# Presentation to the Liquid Waste Committee, Metro Van At 9 AM Oct 10, 2024 at 4515 Central Boulevard, Burnaby B. C.

**Purpose**

## Present the Alternative solution to the present plan to spend $3.86 Billion on the North Shore Waste Water Treatment Plant (NSWWTP) which will save Metro Van taxpayers in the range of $1-$2 Billion in Capital Costs

Mike Fillipoff, P. Eng

Brian Walker, P. Eng. (Retired)

Working, living, and learning on the traditional, ancestral and unceded territory of First Nations

# Highlights

- ***This presentation is forward looking and positive with respect to North Shore sewage and the future*.**
- **Contrary to recent reports, there has been and continues to be a viable alternative to the $3.86 Billion North Shore Waste Water Treatment Plant (NSWWTP) for managing North Shore sewage to ultimately meet Federal regulations.**

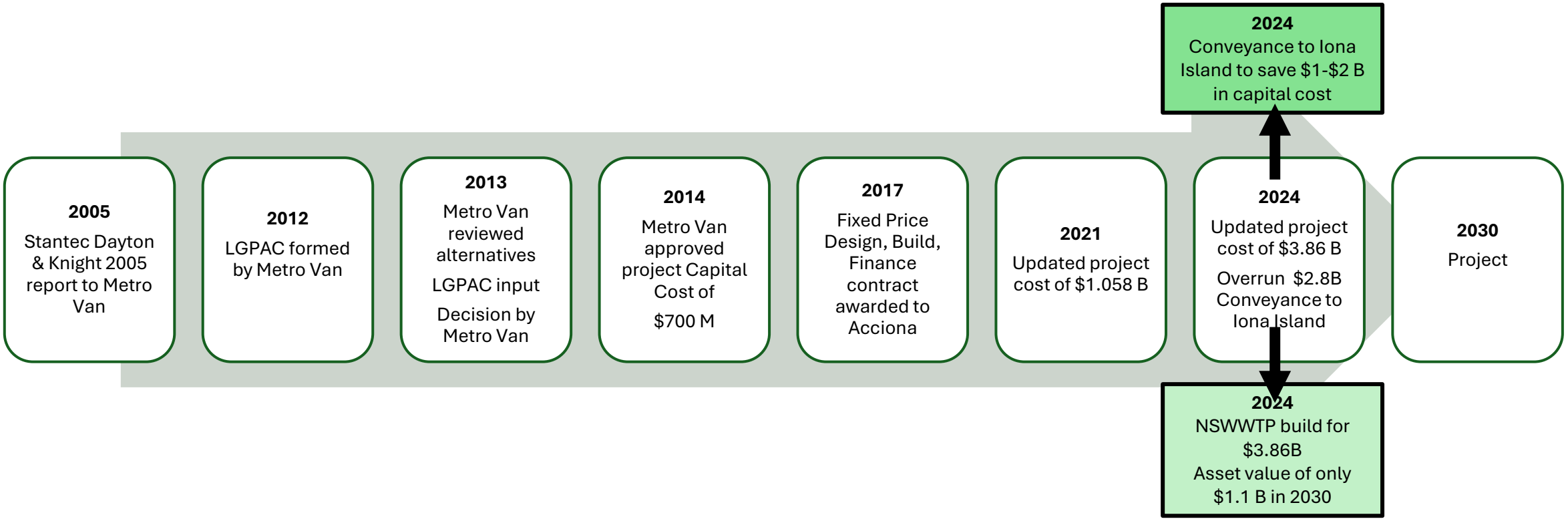
# Highlights

- **It is very important to note that the NSWWTP cost overrun amount of $2.8 Billion has not yet been spent.**
- **And does not need to be spent on the NSWWTP if the Alternative conveyance project is approved by Metro Van.**

# Highlights

- **The viable and cost-effective solution is to convey all the North Shore sewage by pipelines directly from the new pumpstation at Lions Gate Bridge to the expanded Iona Island Waste Water Treatment Plant (IIWWTP)**

