing advised Ops to shut down the other two units to prevent similar damage.

## 2025 Key actions

### New Initiatives

- Assume ownership of WWT Maintenance laptops and incorporate them into the ICS Cybersecurity Program
- Complete Trucked Liquid Waste (TLW) Infrastructure and Capacity Report.
- Complete design of new waste gas burner at Iona.
- Establish a service contract for the maintenance of Iona Causeway.
- Perform market sounding for Digital Twinning Program for WWTP and other divisions.
- Award a new “Reduced Emissions Residuals Hauling” contract
- Establish UBC study for biosolids use in green roofs for potential use at new WWTPs.
- Create a process to convert/create digital checklists for all PMs, improving the tracking of individual tasks and recording them to specific equipment. If feasible, commence pilot at one plant.
- Support Maintenance Engineering Reliability Team with the Asset Remediation Project, improving safety, efficiency, and documentation records at each site. Pilot to commence in 2024 to determine length of project and goals for 2025.
- Create Maintenance Service Agreements to improve planning and procurement of goods and services.

#### Ongoing Initiatives

- Testing and Commissioning of two (2) pilot plants at Iona Island WWTP.
- Primary Effluent Reuse in the Iona Island Solids Handling Facility
- Phase 1 of Process Safety Management System.
- Testing and Commissioning of the new Annacis Island WWTP outfall.
- Strategic procurement for commodities, chemicals and service contracts.
- Commissioning and testing of new centrifuge polymer system at Lulu Island WWTP.
- Pilot testing of the Lions Gate Nanobubbles system.
- Review and update critical operations, maintenance and safety documents related to plant process, operating and maintenance procedures for the wastewater treatment plants.
- Enhanced ICS Operations Cybersecurity Program by implementing recommendations from cybersecurity audit
- Continue dredging the northeast lagoon at Iona Island WWTP.

#### Resiliency Upgrade Projects

- Annacis centrate piping work to divert centrate to process waste drain rather than primary effluent.
- Annacis DAFT polymer system
- Assessment of the Annacis Digester gas system HAZOP recommendations
- ICS Input/Output (I/O) migration project to move existing I/O points to new system
- Assessment to address obsolete TF pumps at Northwest Langley.
- Implementation of improvement projects at Lulu - TF and Secondary Clarifiers refurbishment works.
- Construct biosolids storage area at the Iona Island WWTP biosolids dewatering building to manage loads that cannot immediately leave the WWTP.

#### Optimization Works

- Annacis alarm rationalization work to review, validate and justify ICS alarms.
- Implement the plan to clean digesters at Iona and Annacis
- Work to establish a new Fraser Valley location for a soil mixing facility

#### Project Support Works

- Participate as stakeholders and subject matter experts in the technical discussion, review meetings and works led by EDC and PDE.
- Field support on the Iona Existing Facility Upgrade
- Support PDE in procurement of regional biosolids drying facility – RFQ for consulting services (project management and engineering).
- Support SWS for the procurement of a biosolids feed system for the Waste-to-Energy Facility.



## LIQUID WASTE SERVICES

### Environmental Management & Quality Control

#### Description of services

This business area is responsible for management of environmental programs and initiatives for GVS&DD, analytical services for liquid waste, water and solid waste regulatory, quality control, source control and process control purposes, and federal and provincial regulatory reporting of environmental and wastewater quality and treatment. The work includes environmental investigations, laboratory analyses, modeling, forecasting, simulations, monitoring, risk assessments, support for management of stormwater and urban drainage, development of an Environmental Management System for Liquid Waste Services, implementation of selected source control programs, and liaison with senior governments, academia and environmental stakeholders.

#### Strategic directions and high level goals supported

Board Strategic Plan:

- Enhance the management of the liquid waste system with a commitment to innovative approaches to protect the health of the public and the environment.
- Ensure the long-term resilience of the regional sewage and drainage 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 that the regional liquid waste system protects public health and the environment, now and into the future.

Integrated Liquid Waste and Resource Management Plan:

- Goal 1 - Protect public health and the environment
- Goal 2 - Use liquid waste as a resource
- Goal 3 - Effective, affordable and collaborative management

#### Performance indicators

Indicator	Historical and/or industry benchmark	Current performance	2025 Performance objective
Number of days between May 1 <sup>st</sup> and September 30 <sup>th</sup> swimming advisories posted by the Health Authorities (combined totals for all beaches in region)	MV 3-year average: 28 2023: 5 2022: 52 2021: 26	2024 <sup>1</sup> : 23	33
Fraser River water quality index <sup>2</sup>	MV historical 3-year averages <sup>3</sup> : 2020-2022: 82 2019-2021: 69 2018-2020: 77	2021-2023 <sup>3</sup> : 85	85

Indicator	Historical and/or industry benchmark	Current performance	2025 Performance objective
Burrard Inlet water quality index <sup>2</sup>	MV historical 3-year average <sup>3</sup> : 2019-2021: 84 2018-2020: 76 2017-2019: 82	2020-2022 <sup>3</sup> : 78	78
Sturgeon Bank water quality index <sup>2</sup>	MV historical 3-year average <sup>3</sup> : 2019-2021: 88 2018-2020: 91 2017-2019: 96	2020-2022 <sup>3</sup> : 80	80

<sup>1</sup> As of September 13, 2023

<sup>2</sup> Water Quality Index (WQI) ranking of water quality: Excellent (WQI value 95-100), Good (80-94), Fair (65-79), Marginal (45-64), Poor (0-44)

<sup>3</sup> The reported WQI value represents the 3-year rolling average ending in the year of most recent data, based on data collection and reporting timelines

**2025 Key actions**

- Produce the 2024 GVS&DD Environmental Management & Quality Control Annual Report.
- Complete and submit 2024 National Pollution Release Inventory (NPRI) Report to Environment Canada.
- Perform False Creek water quality monitoring and assessment in collaboration with Friends of False Creek, Raincoast Conservation Foundation and the City of Vancouver.
- Continue scenario modelling to optimize the operation of the collection system to reduce human health and ecological impacts of combined and sanitary sewer overflows (CSOs and SSOs).
- Update the SSO Rapid Risk Ranking Tool for all SSOs for the 5-year interval of 2020-2024.
- Continue monitoring the concentrations of 6PPD-Quinone in Metro Vancouver CSOs, and characterize Metro Vancouver CSO discharges to determine the sanitary loading contribution from the Metro Vancouver CSOs into regional waterbodies.
- Continue scenario modelling and now-casting to support regulatory reporting of wastewater treatment plant (WWTP) process upsets.
- Conduct Annacis Island WWTP dye tracer study.
- Continue collaborative work with BCCDC to develop molecular methods for recreational water quality monitoring.
- Continue the collaborative work on advancing the use of wastewater based epidemiology for the protection of public health.
- Continue collaboration with SFU on development of genomics solutions for understanding impacts of WWTP discharges on Fraser River salmon.
- Continue water and wastewater analyses for Perfluoroalkyl and Polyfluoroalkyl (PFAS) substances and wastewater analyses for pharmaceuticals and personal care products (PPCPs).
- Develop and accredit analytical methods for testing of PPCPs in marine water, and for testing of non-ionic and cationic surfactants in wastewater.
- Perform Canadian Association for Laboratory Accreditation (CALA) bi-annual site assessment to maintain the accreditation of the Chemistry and Wastewater Treatment Process Control Laboratories.

## LIQUID WASTE SERVICES

### Support Services and Strategic Initiatives

#### Description of Services

Liquid Waste Services provides wastewater collection and treatment services to the region through the Liquid Waste function under the authority of the Greater Vancouver Sewerage and Drainage District (GVS&DD). The Support Services and Strategic Initiatives division is responsible for the following Liquid Waste Services functions: business and financial planning and management; department support services; capital budget planning; strategic asset management; performance management and the Annacis Research Centre.

#### Strategic Directions and High Level Goals Supported

##### 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.

##### Integrated Liquid Waste and Resource Management Plan

- Goal 1 - Protect public health and the environment
- Goal 2 - Use liquid waste as a resource
- Goal 3 - Effective, affordable and collaborative management

#### Performance Indicators

Indicator	Historical and/or industry benchmark	Current performance	2025 Performance objective
Operating cost per million litres collected and treated (\$/ML)	MV 3-year average: \$441 2023: \$548 2022: \$472 2021: \$408	\$573	\$612

Indicator	Historical and/or industry benchmark	Current performance	2025 Performance objective
Total LWS energy consumption (GJ/ML)	MV 3-year average: 2.21 2023: 2.21 2022: 2.24 2021: 2.17	2.21	2.30
Total Greenhouse gas emissions from energy and direct emissions (kg CO <sub>2</sub> e/ML)	MV 3-year average: 18.8 2023: 20.5 2022: 19.2 2021: 18.7	18.8	21.0
Energy Savings Realized (kWh/y)	MV 3-year average: 1,037,186 2023: 963,600 2022: 273,000 2021: 3,300,000	1,000,000	1,000,000

**2025 Key Actions**

- In support of Climate 2050 emission reduction targets, and in collaboration with utilities worldwide through the WEF Greenhouse Gas Communities group (Committee), develop plans for monitoring and ultimately reducing process-based greenhouse gas emissions at LIWWTP, as a first step toward reducing process emissions at all WWTPs.
- Promote and pursue additional partnerships with municipalities, utilities and the property development community to implement opportunities for resource recovery from liquid waste with emphasis on projects that achieve regional greenhouse gas emissions reductions.
- Improve the management of departmental performance monitoring data using enterprise tools such as Metrolytics.
- Optimize administration processes associated with the Professional Governance Act.

**2025 to 2029 – WHAT’S HAPPENING**

Below is a summary of the significant initiatives to be undertaken by Liquid Waste Services over the next 5 years.