# Highlights-Key Dates



# Concerns by Taxpayers in Metro Van

**As Metro Van taxpayers we are deeply concerned because:**

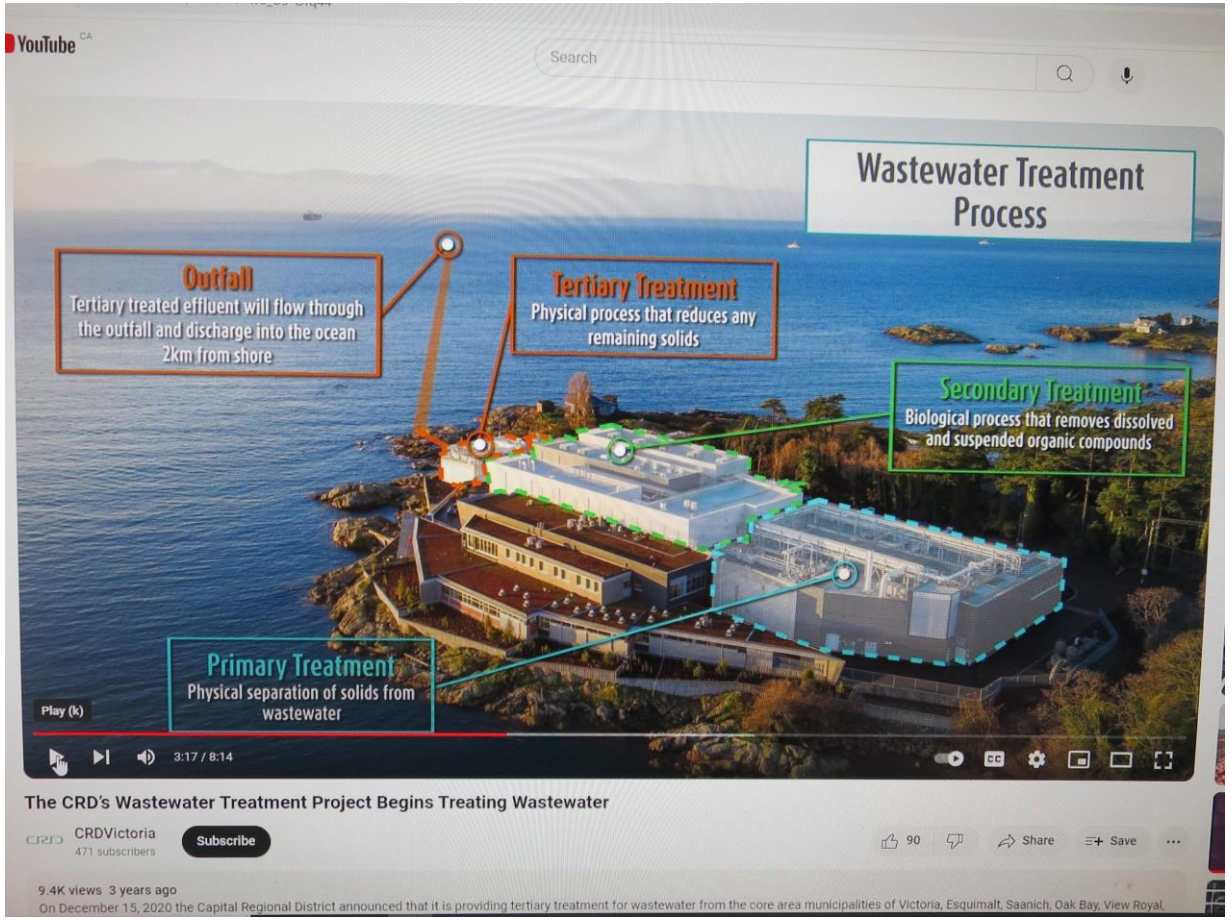
- **The project has gone terribly wrong and the capital cost of the NSWWTP has increased from the Metro Van approved $700 Million to $3.86 Billion (a cost over-run of $3.16 Billion).**
- **Metro Van has voted to fund the cost overrun by taxing municipalities**
- **The Districts of West Van, North Van and City of North Van are to shoulder 37 % of the over-run costs of $2.8 Billion (This is not reasonable because the North Shore makes up only 7 % of the region's population**).
- **Each household in the North Shore will face an increase in sewage costs of $590/year for 30 years that will create financial hardships for many families and add to the affordability crisis**
- Other sewage areas such a Vancouver ($150/yr), Fraser ($90/year),Lulu Island ($80/yr) will face payments for 15 years.

# Highlights (Cont’d)

- **BENCHMARK PROJECT**
- **A  similar Tertiary Wastewater Treatment plant to serve 300,000 residents in Victoria B. C. was recently completed.**
- **The Victoria McLoughin Point Wastewater Treatment Plant was designed and constructed in a 6 years (completed in 2021) at a capital cost of $775 Million.**

Photo of  Victoria McLoughin Point Wastewater Treatment Plant under construction

# Photo of Victoria McLoughin Point Wastewater Treatment Plant Showing Primary, Secondary and Tertiary Process (similar to NSWWTP)