<b>Initiative</b>	<b>Description</b>	<b>Theme</b>
<b>2025</b>		
Annacis Island WWTP Outfall	Complete construction of the outfall system.	Regional Growth
Annacis Island WWTP Stage 5 Expansion	Complete Solids Contact Tank modifications under the Gravity Thickeners #4 and #5 project. Commence preliminary design of Digester No. 5.	Regional Growth
Biosolids Dryer	Commence preliminary design of the regional Biosolids Dryer.	Opportunity
Burnaby Lake North Interceptor	Complete construction of the tunneled section of the Burnaby Lake North Interceptor.	Regional Growth
Climate Adaptation Plan – Vancouver Sewerage Area	Complete a detailed climate and vulnerability assessment and develop an adaptation plan to protect regional assets in the VSA from climate change impacts.	Environmental Sustainability/ System Stewardship
Gleneagles Forcemain	Complete construction of the Gleneagles Forcemain replacement, the last section to connect to Hollyburn Interceptor.	System Stewardship
Growth Plan	Complete plan identifying and addressing regional liquid waste infrastructure needs and priorities to support future growth.	Environmental Sustainability/ System Stewardship
Iona Island WWTP Secondary Upgrade	Complete Phasing Options Assessment and PDR re-validation of the IWWTP Upgrade. Commence preliminary design of the IWWTP Upgrade. Pilot secondary/treatment technology.	Regulatory and Legislative Environment
North Shore WWTP	Substantial construction activities ramp-up and transfer of major equipment packages.	Regulatory and Legislative Environment
Northwest Langley WWTP Expansion	Complete detailed design of the WWTP.	Regional Growth
Vancouver Sewerage Area (VSA) Pump Station Backup Power	Install permanent generators at Jarvis Pump Station. Complete VSA Pump Station Backup Power Program.	System Stewardship
<b>2026</b>		
Annacis Island WWTP Stage 5 Expansion	Commence ground improvements for Trickling Filters #5 and #6.	Regional Growth
Annacis Island WWTP Trickling Filters	Complete replacement of media, distributor arms and foul air ducting.	System Stewardship
Gilbert Trunk Sewer	Complete twinning of Gilbert Trunk Sewer to improve system reliability and resiliency.	System Stewardship

<b>Initiative</b>	<b>Description</b>	<b>Theme</b>
Climate Adaptation Plan - Fraser Sewerage Area	Complete detailed climate and vulnerability assessment and develop an adaptation plan to protect regional assets in the FSA from climate change impacts.	Environmental Sustainability/ System Stewardship
Iona Island WWTP Secondary Upgrade	Construct early works including Causeway, barge berth, early electrical, ground improvement pre-load works.	Regulatory and Legislative Environment
LIWWTP Effluent Heat Recovery and High Efficiency Boiler	Completion of construction of facility to increase volume of Renewable Nature Gas available for sale.	Opportunity
North Shore WWTP	Substantial construction activities underway for all disciplines.	Regulatory and Legislative Environment
Wet Weather Plan	Complete plan for eliminating wet weather overflows.	Environmental Sustainability
<b>2027</b>		
Annacis Island WWTP Hydrothermal Processing (HTP) Demonstration Facility	Commence operation of facility to demonstrate production of biocrude oil from sewage sludge.	Environmental Sustainability
Annacis Island WWTP Stage 5 Expansion	Commence detailed design of Digester No. 5 and Regional Biosolids Dryer.	Regional Growth and Opportunity
Annacis Island WWTP Stage 5 Expansion	Commence construction of Trickling Filters #5 and #6, Trickling Filter Pump Station, Centrifuges, and Maintenance Workshop Building.	Regional Growth
Climate Adaptation Plan – North Shore Sewerage Area	Complete a detailed climate and vulnerability assessment and develop an adaptation plan to protect regional assets in the NSSA from climate change impacts.	Environmental Sustainability / System Stewardship
Cloverdale Pump Station	Complete construction of the first phase of the project to meet the current capacity.	System Stewardship
Iona Island WWTP Secondary Upgrade	Complete preliminary design and procurement of design detailed design packages of WWTP. Commence ground improvements stone columns and seismic barriers. Complete secondary/treatment technology pilot testing.	Regulatory and Legislative Environment
Marshend Pump Station	Complete replacement of the pump station to meet current safety and seismic regulations, and to expand the capacity.	System Stewardship
New Westminster Interceptor	Complete rehabilitation for West Branch and Columbia Street Extension.	System Stewardship
North Surrey Interceptor Odour Control	Complete construction of odor control system.	System Stewardship

<b>Initiative</b>	<b>Description</b>	<b>Theme</b>
South Surrey Interceptor	Complete construction of the South Surrey Interceptor – Johnson Road Section, the last part of the system to be twinned.	Regional Growth
Update Liquid Waste Treatment Fees for Industrial and Commercial Users	Update fees for industrial and commercial users to improve cost recovery and create better incentives for demand side management.	Financial Sustainability
Westridge Pump Station	Complete rehabilitation of Westridge Pump Station 2 and upgrade of Westridge Pump Station 1 to meet current safety regulations and expand station capacity.	System Stewardship
<b>2028</b>		
Annacis Island WWTP Hydrothermal Processing (HTP) Demonstration Facility	Complete performance evaluation of the production of biocrude oil from sewage sludge at demonstration scale.	Environmental Sustainability
Climate Adaptation Plan – Lulu Island Sewerage Area	Complete a detailed climate and vulnerability assessment and develop an adaptation plan to protect regional assets in the Lulu Sewerage Area from climate change impacts.	Environmental Sustainability/ System Stewardship
Iona Island WWTP Secondary Upgrade	Commence detailed design of WWTP Upgrade.	Regulatory and Legislative Environment
North Shore WWTP	Commence functional testing and clean water testing of WWT plant processes.	Regulatory and Legislative Environment
Northwest Langley WWTP	Commence WWTP and outfall construction.	Regional Growth
Stoney Creek Trunk Sewer	Complete construction of the upgrade of Stoney Creek Trunk to mitigate overflow into the Stoney Creek and increase capacity	Regional Growth and System Stewardship
<b>2029</b>		
Annacis Island WWTP Stage 5 Expansion	Commence construction of Digester No. 5 and Regional Biosolids Dryer	Opportunity
North Shore WWTP	Commence WWT Plant commissioning, conveyance final works construction.	Regulatory and Legislative Environment

**METRO VANCOUVER DISTRICTS**  
**2025 - 2029 PROJECTED RESERVES - LIQUID WASTE**

**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
Liquid Waste Services	\$ 44,340,196	\$ 44,340,196	\$ -	\$ -	\$ 1,108,505	\$ 45,448,701	\$ 46,584,919	\$ 47,749,542	\$ 48,943,281	\$ 50,166,863

**DISCRETIONARY 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
<b>Liquid Waste Services</b>										
Biosolids Inventory Reserve	\$ 104,074	\$ 104,074	\$ -	\$ (104,074)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Liquid Waste General Debt Reserve Fund	3,099,015	3,099,015	-	-	77,475	3,176,490	3,255,902	3,337,300	3,420,733	3,506,251
Lions Gate Contingency	1,632,297	1,632,297	-	-	40,807	1,673,104	1,714,932	1,757,805	1,801,750	1,846,794
Drainage General Reserve	5,062,568	5,062,568	-	(1,775,000)	104,377	3,391,945	2,287,056	744,482	580,844	458,678
North Shore WWTP Reserve	-	-	121,165,617	(27,825,404)	1,166,753	94,506,966	118,068,769	103,090,476	77,414,378	60,770,589
<b>Total</b>	<b>\$ 9,897,954</b>	<b>\$ 9,897,954</b>	<b>\$ 121,165,617</b>	<b>\$ (29,704,478)</b>	<b>\$ 1,389,412</b>	<b>\$ 102,748,505</b>	<b>\$ 125,326,659</b>	<b>\$ 108,930,063</b>	<b>\$ 83,217,705</b>	<b>\$ 66,582,312</b>

**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
<b>Liquid Waste Services</b>										
Liquid Waste Laboratory Equipment Reserve	\$ 693,241	\$ 693,241	\$ 109,835	\$ -	\$ 18,704	\$ 821,780	\$ 501,175	\$ 631,422	\$ 363,202	\$ 499,327
Liquid Waste Sustainability Innovation Fund Reserve	4,629,333	4,629,333	1,127,000	-	129,821	5,886,154	7,174,395	8,494,842	9,848,301	11,235,596
<b>Total</b>	<b>\$ 5,322,574</b>	<b>\$ 5,322,574</b>	<b>\$ 1,236,835</b>	<b>\$ -</b>	<b>\$ 148,525</b>	<b>\$ 6,707,934</b>	<b>\$ 7,675,570</b>	<b>\$ 9,126,264</b>	<b>\$ 10,211,503</b>	<b>\$ 11,734,923</b>



E2

Howe Sound / Salish Sea

# 2025 – 2029 FINANCIAL PLAN

## LIQUID WASTE SERVICES

Peter Navratil, P.Eng, MPA  
General Manager, Liquid Waste Services

Liquid Waste Committee – October 10, 2024  
68633643

**metro**vancouver

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LWS Construction Team  
LIWWTP Primary Tank Refurbishment

Iona Island WWTP  
Lagoon Decommissioning

AIWWTP Mixed Liquor  
Stalked Ciliates



## LIQUID WASTE OVERVIEW

- 19 member jurisdictions, with a population of approximately 2.7 million residents
- 530 kilometers of trunk sewers, 34 pump stations and 3 storage tanks
- 5 regional treatment plants
- Average of 1.2 billion litres of wastewater per day
- 3 Urban Drainage Areas: Still Creek/Brunette, Port Moody/Coquitlam and University

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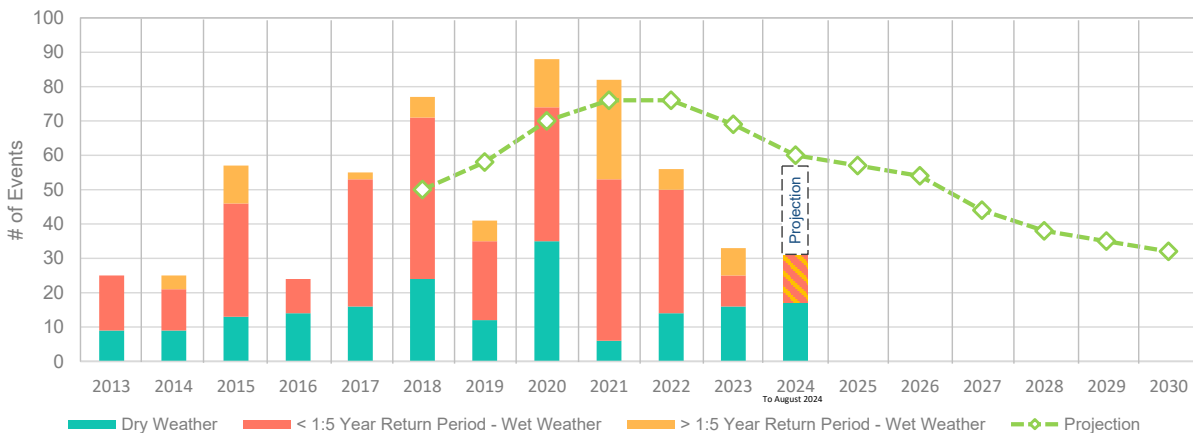
# SERVICE OBJECTIVES

Service Objective	KPI Metric	Current (2023)	Target (2030)	Goal
Eliminate Overflows from the Sewer System	Sanitary Sewage Overflow (SSO) events (#)	33	32	0 (2040)
	Combined Sewage Overflow (CSO) volume (ML)	20,157	30,000	0 (2075)
	Rainfall derived inflow and infiltration (RDII) (ML)	30,700	30,000	10,000 (2040)
	Facilities not meeting basic service or regulations in next 10 years (%)	22%	15%	0% (2035)
Protect Public Health and the Environment – Authorized WWTP Discharges	Duration of events not in compliance with operational certificates (hrs)	18.25	0	0 (2030)
	Duration of events not in compliance with WSER (hrs)	8,760	0	0 (2040)
	Recreational water quality (% of tests not meeting criteria)	0.1%	1.5%	0 (2040)
Improve Environmental Stewardship	Biosolids beneficially used (%)	100%	100%	100% (2030)
	Net GHG emissions (kg of CO2 / ML treated)	20.5	(2.1)	0 (2050)
	Odour complaints (#)	11	10	0 (2035)
Minimize Timeline to Recover from a Major Event	Targeted assets resilient to seismic event (%)	Undefined	Defined	100% (2050)
	Targeted assets resilient to power outage event (%)	91%	100%	100% (2035)
	Targeted assets resilient to climate change event (%)	Undefined	Defined	100% (2100)

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# SANITARY SEWER OVERFLOW TREND

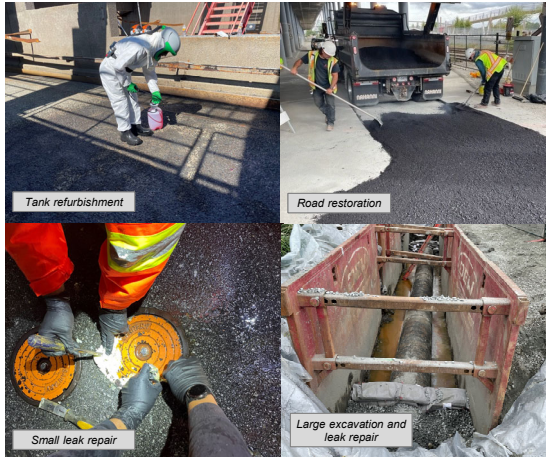
Demand Side Management is critical



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# CONTINUOUS IMPROVEMENT - 2024

Contracted-in Construction Crew



Benefits
Savings between 15-20% in labor costs
Reduced administration and procurement costs associated with tendering
Enhanced expertise within the department
Improved ability to adapt to changing construction scheduling demands and urgent emergency or high-priority projects
Reduced change orders

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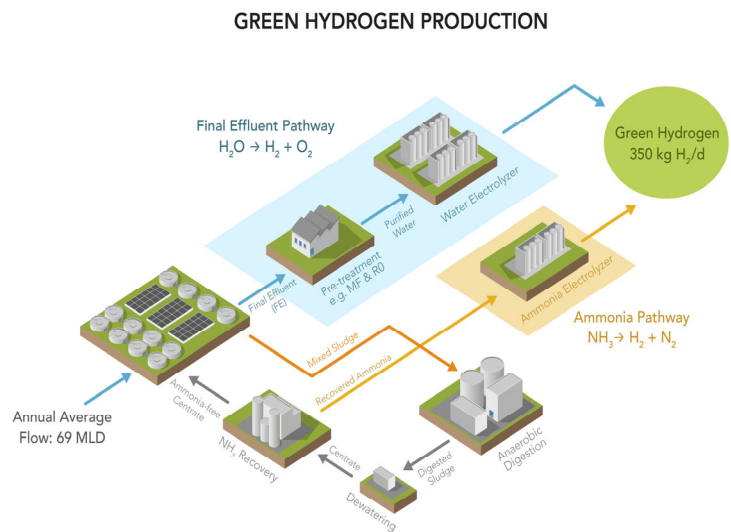
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# INNOVATION – 2025

Lulu Island WWTP Hydrogen Pilot

- Nuisance ammonia capture for conversion to Hydrogen
- Export hydrogen as low carbon fuel
- Potential at LIWWTP for 128 tonnes of Hydrogen per year
- 2025 Workplan: Initiate preliminary design; selection of Hydrogen Production Unit; develop hydrogen off-take agreements



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## CONTINUOUS IMPROVEMENT – 2024 ONGOING

### Liquid Waste Services

Initiative	Outcomes
Conservation versus Infrastructure to manage excess rainwater	Work with members to provide and share tools, experiences, public communications to reduce I&I into private laterals
Science World activation	Interactive display that highlights the connection between household wastewater and our aquatic environment, focusing on the role of wastewater treatment, environmental monitoring, and actions that residents can take
Nano-Bubble Technology	First application of nano bubble aeration technology on primary effluent to improve overall effluent quality
On-line Project Controls Tool	Creation of on-line project tools to streamline project management processes, improve forecasting of project progress and provide up-to-date information on project status

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## CONTINUOUS IMPROVEMENT – 2025 NEW

### Liquid Waste Services

Initiative	Outcomes
Biosolids Hauling De-carbonization	Trials of low-carbon hauling vehicles (battery electric vehicles and hydrogen electric vehicles) for short to medium haul routes which could reduce hauling GHG emissions by 130 tonnes of CO <sub>2</sub> e per year
Customer Service Excellence	Structured training for staff who work in public-serving and public-facing roles to improve skills for interacting with community members more effectively
Expanding Construction Crew	Continued development of construction crew and expansion of scope and breadth of technical work including pipeline construction
Incubator – Red Tape Resolution	Initiative lead by staff at positions throughout the department to identify processes that slows progress and to come up with solutions to improve productivity

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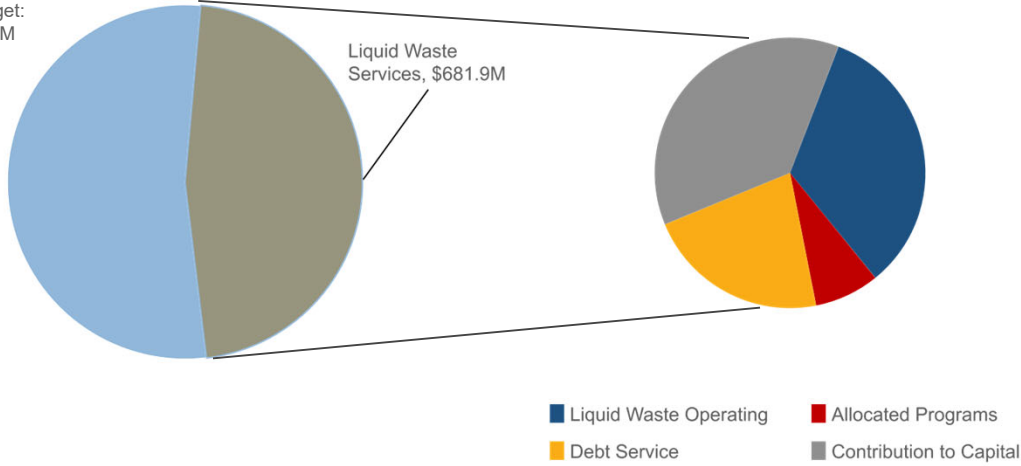
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# BUDGET OVERVIEW

## 2025 Operating Budget Breakdown - Liquid Waste Services

Total 2025 MV Budget: \$1,463.7M



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# OPERATING EXPENDITURES

## Liquid Waste Services Financial Plan

### Overview:

2024 Operating Budget: **\$487.9M**

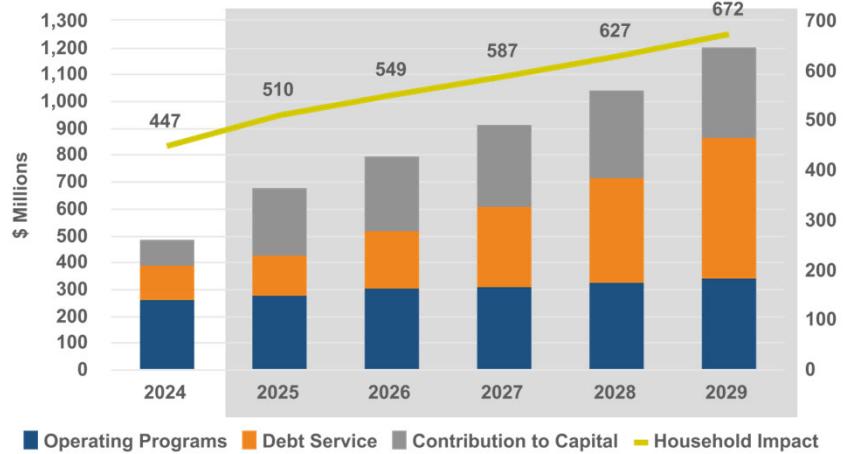
2025 Operating Budget: **\$681.9M**

39.8% increase

### Drivers for Change:

- Increasing contribution to capital and debt service to fund capital program
- Operating programs are largely inflationary with some increases on chemical costs to maintain compliance with regulations

### 2025 - 2029 Liquid Waste Services Financial Plan



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# OPERATING FUNDING

## Liquid Waste Services Financial Plan

### Overview:

2024 Operating Budget: **\$487.9M**

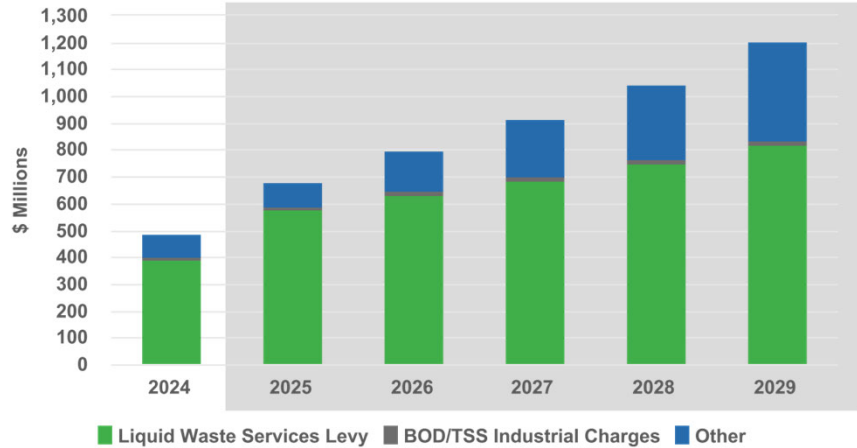
2025 Operating Budget: **\$681.9M**

**39.8%** increase

### Drivers for Change:

- Growing capital program
- Increasing usage of DCCs to fund debt servicing

### 2025 - 2029 Liquid Waste Services Financial Plan



# OPERATING HIGHLIGHTS – 2025

## Liquid Waste Services

Division	
PPA	Complete update and provincial approval of the Liquid Waste Management Plan
ED&C	Provide structured training for project managers to improve skills for interacting with community members more effectively
O&M-WWT	Award a new “Reduced Emissions Residuals Hauling” contract
O&M-WWCD	Continued development of construction crew and expansion of scope and breadth of technical work including pipeline construction
EMQC	False Creek water quality monitoring and assessment in collaboration with Friends of False Creek, Raincoast Conservation Foundation and the City of Vancouver
SS&SI	Conduct on-site monitoring at Lulu Island WWTP to quantify GHG emissions from wastewater treatment process units