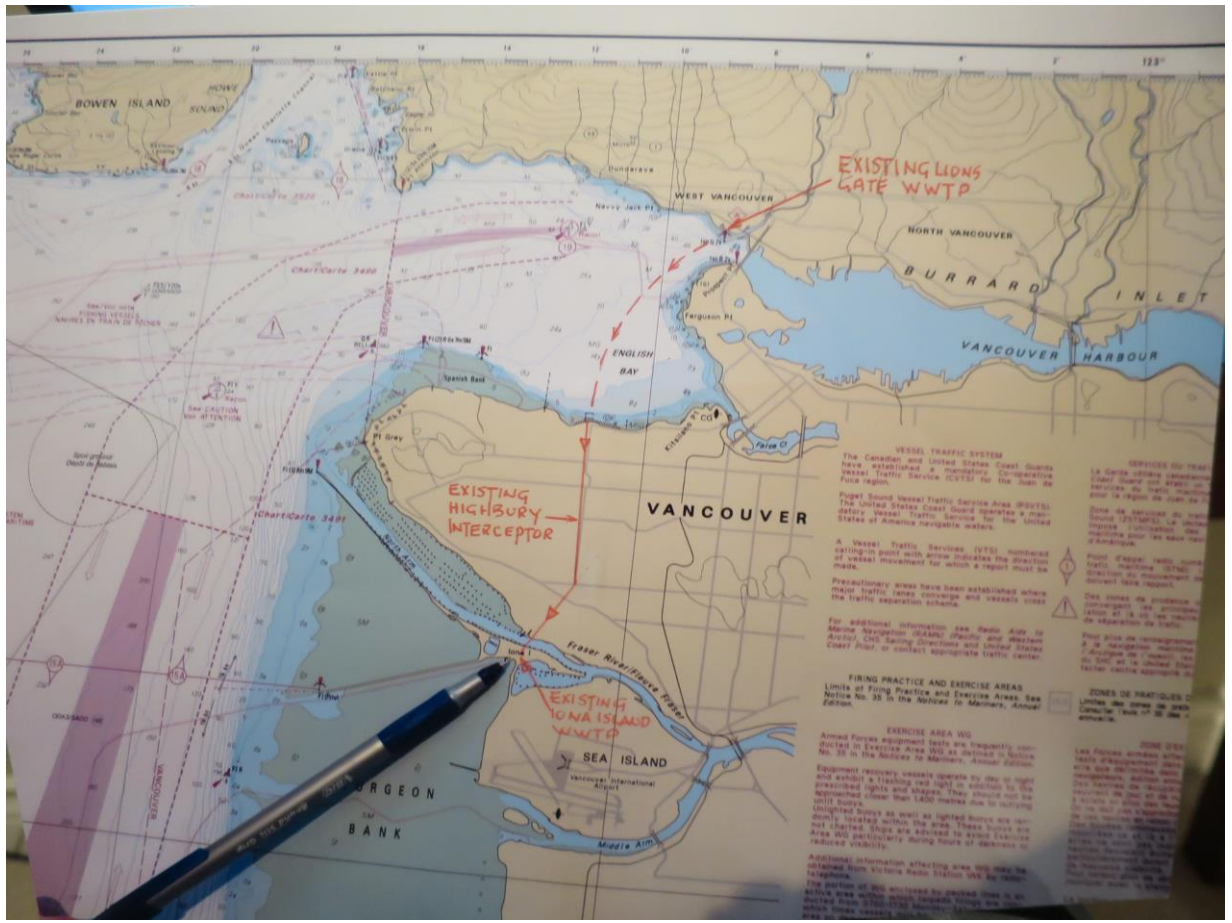


# Photo of Completed Victoria McLoughin Point Wastewater Treatment Plant

# PROPOSAL FOR CONVEYANCE BY PIPELINES OF NORTH SHORE SEWAGE TO IONA ISLAND WWTP

## Capital Cost savings of $1-$2 Billion

- Pipeline route from existing Lions Gate Pump Station to Iona Island via Highbury Interceptor



# Conceptual Designs and Cost Estimates for conveying North Shore Sewage to Iona Island

- Metro had contracted Stantec Dayton & Knight to develop options including conveyance of North Shore Sewage to Iona Island.
- Conveyance of North Shore sewage from the existing North Shore pumpstation, then two 7 km long subsea pipelines to the existing Highbury pump station at 1st Avenue. At Highbury connect to the existing concrete interceptor and twin force mains to the Iona Waste Water Treatment Plant.

# Recommendations

- It is recommended that the North Shore sewage be conveyed by 2 pipelines to the Iona Island Waste Water Treatment Plant to save $1-2 Billion in Capital Costs.
- The updated Class 4 Capital Cost Estimate including design allowances, inflation and contingency is in the range of $900 Million to $1.1 Billion with completion in 2030.
- The North Shore sewage would only add 10-15 % to the flow and to the organic load which can be accommodated in the present design of the Iona Island WWTP at minimal additional cost.