## OPERATING HIGHLIGHTS – 2026-2029

### Liquid Waste Services

Budget Year	Initiative	Description
2026	Liquid Waste Services Comprehensive Long Range Plan	Complete plan outlining strategy for long-term infrastructure needs
2027	Annacis Island WWTP HTP Demonstration Facility	Commence operation of the HTP Demonstration Facility
2028	Stoney Creek Sanitary Trunk Sewer	Begin operation of expanded trunk sewer
2029	North Shore WWTP	Preparations for plant start-up including on-boarding of WWTP operating staff

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## CAPITAL EXPENDITURES

### Liquid Waste Services Capital Plan

#### Overview:

2024 Capital Cash Flow: **\$781.2M**

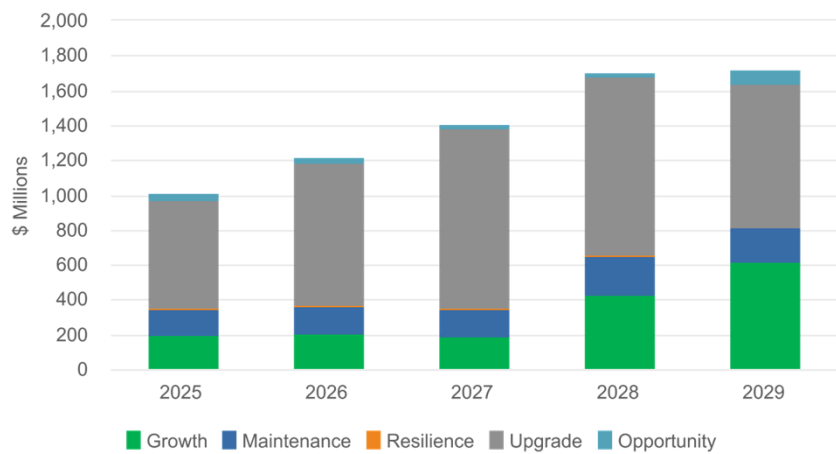
2025 Capital Cash Flow: **\$1,010.4M**

**29.3%** increase

#### Drivers for Change:

- North Shore WWTP Regulatory Upgrade
- Iona Island WWTP Regulatory Upgrade
- Northwest Langley WWTP Expansion
- Annacis Island WWTP Expansion
- Regional Biosolids Dryer
- Gilbert / Brighthouse Trunk Sewer

2025 – 2029 Liquid Waste Services Capital Cash Flow



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# CAPITAL FUNDING

## Liquid Waste Services Capital Plan

### Overview:

2024 Capital Cash Flow: **\$781.2M**

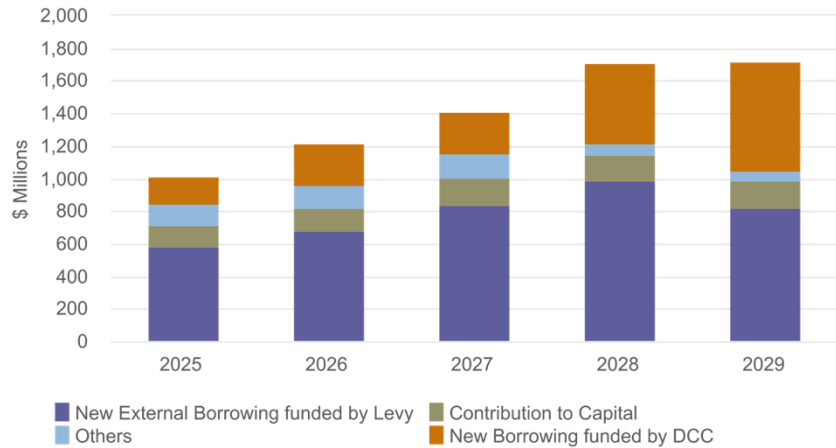
2025 Capital Cash Flow: **\$1,010.4M**

**29.3%** increase

### Drivers for Change:

- Utilizing borrowing
- Increasing usage of Development Cost Charges
- Continuing to work with external partners for funding

### 2025 – 2029 Liquid Waste Services Capital Funding



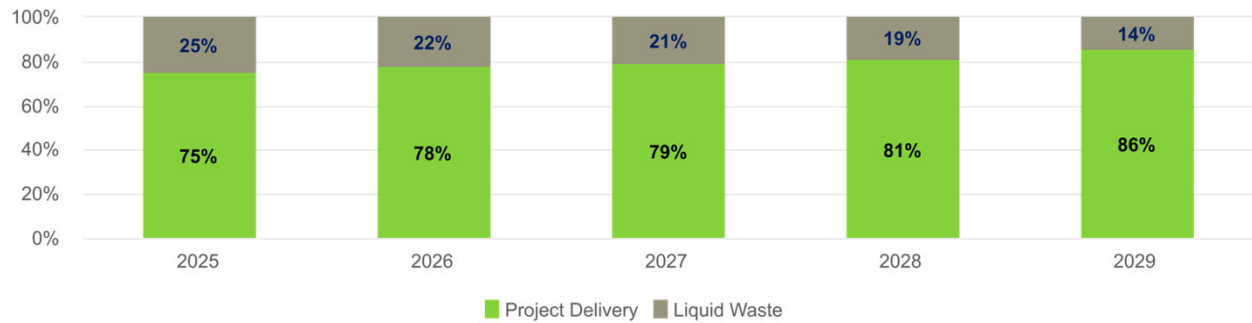
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# LIQUID WASTE 2025 - 2029 CAPITAL PLAN

	2025	2026	2027	2028	2029
Annual Capital Expenditures (millions)					
LWS	\$252	\$266	\$291	\$321	\$241
PD	\$759	\$950	\$1,116	\$1,386	\$1,478

### Drivers:

- **LWS** - 143 projects in the 2025 - 2029 capital plan
- **Project Delivery** - 8 projects in the 2025 - 2029 capital plan



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## CAPITAL PROGRAM HIGHLIGHTS

### Liquid Waste Services

Budget Year	Capital Project	Description
2025	Annacis Island WWTP	Outfall construction complete Commence design of Digester #5 and Biosolids Dryer
2026	Gilbert Trunk Sewer South Surrey Interceptor	Twinning of the trunk sewer complete Twinning of the Johnston Road section complete
2027	Annacis Island WWTP New Westminster Interceptor	Commence construction of Trickling Filter 5/6, TF Pump Station Complete rehabilitation of West Branch and Columbia St.
2028	Iona Island WWTP Northwest Langley WWTP	Commence detailed design Commence outfall construction
2029	Annacis Island WWTP	Commence construction of Digester #5 Commence construction of regional Biosolids Dryer

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## LIQUID WASTE SERVICES FINANCIAL PLAN SUMMARY

### Liquid Waste Services Overall

	2024	NSWWTP Amended	2025	2026	2027	2028	2029
Total Expenditures (\$ Millions)	\$487.9	\$609.1*	\$681.9	\$797.0	\$915.3	\$1,042.6	\$1,202.9
% Change			12.0%	16.9%	14.8%	13.9%	15.4%
Liquid Waste Service Levy (\$ Millions)	\$389.5		\$575.6	\$630.7	\$687.3	\$748.6	\$817.8
Total Capital Cash Flow (\$ Million)	\$781.2		\$1,010.4	\$1,215.7	\$1,407.1	\$1,707.0	\$1,719.4
Household Impact (\$)	\$349	\$447*	\$510	\$549	\$587	\$627	\$672
% Change			14.0%	7.8%	6.8%	6.8%	7.2%
Prior Cycle Household Impact Change (%)			15.3%	9.1%	7.8%	7.4%	N/A

\*Estimated based on amended NSWWTP budget

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## LIQUID WASTE SERVICES FINANCIAL PLAN SUMMARY - VSA

### Vancouver Sewerage Area

	2024	NSWWTP Amended	2025	2026	2027	2028	2029
Total Expenditures (\$ Millions)	\$141.3	\$185.3*	\$205.4	\$231.7	\$263.6	\$296.7	\$341.5
% Change			10.8%	12.8%	13.7%	12.6%	15.1%
Liquid Waste Service Levy (\$ Millions)	\$125.9		\$190.3	\$209.5	\$228.9	\$246.9	\$274.1
Total Capital Cash Flow (\$ Million)	\$141.1		\$184.9	\$244.2	\$329.6	\$487.8	\$490.8
Household Impact (\$)	\$432	\$582*	\$650	\$706	\$755	\$799	\$869
% Change			11.6%	8.7%	7.0%	5.7%	8.8%
Prior Cycle Household Impact Change (%)			13.9%	6.3%	10.0%	10.8%	N/A

\*Estimated based on amended NSWWTP budget

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## LIQUID WASTE SERVICES FINANCIAL PLAN SUMMARY - NSSA

### North Shore Sewerage Area

	2024	NSWWTP Amended	2025	2026	2027	2028	2029
Total Expenditures (\$ Millions)	\$41.7	\$51.4*	\$69.4	\$94.4	\$122.5	\$152.6	\$181.4
% Change			35.1%	36.1%	29.7%	24.6%	18.9%
Liquid Waste Service Levy (\$ Millions)	\$38.0		\$64.3	\$81.4	\$94.7	\$108.0	\$121.7
Total Capital Cash Flow (\$ Million)	\$317.6		\$467.3	\$592.4	\$670.7	\$554.0	\$382.9
Household Impact (\$)	\$464	\$582*	\$782	\$980	\$1,123	\$1,262	\$1,401
% Change			34.5%	25.2%	14.7%	12.4%	11.0%
Prior Cycle Household Impact Change (%)			32.7%	34.4%	19.0%	9.8%	N/A

\*Estimated based on amended NSWWTP budget

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## LIQUID WASTE SERVICES FINANCIAL PLAN SUMMARY - LIWSA

Lulu Island West Sewerage Area

	2024	NSWWTP Amended	2025	2026	2027	2028	2029
Total Expenditures (\$ Millions)	\$36.7	\$45.5*	\$50.4	\$57.9	\$65.1	\$70.2	\$76.2
% Change			10.9%	14.9%	12.3%	7.9%	8.5%
Liquid Waste Service Levy (\$ Millions)	\$32.2		\$46.1	\$51.9	\$56.4	\$58.6	\$60.8
Total Capital Cash Flow (\$ Million)	\$47.4		\$57.3	\$53.0	\$26.5	\$26.5	\$35.2
Household Impact (\$)	\$295	\$375*	\$418	\$464	\$496	\$505	\$515
% Change			11.6%	11.1%	6.7%	2.0%	2.0%
Prior Cycle Household Impact Change (%)			16.8%	9.9%	6.5%	3.1%	N/A