Metro Vancouver Region

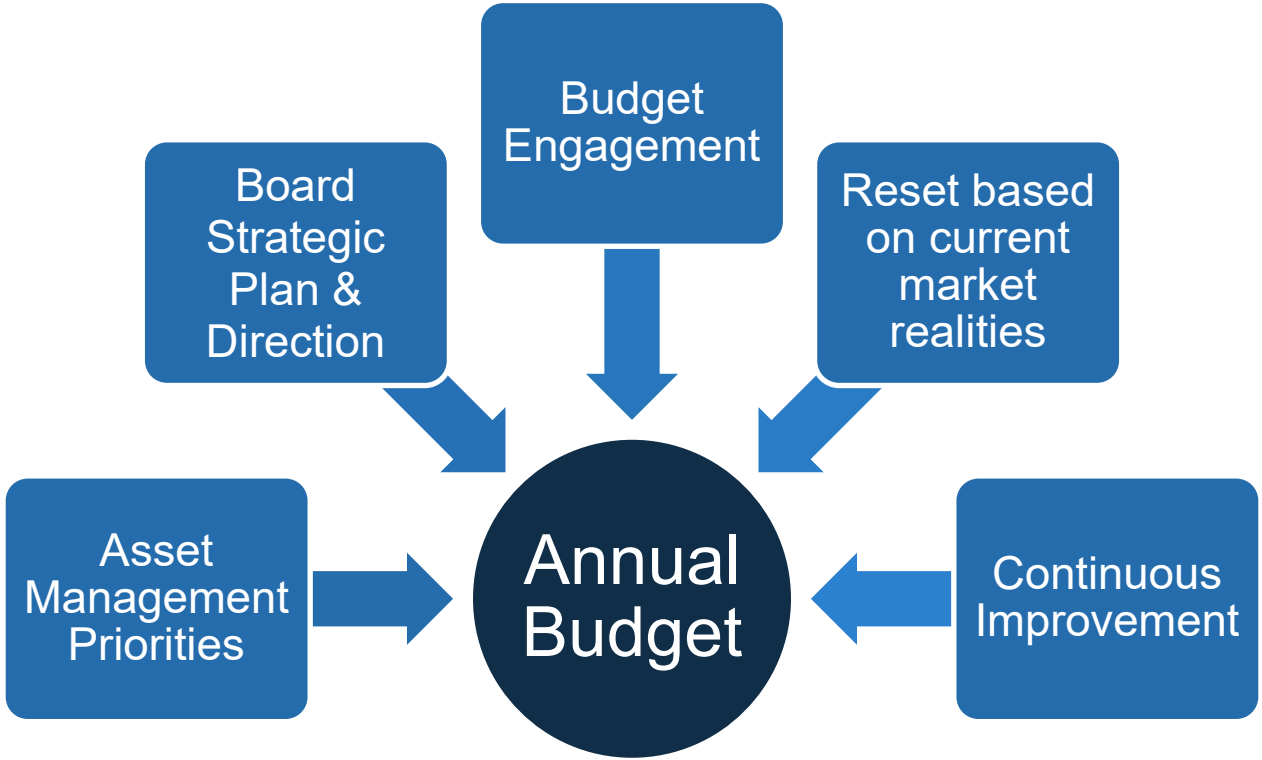
# 2025 – 2029 Financial Plan Overview

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

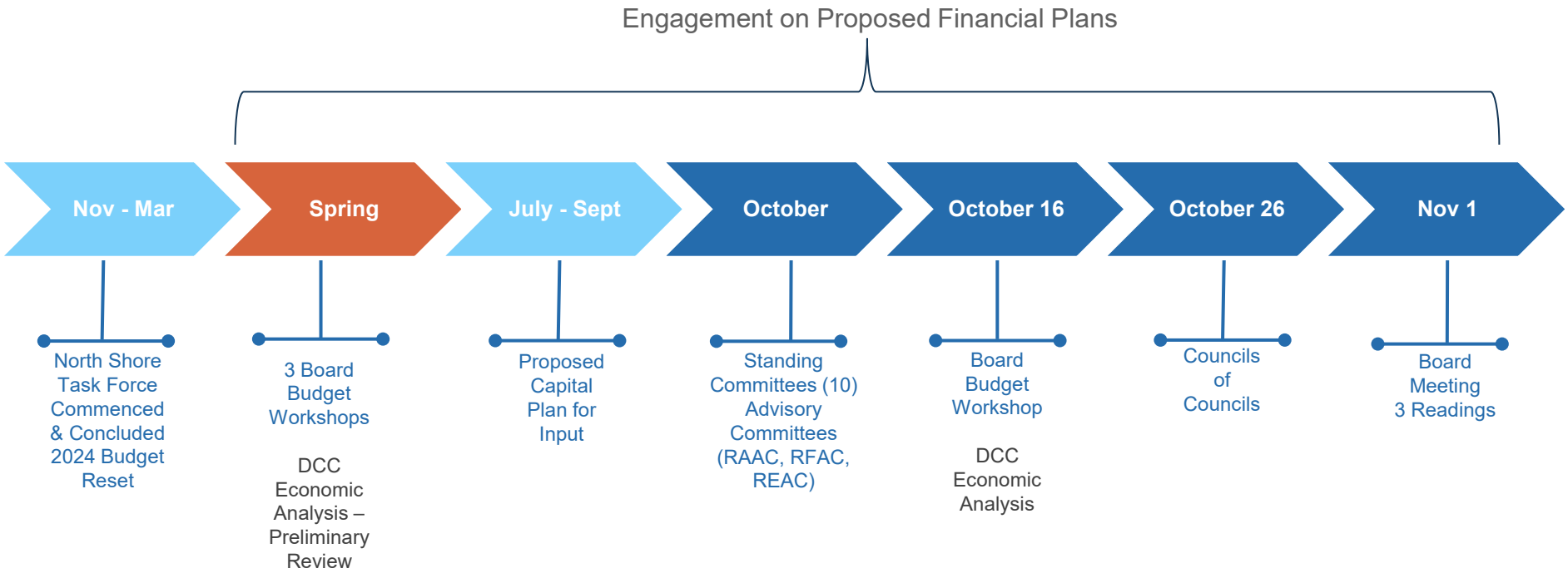
Harji Varn
GM Financial Services / Chief Finance Officer