\*Estimated based on amended NSWWTP budget

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## LIQUID WASTE SERVICES FINANCIAL PLAN SUMMARY - FSA

Fraser Sewerage Area

	2024	NSWWTP Amended	2025	2026	2027	2028	2029
Total Expenditures (\$ Millions)	\$265.2	\$323.8*	\$353.1	\$409.3	\$460.4	\$519.2	\$599.8
% Change			9.0%	15.9%	12.5%	12.8%	15.5%
Liquid Waste Service Levy (\$ Millions)	\$190.5		\$271.5	\$284.4	\$303.6	\$331.3	\$357.4
Total Capital Cash Flow (\$ Million)	\$274.6		\$299.4	\$325.2	\$379.1	\$638.7	\$810.4
Household Impact (\$)	\$301	\$391*	\$421	\$434	\$454	\$485	\$512
% Change			7.7%	3.0%	4.5%	6.9%	5.7%
Prior Cycle Household Impact Change (%)			8.9%	4.9%	3.7%	4.9%	N/A

\*Estimated based on amended NSWWTP budget

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## LIQUID WASTE SERVICES FINANCIAL PLAN SUMMARY Drainage

	2024	2025	2026	2027	2028	2029
Total Expenditures (\$ Millions)	\$3.1	\$3.6	\$3.6	\$3.9	\$3.9	\$4.0
% Change		15.1%	2.5%	5.9%	—%	2.7%
Liquid Waste Service Levy (\$ Millions)	\$2.9	\$3.3	\$3.4	\$3.6	\$3.7	\$3.8
Total Capital Cash Flow (\$ Million)	\$0.5	\$1.6	\$1.0	\$1.4	\$0.1	\$-

## BENCHMARK OF UTILITY COSTS

Liquid Waste (\$ CAD)

Liquid Waste (Average household rate)	
Metro Vancouver (2025 - Proposed)	\$510
Capital Region District (2024)	\$330
MV municipal regional average (MV 2025 + 2025 estimated municipal household rate)	\$510 + \$525 = \$1,035
Portland, OR (2024)	\$1,050
Seattle, WA (2024)	\$1,270
San Francisco, CA (2024)	\$1,300

Comparative sewer service rates are calculated based on the average water use for each community.

# APPORTIONMENT AND RESERVE BYLAWS

## Liquid Waste

### GVS&DD Cost Apportionment Bylaw Amendment

- Establish apportionment for the North Shore program additional costs as directed by the Board at the Board Budget Workshop May 31, 2024.

### North Shore WWTP Reserve Bylaw

- Establish reserves for each sewerage area to reflect the levy phasing directed by the Board at the Board Budget Workshop May 31, 2024.
- This will result in an estimated \$60 million in debt service savings over the next five years by reducing borrowing.

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Annacis Island Wastewater Treatment Plant

Questions?

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GREATER VANCOUVER SEWERAGE AND DRAINAGE DISTRICT  
BYLAW NO. 384, 2024  
A Bylaw to Amend Greater Vancouver Sewerage and Drainage District  
Cost Apportionment Bylaw No. 283, 2014

**WHEREAS:**

- A. the Board of Directors of the Greater Vancouver Sewerage and Drainage District adopted the “Greater Vancouver Sewerage and Drainage District Cost Apportionment Bylaw No. 283, 2014” on March 28, 2014;
- B. “Greater Vancouver Sewerage and Drainage District Cost Apportionment Bylaw No. 283, 2014” sets out the method of apportioning annual sewerage and drainage expenditures among the member municipalities, as permitted by section 55(4) of the *Greater Vancouver Sewerage and Drainage District Act*; and
- C. the Board of Directors of the Greater Vancouver Sewerage and Drainage District wishes to amend the “Greater Vancouver Sewerage and Drainage District Cost Apportionment Bylaw No. 283, 2014”.

**NOW THEREFORE** the Board of the Greater Vancouver Sewerage and Drainage District enacts as follows:

**Citation**

1. The official citation of this bylaw is “Greater Vancouver Sewerage and Drainage District Cost Apportionment Amendment Bylaw No. 384, 2024”.

**Effective Date**

2. This bylaw will come into effect on January 1, 2025.

**Amendment of Bylaw**

3. “Greater Vancouver Sewerage and Drainage District Cost Apportionment Bylaw No. 283, 2014” is amended as follows:

- (a) The definition “**Growth Component**” in Section 1 is deleted and replaced as follows:

“**Growth Component**” means, together, the Tier I Growth Component, the Tier II Growth Component and the Tier III Growth Component;

- (b) The definition “**Tier I Growth Component**” in Section 1 is deleted and replaced as follows:

“**Tier I Growth Component**” means all of the capital expenditures, net of revenue, incurred by the Corporation for Tier I Projects that are primarily “growth” projects, as provided for in the applicable annual budgets of the Corporation or in the supporting

documentation to such annual budgets, excluding North Shore Program Growth Component;

- (c) The definition **“Tier I Non-Growth Component”** in Section 1 is deleted and replaced as follows:

**“Tier I Non-Growth Component”** for any 12-month period, means the aggregate of those capital expenditures, net of revenue, for Tier I Projects not constituting the Tier I Growth Component, excluding North Shore Program Non-Growth Component;

- (d) The definition **“Tier II Growth Component”** in Section 1 is deleted and replaced as follows:

**“Tier II Growth Component”** means all of the capital expenditures, net of revenue, incurred by the Corporation for Tier II Projects that are primarily “growth” projects, as provided for in the applicable annual budgets of the Corporation or in the supporting documentation to such annual budgets, excluding North Shore Program Growth Component;

- (e) The definition **“Tier II Non-Growth Component”** in Section 1 is deleted and replaced as follows:

**“Tier II Non-Growth Component”** for any 12-month period, means the aggregate of those capital expenditures, net of revenue, for Tier II Projects not constituting the Tier II Growth Component, excluding North Shore Program Non-Growth Component;

- (f) The definition **“Tier III Growth Component”** in Section 1 is deleted and replaced as follows:

**“Tier III Growth Component”** for any 12-month period, means all of the capital expenditures, net of revenue, incurred by the Corporation for Tier III Projects that are primarily “growth” projects, as provided for in the applicable annual budgets of the Corporation or in the supporting documentation to such annual budgets, excluding North Shore Program Growth Component;

- (g) The definition **“Tier III Non-Growth Component”** in Section 1 is deleted and replaced as follows:

**“Tier III Non-Growth Component”** for any 12-month period, means the aggregate of those capital expenditures, net of revenue, for Tier III Projects not constituting the Tier III Growth Component, excluding North Shore Program Non-Growth Component;

- (h) The following definitions are added in alphabetical order to Section 1:

**“North Shore Program”** means, collectively:

- i. designing, constructing and commissioning the North Shore Wastewater Treatment Plant;
- ii. designing, constructing and commissioning the First Narrows Pump Station and conveyance pipe that will serve the North Shore Wastewater Treatment Plant; and
- iii. preliminary design for decommissioning the Lions Gate Wastewater Treatment Plant;

**“North Shore Program Additional Costs”** means the costs for completing the North Shore Program in excess of \$1.06 Billion, to a maximum of \$3.86 Billion; stated another way, North Shore Program Additional Costs will not exceed \$2.8 Billion;

**“North Shore Program Growth Component”** means the capital expenditures, net of revenue, incurred by the Corporation that are North Shore Program Additional Costs and are primarily attributable to “growth”, as provided for in the applicable annual budgets of the Corporation or in the supporting documentation to such annual budgets;

**“North Shore Program Non-Growth Component”** means the capital expenditures, net of revenue, incurred by the Corporation that are North Shore Program Additional Costs and that do not constitute North Shore Program Growth Component, as provided for in the applicable annual budgets of the Corporation or in the supporting documentation to such annual budgets;

(i) Section 2 is added as follows:

2. Special Apportionment for North Shore Program Growth Component and North Shore Program Non-Growth Component

Each year, for the duration of the North Shore Program, the North Shore Program Growth Component and the North Shore Program Non-Growth Component will be apportioned among the Sewerage Areas as follows:

Vancouver Sewerage Area	23.7%
North Shore Sewerage Area	37.3%
Lulu Island West Sewerage Area	4.9%
Fraser Sewerage Area	34.1%
<b>Total Allocation</b>	<b>100.0%</b>



(j) Section 4.4 is deleted and replaced as follows:

4.4 The Corporation will apply the development cost charge monies (the “DCC Monies”) received under Greater Vancouver Sewerage and Drainage District Development Cost Charge Bylaw No. 371, 2023 (as amended or replaced from time to time) in any year and apportioned to a particular Sewerage Area to pay up to 99% of the sum of the North Shore Program Growth Component, Tier I Growth Component, Tier II Growth Component and Tier III Growth Component apportioned to that Sewerage Area pursuant to sections 2, 4.2 and 4.3.

(k) Section 4.5 is deleted and replaced as follows:

4.5 The Corporation will further apportion among the member municipalities within each Sewerage Area (including, in the case of the Vancouver Sewerage Area, the University Endowment Lands) the total of:

- (a) 1% of the sum of the North Shore Program Growth Component apportioned to the Sewerage Area pursuant to section 2 and the amounts apportioned to the Sewerage Area pursuant to sections 4.2 and 4.3; and
- (b) the amount by which the DCC Monies are insufficient to pay 99% of the sum of the North Shore Program Growth Component apportioned to the Sewerage Area pursuant to section 2 and the amounts apportioned to the Sewerage Area pursuant to sections 4.2 and 4.3;

on the basis of the following formula:

$$\frac{\text{Member Population Growth}}{\text{Sewerage Area Population Growth}} \times \text{The sum of amounts (a) and (b)}$$

(l) Section 4.7 is deleted and replaced as follows:

4.7 Special Apportionment for the Vancouver Sewerage Area

- (a) If by January 31 of any year there is no agreement under subsection 6(5) of the Act in force with respect to that year, and for the purpose of further apportioning North Shore Program Growth Component apportioned to the Vancouver Sewerage Area under section 2 and costs apportioned to the Vancouver Sewerage Area under sections 4.2 and 4.3, the Corporation will further apportion to the University of British Columbia an amount equal to:

$$A \times [(B + C)/D], \text{ where:}$$

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Greater Vancouver Sewerage and Drainage District Cost Apportionment  
Amendment Bylaw No. 384, 2024

A = 90% of the sums of the amounts apportioned to the Vancouver Sewerage Area as calculated in Sections 4.5 (a) and (b)

B = University of British Columbia residential population (the population as published in the most recent edition, as determined by the Corporation, of British Columbia Municipal and Regional District Population Estimates of BC Stats, of the Government of the Province of British Columbia)

C = University of British Columbia student population (the total student enrolment for the Vancouver campus, reported/published annually by the University's Provost and Vice-President Academic)

D = Vancouver Sewerage Area total population (the total member population for that Area's member municipalities as published in the most recent edition, as determined by the Corporation, of British Columbia Municipal and Regional District Population Estimates of BC Stats, of the Government of the Province of British Columbia, and where the member population for the University Endowment Lands will be deemed to be equal to 0.9% of the member population for the City of Vancouver).