metrovancouver

# METRO VANCOUVER BUDGET APPROACH



# 2025 BUDGET CYCLE TIMELINE



# COMMUNICATIONS AND ENGAGEMENT

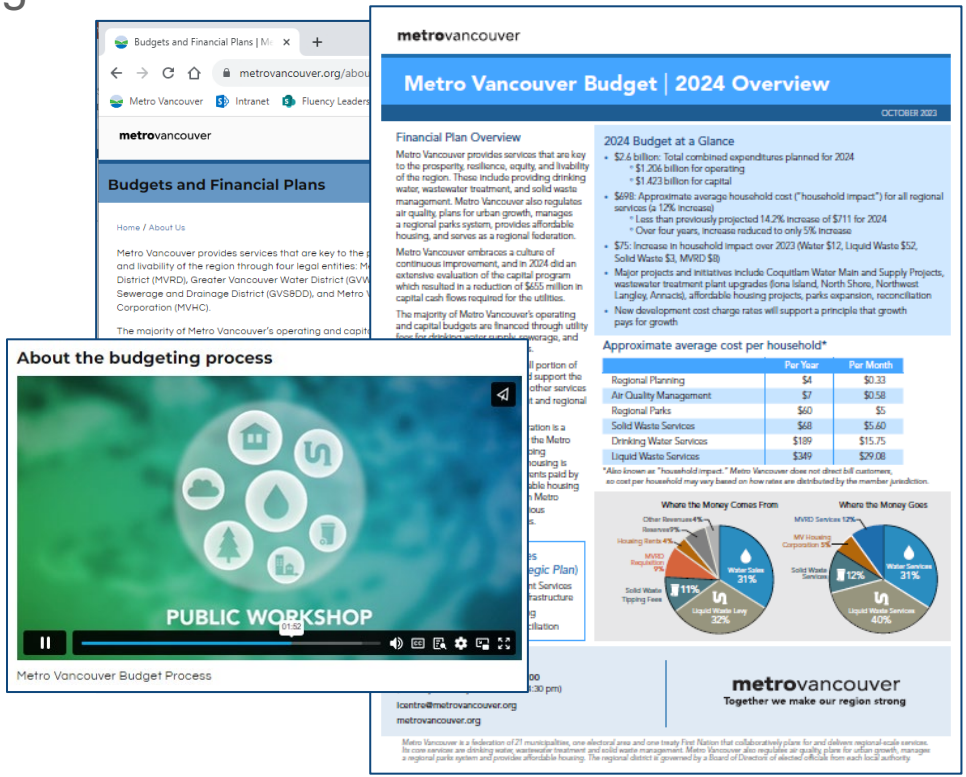
## Public Engagement Period, July 31 – September 16

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

# COMMUNICATIONS AND ENGAGEMENT

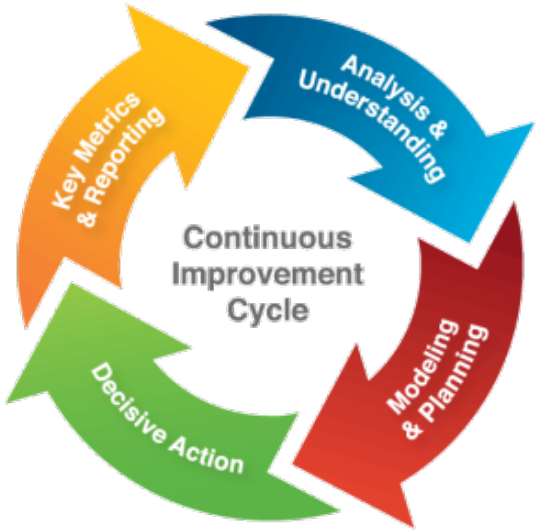
## Overall Communications / Member Engagement

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



# COMMITMENT TO CONTINUOUS IMPROVEMENT

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



# CONTINUOUS IMPROVEMENT – 2024 COMPLETED OR ONGOING

| Initiative | Outcomes |
|---|---|
| Cyber Resilience (CS) | • Improve cyber security and resilience to proactively mitigate the risks posed by evolving cyber security threats |
| Weigh Scale Software Upgrade Implementation (SWS) | • Range of new features: license plate readers, emailing bills, real-time customer feedback; system resilience. |
| Refined Environmental Management System (WS) | • Revised the review and approval process for regulatory reporting, which is freeing up time for our frontline, engineering, and legal teams |