This sum of money to be paid by the University of British Columbia will be due and payable on the fifteenth day of August in such year, with any sum of money apportioned but not paid by such due date bearing interest pursuant to section 6(8) of the Act.

- (b) Despite section 4.4, for the Vancouver Sewerage Area, the Corporation will apply, to pay up to 99% of the North Shore Program Growth Component, Tier I Growth Component, Tier II Growth Component and Tier III Growth Component apportioned to the Vancouver Sewerage Area pursuant to sections 2, 4.2 and 4.3:
  - (1) Monies received from the University of British Columbia pursuant to section 4.7(a); and
  - (2) DCC Monies received under Greater Vancouver Sewerage and Drainage District Development Cost Charge Bylaw No. 254,

2010 (as amended or replaced from time to time) in any year and apportioned to the Vancouver Sewerage Area.

(m) Section 4.8 is deleted and replaced as follows:

4.8 Special Apportionment for the Fraser Sewerage Area

- (a) Despite section 4.5, for the Fraser Sewerage Area, the Corporation will not apportion to the Village of Anmore the North Shore Program Growth Component apportioned to the Fraser Sewerage Area under section 2, or costs apportioned to the Fraser Sewerage Area under sections 4.2 and 4.3, except if the Fraser Sewerage Area boundary within the Village of Anmore is further extended to service sites beyond the existing building footprint at Anmore Green Estates or sites beyond the Fraser Sewerage Area boundary at Eagle Mountain Middle School, in which case the Corporation will, in accordance with section 4.5, further apportion to the Village of Anmore as a member municipality the North Shore Program Growth Component apportioned to the Fraser Sewerage Area under section 2 and those costs apportioned to the Fraser Sewerage Area under sections 4.2 and 4.3.

(n) Section 7.1 is deleted and replaced as follows:

7.1 Except as otherwise provided in this bylaw, the total of:

- (a) the portion of the North Shore Program Non-Growth Component apportioned to the Vancouver Sewerage Area under section 2;
- (b) the portion of the Regional Share apportioned to the Vancouver Sewerage Area under section 6.1;
- (c) the Sewerage Area Share apportioned to the Vancouver Sewerage Area under section 6.2;
- (d) the Tier I Non-Growth Component apportioned to the Vancouver Sewerage Area under section 6.3; and
- (e) all other costs apportioned to the Vancouver Sewerage Area pursuant to section 9,

will be the total Non-Growth Costs for the Vancouver Sewerage Area.

(o) Section 7.4 is deleted and replaced as follows:

7.4 Except as otherwise provided in this bylaw, the total of:

- (a) the portion of the North Shore Program Non-Growth Component apportioned to the Lulu Island West Sewerage Area under section 2;
- (b) the portion of the Regional Share apportioned to the Lulu Island West Sewerage Area under section 6.1;
- (c) the Sewerage Area Share apportioned to the Lulu Island West Sewerage Area under section 6.2;
- (d) the Tier I Non-Growth Component apportioned to the Lulu Island West Sewerage Area under section 6.3; and
- (e) all other costs apportioned to the Lulu Island West Sewerage Area pursuant to section 9,

will be the total Non-Growth Costs for the Lulu Island West Sewerage Area and will be further apportioned entirely to the City of Richmond, being the sole member municipality within that Sewerage Area.

(p) Section 7.5 is deleted and replaced as follows:

7.5 Except as otherwise provided in this bylaw, the total of:

- (a) the portion of the North Shore Program Non-Growth Component apportioned to the North Shore Sewerage Area under section 2;
- (b) the portion of the Regional Share apportioned to the North Shore Sewerage Area under section 6.1;
- (c) the Sewerage Area Share apportioned to the North Shore Sewerage Area under section 6.2;
- (d) the Tier I Non-Growth Component apportioned to the North Shore Sewerage Area under section 6.3; and
- (e) all other costs apportioned to the North Shore Sewerage Area pursuant to section 9,

will be the total Non-Growth Costs for the North Shore Sewerage Area.

(q) Section 7.8 is deleted and replaced as follows:

7.8 Except as otherwise provided in this bylaw, the total of:

- (a) the portion of the North Shore Program Non-Growth Component apportioned to the Fraser Sewerage Area under section 2;
- (b) the portion of the Regional Share apportioned to the Fraser Sewerage Area under section 6.1;
- (c) the Sewerage Area Share apportioned to the Fraser Sewerage Area under section 6.2;
- (d) the Tier I Non-Growth Component apportioned to the Fraser Sewerage Area under section 6.3; and
- (e) all other costs apportioned to the Fraser Sewerage Area pursuant to section 9,

will first be subject to a special apportionment for Fraser Sewerage Area in accordance with section 7.9, and second, after deduction of the special apportionments in section 7.9, the remaining costs will be the Total Non-Growth Costs for the Fraser Sewerage Area and will be further apportioned in accordance with sections 7.10 and 7.11.

(r) Section 7.9 is deleted and replaced as follows:

7.9 As a special apportionment for the Fraser Sewerage Area, the amount to be apportioned to the Village of Anmore in respect of Anmore Green Estates and Eagle Mountain Middle School will be equal to that portion of the North Shore Program Non-Growth Component, Tier I Non-Growth Component, Tier II Non-Growth Component, and Tier III Non-Growth Component apportioned to the Fraser Sewerage Area that are attributable to Village of Anmore Flow.

Read a first, second, and third time this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

Adopted this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

\_\_\_\_\_  
Mike Hurley, Chair

\_\_\_\_\_  
Dorothy Shermer, Corporate Officer

GREATER VANCOUVER SEWERAGE AND DRAINAGE DISTRICT  
BYLAW NO. 385, 2024

A bylaw to establish reserve funds for the North Shore Wastewater Treatment Plant

**WHEREAS:**

- A. the *Greater Vancouver Sewerage and Drainage District Act* authorizes the Greater Vancouver Sewerage and Drainage District (the “GVS&DD”) Board (the “Board”) to establish by bylaw a reserve fund for a specified purpose;
- B. the “**North Shore Program**” means, collectively,
  - i. designing, constructing and commissioning the North Shore Wastewater Treatment Plant;
  - ii. designing, constructing and commissioning the First Narrows Pump Station and the conveyance pipe that will serve the North Shore Wastewater Treatment Plant; and
  - iii. preliminary design for decommissioning the Lions Gate Wastewater Treatment Plant; and
- C. the Board considers it desirable to establish four reserve funds to set aside funds collected from each of GVS&DD’s sewerage areas under the Greater Vancouver Sewerage and Drainage District Cost Apportionment Bylaw No. 283, 2014, as amended from time to time, to provide for “**North Shore Program Additional Costs**”, which means the costs for completing the North Shore Program in excess of \$1.06 Billion, to a maximum of \$3.86 Billion; stated another way, North Shore Program Additional Costs will not exceed \$2.8 Billion.

**NOW THEREFORE** the Board of the Greater Vancouver Sewerage and Drainage District enacts as follows:

**Citation**

- 1. The official citation of this bylaw is “Greater Vancouver Sewerage and Drainage District North Shore Wastewater Treatment Plant Reserve Funds Bylaw No. 385, 2024”.

**Effective Date**

- 2. This bylaw will come into effect on January 1, 2025.

**Establishment of North Shore Wastewater Treatment Plant Sewerage Area Reserves**

- 3. The Board hereby establishes four reserve funds, one for each of the four GVS&DD sewerage areas, in respect of monies collected for North Shore Program Additional Costs, to be respectively known as:
  - a. the “North Shore Wastewater Treatment Plant (Vancouver Sewerage Area) Reserve”;
  - b. the “North Shore Wastewater Treatment Plant (Lulu Island West Sewerage Area) Reserve”;
  - c. the “North Shore Wastewater Treatment Plant (North Shore Sewerage Area) Reserve”;
  - d. the “North Shore Wastewater Treatment Plant (Fraser Sewerage Area) Reserve”

(collectively referred to as the “North Shore Wastewater Treatment Plant Reserves”).

4. Money from the current revenue of the GVS&DD, or amounts otherwise assigned by the Board, to the extent to which it is permitted in the *Greater Vancouver Sewerage and Drainage District Act*, may from time to time be paid into any of the North Shore Wastewater Treatment Plant Reserves.
5. Money collected from a particular sewerage area in respect of North Shore Program Additional Costs, in accordance with apportionment of such costs to that particular sewerage area under the Greater Vancouver Sewerage and Drainage District Cost Apportionment Bylaw No. 283, 2014, as amended from time to time, must be placed in the North Shore Wastewater Treatment Plant Reserve for that particular sewerage area, unless its use is immediately required for the North Shore Program Additional Costs.
6. The money in the North Shore Wastewater Treatment Plant Reserves may be invested in the manner provided by the Metro Vancouver Regional District *Corporate Investments Policy*, as amended from time to time, until its use is required.
7. Money in each of the respective North Shore Wastewater Treatment Plant Reserves, and interest earned on that money, must be used only for North Shore Program Additional Costs apportioned to that particular sewerage area in accordance with the Greater Vancouver Sewerage and Drainage District Cost Apportionment Bylaw No. 283, 2014, as amended from time to time.