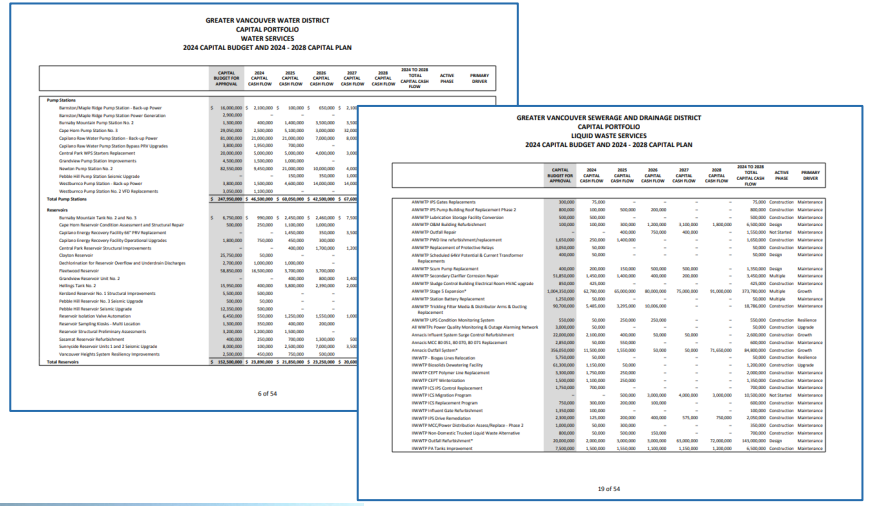
# CONTINUOUS IMPROVEMENT – 2025 NEW

| Initiative | Outcomes |
|---|---|
| Waste-to Energy District Energy (SWS) | • Up to 70,000 tonnes GHG per year emissions reduction. |
| Biosolids Hauling de-carbonization (LWS) | • Trials of low-carbon hauling vehicles (battery electric vehicles and hydrogen electric vehicles) for short to medium haul routes. |
| Project Quality Management (PD) | • Consistent implementation of Project Quality Management and reduction of quality related risks. Efficiencies due to risk avoidance and streamlined processes. |

# MAJOR DRIVERS – CAPITAL PROGRAM

## WHAT WE ARE DOING

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



GREATER VANCOUVER WATER DISTRICT
CAPITAL PORTFOLIO
WATER SERVICES
2024 CAPITAL BUDGET AND 2024 - 2028 CAPITAL PLAN

6 of 54

GREATER VANCOUVER SEWERAGE AND DRAINAGE DISTRICT
CAPITAL PORTFOLIO
LIQUID WASTE SERVICES
2024 CAPITAL BUDGET AND 2024 - 2028 CAPITAL PLAN

19 of 54

Fleetwood Reservoir Roof slab

Annacis WWTP Digesters

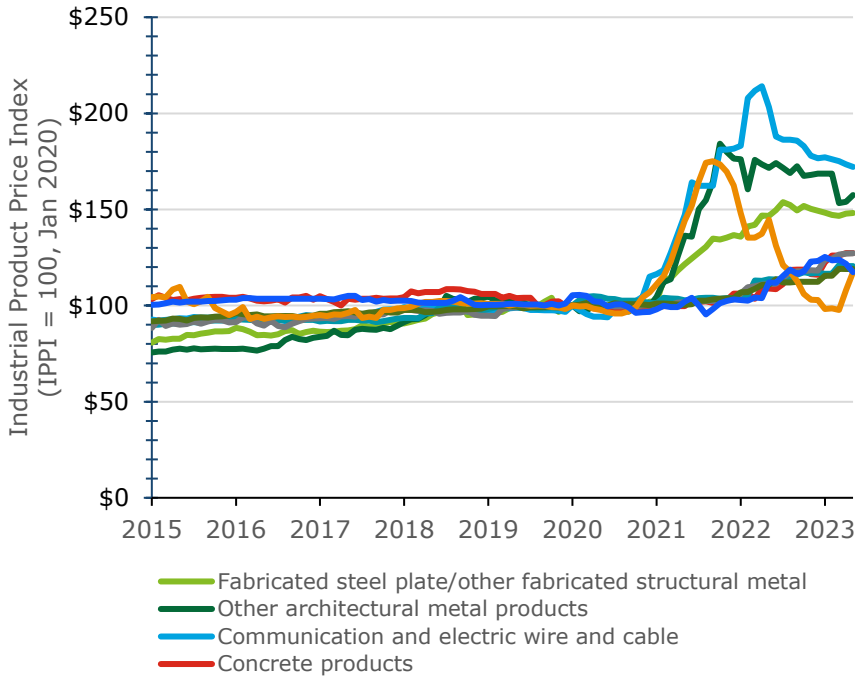
Widgeon Marsh Development

Central Surrey Recycling and Waste

# MAJOR DRIVERS – INFLATION AND COST ESCALATION

## WHAT WE ARE DOING

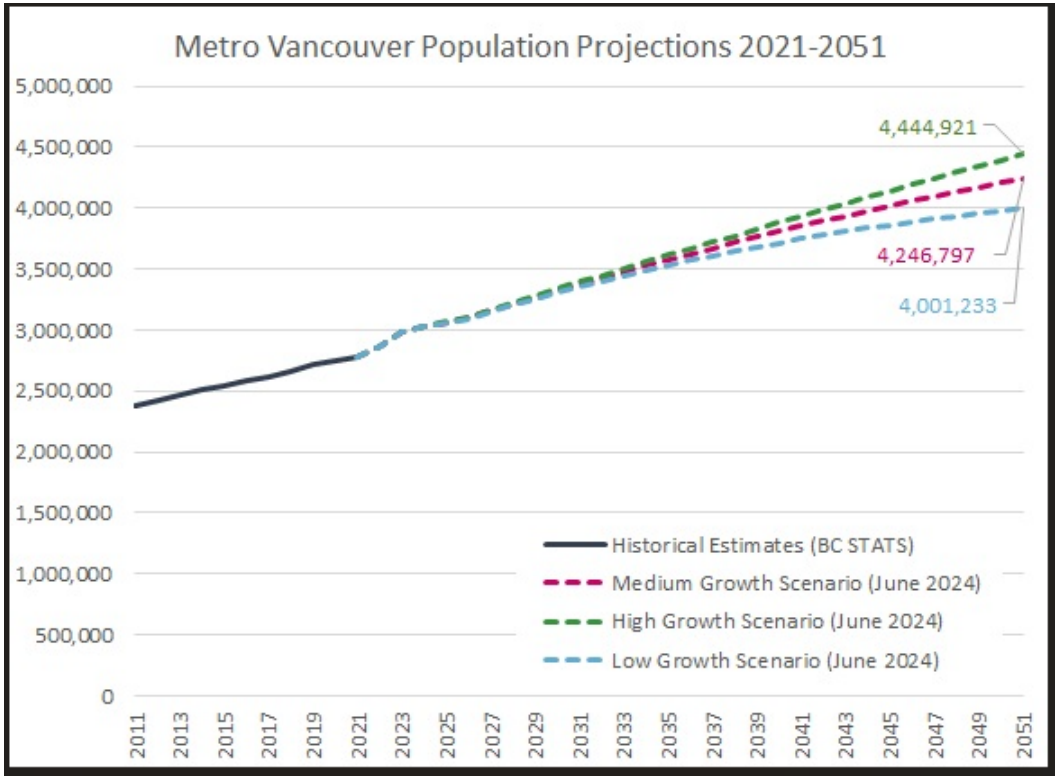
- Strengthening procurement strategies
- Examining revenue sources and partnerships
- Timing and scope of projects and programs



# MAJOR DRIVERS - POPULATION GROWTH

## WHAT WE ARE DOING

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



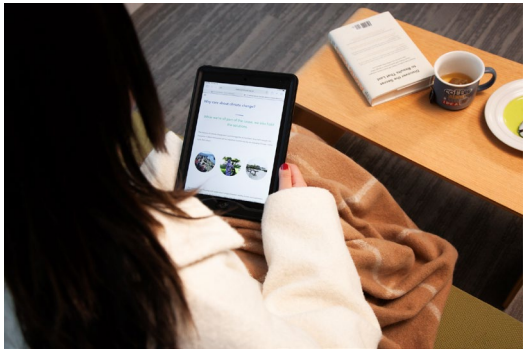
# MAJOR DRIVERS - CLIMATE CHANGE AND RESILIENCE

## WHAT WE ARE DOING

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

King tide in West Vancouver

Minnekhada fire



Climate Literacy Program

Smoky conditions in Metro Vancouver

# MAJOR DRIVERS – BELOW MARKET RENTAL HOUSING

## WHAT WE ARE DOING

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

# APRIL 2023 BOARD BUDGET WORKSHOP DIRECTION

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

*a) direct staff to proceed through the 2024 budget cycle with household impact targets as follows*

- *i. 2024 – 12%*
- *ii. 2025 – 11%*
- *iii. 2026 – 5%*
- *iv. 2027 – 5%*

*b) direct staff to prepare the 2024–2028 Financial Plan with the following development cost charge (DCC) rate assumptions:*

- *i. Liquid Waste Development Cost Charges moving to a 1% assist factor with interest as part of the 2024–2028 Financial Plan*
- *ii. Water Development Cost Charges moving to a 1% assist factor with interest as part of the 2024–2028 Financial Plan; and*
- *iii. Implementation of a Development Cost Charge for Regional Parks and move to a 1% assist factor within the 2024–2028 Financial Plan*

# MARCH 2024 BOARD MEETING

- The DCC Bylaws received Provincial Inspector Approval in February 2024

- On March 22, 2024, the MVRD/ GVS&DD/ GVWD Board had 4th reading and final adoption of the 3 DCC Bylaws

- The DCC Bylaws have a 3-year phase-in January 1, 2025; January 1, 2026; and January 1, 2027

# SPRING 2024 BOARD BUDGET WORKSHOPS DIRECTION

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

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

# BOARD BUDGET WORKSHOP DIRECTION

## May 2024 Board Budget Workshop Resolution

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

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

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

# 2025–2029 FINANCIAL PLAN OVERVIEW

## 2025 Budget – Bottom Line

| 11.0% | Prior Projection for 2025 |
|---|---|
| $88 | Increase for the average household in 2025<br>(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<br>(Water: $11, Liquid Waste: $63, Solid Waste: $3, MVRD: $2) |
| $875 | Average annual cost for all Metro Vancouver services |