Read a first, second, and third time this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

Adopted this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

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Mike Hurley, Chair

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Dorothy Shermer, Corporate Officer

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To: Liquid Waste Committee

From: George Kavouras, Director, Procurement, Procurement & Real Estate Services  
Winnie Shi, Director, Major Projects, Iona Island Wastewater Treatment Plant

Date: September 19, 2024 Meeting Date: October 10, 2024

Subject: **Award of RFP No. 23-404 for Supply and Delivery of Standby Diesel Generators for Iona Island Wastewater Treatment Plant Projects**

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### RECOMMENDATION

That the GVS&DD Board:

- a) approve the award of RFP 23-404 for Supply and Delivery of Standby Diesel Generators for Iona Island Wastewater Treatment Plant Projects in the amount of up to \$14,052,914 (exclusive of taxes) to Finning (Canada) a division of Finning International Inc., for a one time-time purchase, 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

Finning (Canada) a division of Finning International Inc. (Finning) proposal ranked highest overall, had the highest technical score and demonstrated best value overall for Metro Vancouver. The Standby Diesel Generators (SDGs) are critical to ensure resiliency and safe operation of the existing plant while staff evaluates a prolonged use of the plant as directed by the GVS&DD Board, in July 2024. Securing this contract with Finning allows Metro Vancouver to install the SDGs in 2026, before construction of the plant rehabilitation scope required to extend the plant's lifespan commences.

GVS&DD issued a Request for Expressions of Interest and Qualifications (RFEOI) 23-331 in September 2023. Eight responses were received and five proponents were invited to participate in Request for Proposal (RFP) No. 23-404. RFP No. 23-404 was issued on December 13, 2023. The procurement process was executed in accordance with the terms and conditions of Metro Vancouver's Procurement Policy. RFP No. 23-404 evaluation team have considered the proposals received, and on that basis recommend that the GVS&DD Board award RFP No. 23-404 to Finning.

### PURPOSE

Pursuant to the *GVS&DD Officers and Delegation Bylaw No.284, 2014* (Bylaw) and *Board Policy No. FN-031*, procurement contracts which exceed a value of \$10 million require the approval of the GVS&DD Board.

### BACKGROUND

The Iona Island Wastewater Treatment Plant Early Electrical Works Project includes the purchase of SDGs that are required to keep the existing plant operational during ground improvements and will



remain as a backup power supply until the new secondary treatment plant is commissioned. The SDGs are critical to ensure resiliency and safe operation of the existing plant while staff evaluate a prolonged use of the plant as directed by the GVS&DD Board, in July 2024. Securing this contract with Finning allows Metro Vancouver to install the SDGs in 2026, before construction of the plant rehabilitation scope required to extend the plant's lifespan commences which is an important consideration given that the existing plant does not have standby power installed.

**PROCUREMENT SUMMARY**

RFEI 23-331 was issued on September 1, 2023 to prequalify proponents to participate in RFP 23-404. Eight firms responded to REOI 23-331, of those five were shortlisted and invited to respond to RFP 23-404.

RFP 23-404 Submissions

Proponents	Pricing (excluding taxes)
Finning (Canada) a division of Finning International Inc.	\$13,293,029
GAL Power Systems	\$6,468,731
Prima Power and Systems	\$9,240,501
Simson-Maxwell Ltd.	\$12,550,677

Metro Vancouver received four proposals. All proposals submitted by the Proponents were in compliance with the submission requirements. The compliant proposals were evaluated against Technical requirements (70 percent) and Commercial requirements (30 percent). Technical requirements were evaluated by Project Delivery and Commercial requirements were evaluated by Procurement and Real Estate Services, Procurement Division.

After a comprehensive evaluation of the compliant proposals the evaluation team concluded that the proposal submitted by Finning ranked highest overall, had the highest technical score and demonstrated best value overall for Metro Vancouver. Finning's proposal presented the best technical solution, mitigates supply chain risk, and achieves the project's schedule requirements. The proposed SDGs are built by a reputable company (Caterpillar), ideally sized for the existing plant power needs, and similar SDGs are used at other Metro Vancouver facilities. In addition, Finning offers an integrated approach to providing parts and services.

Negotiations with Finning were completed on August 23, 2024 and the terms of the contract were agreed to and finalized. The contract value agreed to is \$14,052,914. This is an increase of \$759,885 due to foreign exchange allowance, extended warranty coverage, budgetary allowances for SDG fuel, and value-added equipment (utility controls and neutral grounding resistors).

**ALTERNATIVES**

1. That the GVS&DD Board:
  - a) approve the award of RFP 23-404 for Supply and Delivery of Standby Diesel Generators for Iona Island Wastewater Treatment Plant Projects in the amount of up to \$14,052,914

- (exclusive of taxes) to Finning (Canada) a division of Finning International Inc., for a one-time purchase, 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.
2. That the GVS&DD receive the report dated September 19, 2024, titled, "Award of RFP No. 23-404 for Supply and Delivery of Standby Diesel Generators for Iona Island Wastewater Treatment Plant Projects" for information and direct staff to report back with options for an alternate course of action.

### **FINANCIAL IMPLICATIONS**

Finance has reviewed and confirmed that funding is available. There are no financial implications under Alternative 1.

### **CONCLUSION**

It is recommended that the GVS&DD Board approve the award of RFP 23-404 for Supply and Delivery of Standby Diesel Generators for Iona Island Wastewater Treatment Plant Projects in the amount of up to \$14,052,914 (exclusive of taxes) to Finning (Canada) a division of Finning International Inc., for a one time-time purchase, 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.

62141545

To: Liquid Waste Committee

From: Bob Cheng, Director, Major Projects – Coquitlam Water Supply and Annacis Stage 5 Expansion, Project Delivery

Date: September 26, 2024 Meeting Date: October 10, 2024

Subject: **Annacis Island Wastewater Treatment Plant Digester No. 5 – Stage Gate 0 Approval**

**RECOMMENDATION**

That the GVS&DD Board approve the Annacis Island Wastewater Treatment Plant Digester No. 5 advancing from the Initiation phase to the Definition phase (Stage Gate 0), as described in the report dated September 26, 2024, titled “Annacis Island Wastewater Treatment Plant Digester No. 5 – Stage Gate 0 Approval”.

**EXECUTIVE SUMMARY**

To accommodate population growth, the Annacis Island Wastewater Treatment Plant is undergoing expansion works to increase treatment capacity to serve 1.5 million people. As part of the expansion works, a new Digester No. 5 is proposed to be constructed, to ensure sufficient regional digester capacity and redundancy to accommodate population growth.

The Long Range Capital Plan has identified a total budget of \$456 million for design and construction of the Digester No. 5 project and this will be reviewed further in the Definition Stage. Staff recommend that the GVS&DD Board approve advancing to the Definition Stage (Stage Gate 0) to allow the project definition work to commence for the Annacis Island Wastewater Treatment Plant Digester No. 5.

**PURPOSE**

To seek approval for the AIWWTP Digester No. 5 to advance from the Initiation phase to the Definition phase (Stage Gate 0, see Figure 1), provide information to support this decision, and provide a progress update on the work completed to date.

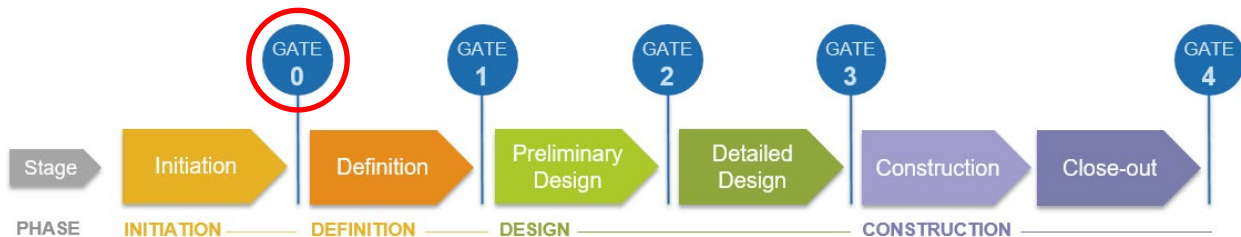


Figure 1: Overview of Stage Gate and Project Phases

**BACKGROUND**

The Annacis Island Wastewater Treatment Plant, located in the City of Delta, provides secondary treatment for approximately 1.2 million people in Metro Vancouver. There are currently four

existing digesters at the Annacis Island Wastewater Treatment Plant. Digesters convert organic sludge into biosolids in the overall wastewater treatment process.

To accommodate population growth, the Annacis Island Wastewater Treatment Plant is undergoing expansion works to increase treatment capacity to serve 1.5 million people. As part of the expansion works, a new Digester No. 5 is proposed to be constructed.

Due to continued population growth in the region and the upgrade of Iona Island Wastewater Treatment Plant and Lions Gate Wastewater Treatment Plant to secondary treatment, the amount of primary and secondary sludge produced from Metro Vancouver’s regional wastewater treatment plants is expected to more than double over the next decade. In 2022, Metro Vancouver completed a Wastewater Treatment Plant Digester Capacity Review Options Analysis, which reviewed means to establish a regional plan to ensure sufficient digester capacity and redundancy to meet the needs of the future. This exercise confirmed the need for an additional digester at the Annacis Island Wastewater Treatment Plant. Digester No. 5 will accommodate population growth as well as to allow the Annacis Island Wastewater Treatment Plant to continue to provide regional digestion capacity during planned maintenance or process upsets at the other wastewater treatment plants. This analysis also recommended that a subsequent new digester (Digester No. 6) be considered in the future. Staff are currently giving consideration to include design for Digester No. 6 within the Digester No. 5 project to leverage design efficiencies, and this will be explored further within the Definition Stage.

## TECHNICAL UPDATE

### Environmental, Geotechnical, and Archaeological Considerations

A desktop review concluded that there are no environmental or archaeological concerns at this stage of the project. The geotechnical information considered during the Initiation phase was obtained from previous studies performed within the plant property. This information indicates that ground improvements are likely to be required, which will be examined further in future phases.

As the project progresses through the Definition, Preliminary Design, and Detailed Design phases, further environmental, geotechnical, and archaeological assessments will be performed.

### Schedule

Table 1 below outlines the anticipated overall project schedule.

**Table 1: Anticipated Project Schedule**

Project Stage	Schedule	
	Start Date	End Date
Definition	Late 2024	Late 2025
Preliminary Design	Late 2025	Early 2027
Detailed Design	Early 2027	Early 2029
Construction	Early 2029	Early 2032

### **CAPITAL COST UPDATE**

The overall Board-approved budget for the Definition phase is included in the Preliminary Design phase budget of \$6.9 million. The Long Range Capital Plan has identified a total budget of \$456 million for design and construction of the Digester No. 5 project and this will be reviewed further in the Definition Stage in accordance with Metro Vancouver’s Cost Estimating Framework. The cost estimating framework includes a rigorous approach to addressing challenges inherent in estimating future costs on large, complex, high risk, and lengthy projects, including using forecast cash flows to estimate escalation, as well as a contingency/risk reserve which are identified, managed, and quantified according to a standardized risk review process.

### **PROCUREMENT UPDATE**

A Request for Qualifications has been issued to shortlist up to three qualified firms to receive a Request for Proposal (RFP) for Owner’s Engineer services required to complete the Definition phase. The RFP will be issued later in 2024. The scope of services in the RFP will also include provision for future amendments to provide Owner’s Engineer services for the Preliminary Design, Detailed Design, and Construction phases.

Prior to commencement of the Preliminary Design phase, a separate future procurement will be undertaken to retain consultants to provide engineer-of-record, design, and construction engineering services, and construction management services.

Upon completion of the Detailed Design phase, the intent will be to conduct a two-stage best-value procurement to retain a construction contractor. As the design progresses through the Definition, Preliminary Design, and Detailed Design phases, additional procurements may be identified to mitigate impacts during construction such as long lead times on critical materials and equipment.

### **PROJECT RISKS**

An initial risk assessment of key project risks was performed in the Initiation phase following a qualitative risk analysis approach and utilizing a standardized risk register. At this time, key anticipated project risks identified for the Definition phase include consideration of the future treatment processes when determining the footprint for the new Digester and associated works including any required ground improvements.

### **ENGAGEMENT**

Engagement opportunities with the public, First Nations, and other interested parties will be assessed during the Definition phase.

### **REVIEWS**

This project was presented to the Wastewater Treatment Plant Upgrades Steering Committee on July 15, 2024, and to the REAC and RAAC Committees in September. All Committees were supportive of advancing the project to the Definition phase.

### **FUTURE BOARD DECISIONS**

Future Stage Gate approvals for subsequent phases, together with contract awards, will be brought to the GVS&DD Board following GVS&DD policies and practices. Stage Gate 1 is planned for 2025 at

which point an update on the project, its costs, and schedule will be provided in the request to move forward to the Preliminary Design phase.

### **ALTERNATIVES**

1. That the GVS&DD Board approve the Annacis Island Wastewater Treatment Plant Digester No. 5 advancing from the Initiation phase to the Definition phase (Stage Gate 0), as described in the report dated September 26, titled “Annacis Island Wastewater Treatment Plant Digester No. 5 – Stage Gate 0 Approval”.
2. That the GVS&DD Board receive for information the report dated September 26, 2024, titled “Annacis Island Wastewater Treatment Plant Digester No. 5 – Stage Gate 0 Approval” and provide alternate direction to staff.

### **FINANCIAL IMPLICATIONS**

The Board-approved budget for the Definition phase is included in the Preliminary Design phase budget of \$6.9 million. The Long Range Capital Plan has identified a total budget of \$456 million for design and construction of the Digester No. 5 project and this will be reviewed further in the Definition Stage.

There are no external funding sources or funding agreements for this project. Annacis Island Wastewater Treatment Plant Digester No. 5 is expected to be funded through development cost charges as it is deemed a growth project in accordance with the *GVS&DD Cost Apportionment Bylaw No. 283* and the *MVRD Development Cost Charge Bylaw No 1369*.

### **CONCLUSION**

The Annacis Island Wastewater Treatment Plant is undergoing expansion works to increase treatment capacity to serve 1.5 million people. As part of the expansion works, a new Digester No. 5 is proposed to be constructed, to ensure sufficient regional digester capacity and redundancy to accommodate population growth. Staff recommend that the GVS&DD Board approve Stage Gate 0 to allow the Annacis Island Wastewater Treatment Plant Digester No. 5 to proceed to the Definition phase.

68448385

To: Liquid Waste Committee

From: Peter Navratil, General Manager, Liquid Waste Services

Date: September 16, 2024 Meeting Date: October 10, 2024

Subject: **Manager's Report**

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## RECOMMENDATION

That the Liquid Waste Committee receive for information the report dated September 16, 2024 titled "Manager's Report".

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### 1. 2024 Wipe It, Green Bin It Campaign

The 2024 Wipe It, Green Bin It campaign will be launched on October 7, 2024. The campaign supports Metro Vancouver source control initiatives to reduce unwanted materials in our wastewater system by asking residents to put fats, oils, and grease (FOG) in their green bin and not down their sinks. The disposal of FOG into the sewer system is an ongoing issue that contributes to sewer clogs and overflows that cost Metro Vancouver and member jurisdictions \$2.7 million every year. The campaign starts before Thanksgiving to reach residents when they are preparing heavier, holiday-oriented meals, and runs until November 17, 2024.

Creative materials highlight various forms of FOG and raise awareness of the impacts of foods that are less known for causing problems in sewers, like dairy products. The target audience continues to be Metro Vancouver adult residents. This year's campaign will aim to reach more of the younger demographic (18-34) who are more likely to put FOG down their sinks, as shown by recent survey results. The campaign's paid placements include YouTube, social media, Pinterest, television PSA (Mandarin and Cantonese), Google search, and advertising on bus sides and in SkyTrain stations (new for 2024). All campaign messaging directs residents to [wipeitgreenbinit.ca](http://wipeitgreenbinit.ca).

### 2. Gilbert Trunk Sewer – Grease Removal

In June 2024, a large fatberg (mass of hardened grease) arrived at the Lulu Island Wastewater Treatment Plant, causing damage to influent screening equipment. Subsequent investigations discovered significant quantities of grease (Attachment 1) on the roof of our inverted siphon sewers (siphons) in the upstream Gilbert Trunk Sewer, causing capacity restrictions. Traditional inspection and cleaning tools don't work on siphons.

An innovative approach was developed by LWS O&M staff that combined using non-traditional sonar-technology equipment to clearly define where, and how much grease, was present, with innovative flushing equipment that effectively removed grease from large siphons. The work, which needed to be completed during low flow conditions, required considerable coordination and support from the City of Richmond and local residents.

As of August 29, 2024, we have removed about 2/3 of the grease or 45 m<sup>3</sup> (equivalent of 6 dump trucks full) from the most problematic siphon. Inspections and cleaning continue with the goal of returning full capacity to the system. This discovery will lead us to create a new maintenance plan, which we plan to share with your municipalities, to prevent this type of build-up from occurring in the future.

### **3. Liquid Waste Committee 2024 Work Plan**

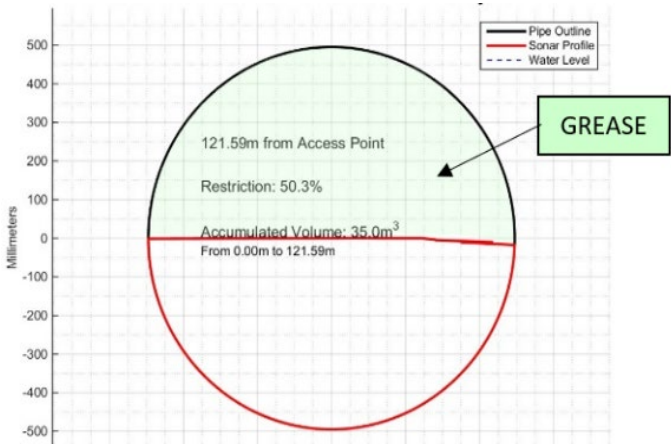
The updated 2024 Work Plan (Attachment 2) shows the status of the Committee's key priorities for the year.

#### **ATTACHMENTS**

1. Gilbert Sewer Trunk Grease Photos
2. Liquid Waste Committee 2024 Work Plan

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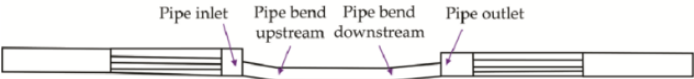




Sonar Inspection Result – Gilbert Trunk Sewer Siphon



Grease Removal - Gilbert Trunk Sewer



Example of Sewer Siphon



LWS Night-time Grease-removal Operation – Gilbert Trunk Sewer

## Liquid Waste Committee 2024 Work Plan

Report Date: October 10, 2024

<b>Priorities</b>	
<b>1st Quarter</b>	<b>Status</b>
2024 Liquid Waste Capital Projects	Complete
2023 Wipe It, Green Bin It Campaign Results	Complete
2023 and 2024 Inflow and Infiltration Communication Initiative	Complete
2023 Microfibres Reduction Campaign Results	Complete
2024 Unflushables Campaign	Complete
Major Project Updates (as applicable)	Complete
Municipal Requests for Sewerage Area Boundary Amendments (as applicable)	Complete
Contract Approvals as per <i>Procurement and Real Property Contracting Authority Policy</i>	Complete
Utility Policies (as applicable)	Complete
<b>2<sup>nd</sup> Quarter</b>	
GVS&DD 2023 Year End Financial Performance Results Review	Complete
2024 Financial Performance Reporting and Annual Forecast #1	Complete
2024 Surfactants Reduction Communications Initiative	Complete
Impacts of Provincial Housing Policy Changes to Regional Liquid Waste System	Complete
Trucked Liquid Waste from Fraser Valley Regional District	Complete
Major Project Updates (as applicable)	Complete
Municipal Requests for Sewerage Area Boundary Amendments (as applicable)	Complete
Contract Approvals as per <i>Procurement and Real Property Contracting Authority Policy</i>	Complete
Utility Policies (as applicable)	Complete
<b>3rd Quarter</b>	
Draft Liquid Waste Services 2025 – 2029 Capital Plan	Complete
2024 GVS&DD Environmental Management and Quality Control Annual Report	Complete
2024 Unflushables Campaign Results	Complete
2024 Our Ocean Thanks You Campaign	Complete
Major Project Updates (as applicable)	Complete
Municipal Requests for Sewerage Area Boundary Amendments (as applicable)	Complete
Contract Approvals as per the <i>Procurement and Asset Disposal Authority Policy</i> *	Complete
Transaction approvals per the <i>Real Estate Authority Policy</i> *	Complete
Utility Policies (as applicable)	Complete
<b>4th Quarter</b>	
2025 – 2029 Five Year Financial Plan and 2025 Budget & Annual Rates	In Progress
Capital Project Impact Mitigation Framework	In Progress
2024 Financial Performance Reporting and Annual Forecast #2	In Progress
2024 Financial Performance Reporting and Annual Forecast #3	In Progress
<i>Liquid Waste Management Plan</i> Review and Update: Report on Phase 2	In Progress
2024 Wipe It, Green Bin It Campaign	In Progress
2024 Update on Liquid Waste Sustainability Innovation Fund Projects	In Progress
Major Project Updates (as applicable)	In Progress
Municipal Requests for Sewerage Area Boundary Amendments (as applicable)	In Progress
Contract Approvals as per the <i>Procurement and Asset Disposal Authority Policy</i> *	In Progress
Transaction approvals per the <i>Real Estate Authority Policy</i> *	In Progress

Utility Policies (as applicable)	In Progress
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*\*Committee Work Plan administrative change July 30, 2024: the Procurement and Real Property Contracting Authority Policy has been rescinded and replaced by the Procurement and Asset Disposal Authority Policy and the Real Estate Authority Policy.*