# OVERALL AVERAGE HOUSEHOLD IMPACT 2025–2029

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

# VSA TOTAL AVERAGE HOUSEHOLD IMPACT 2025–2029

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

# NSSA TOTAL AVERAGE HOUSEHOLD IMPACT 2025–2029

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

# LIWSA TOTAL AVERAGE HOUSEHOLD IMPACT 2025–2029

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

# FSA TOTAL AVERAGE HOUSEHOLD IMPACT 2025–2029

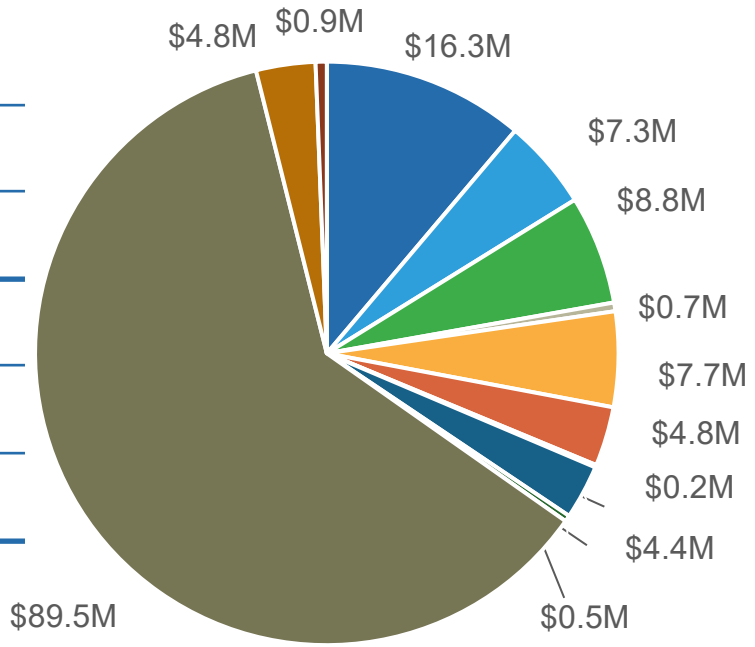
| | 2024 | NSWWTP Amended | 2025 | 2026 | 2027 | 2028 | 2029 |
|---|---|---|---|---|---|---|---|
| **Water Services** | $189 | $189 | $200 | $211 | $215 | $218 | $218 |
| **Liquid Waste Services** | $301 | $391 | $421 | $434 | $454 | $485 | $512 |
| **Solid Waste Services** | $68 | $68 | $71 | $74 |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

# BUDGET OVERVIEW

## 2025 MVRD Budget

| Revenues (millions) | |
|---|---|
| MVRD Requisition | $117M |
| Transfer from Reserves | $16M |
| Other Revenues | $13M |
| | **$146M** |

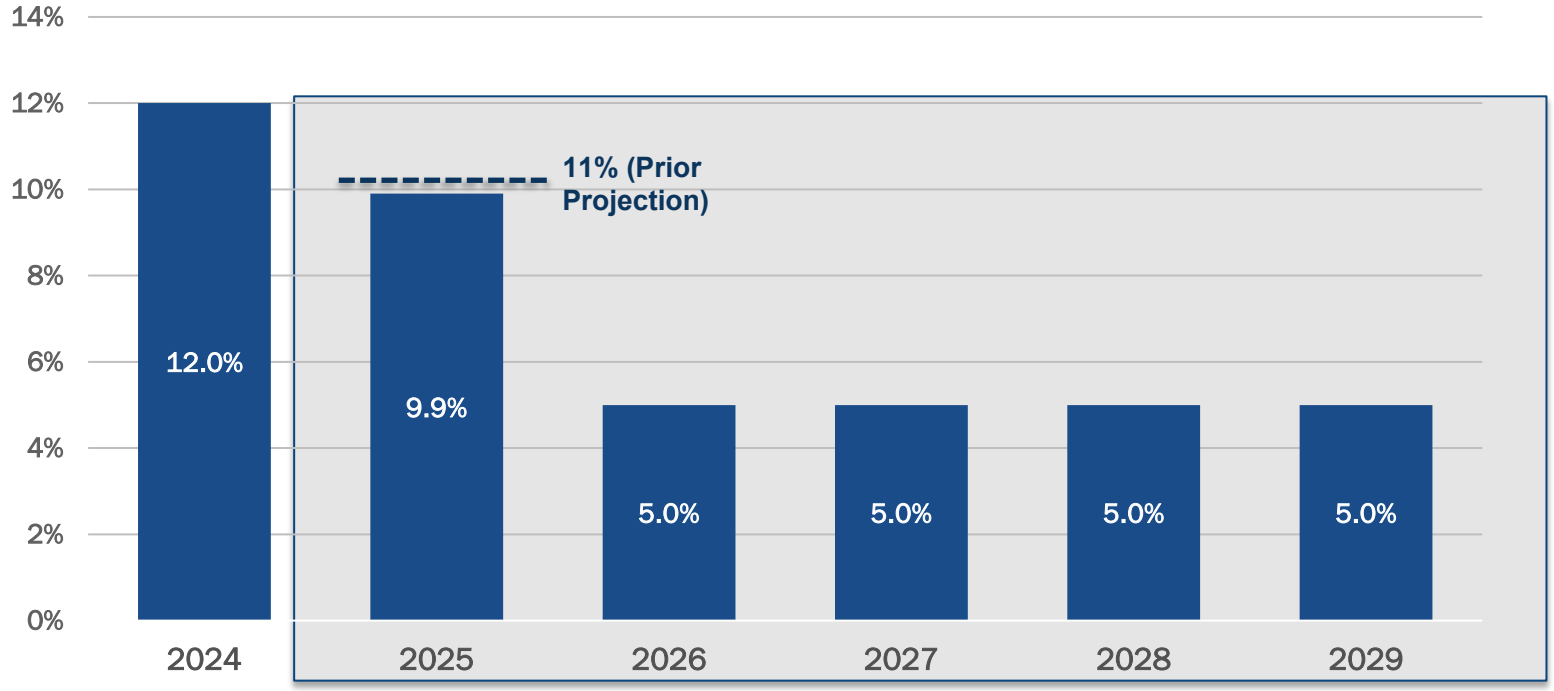
## Expenditure by Department

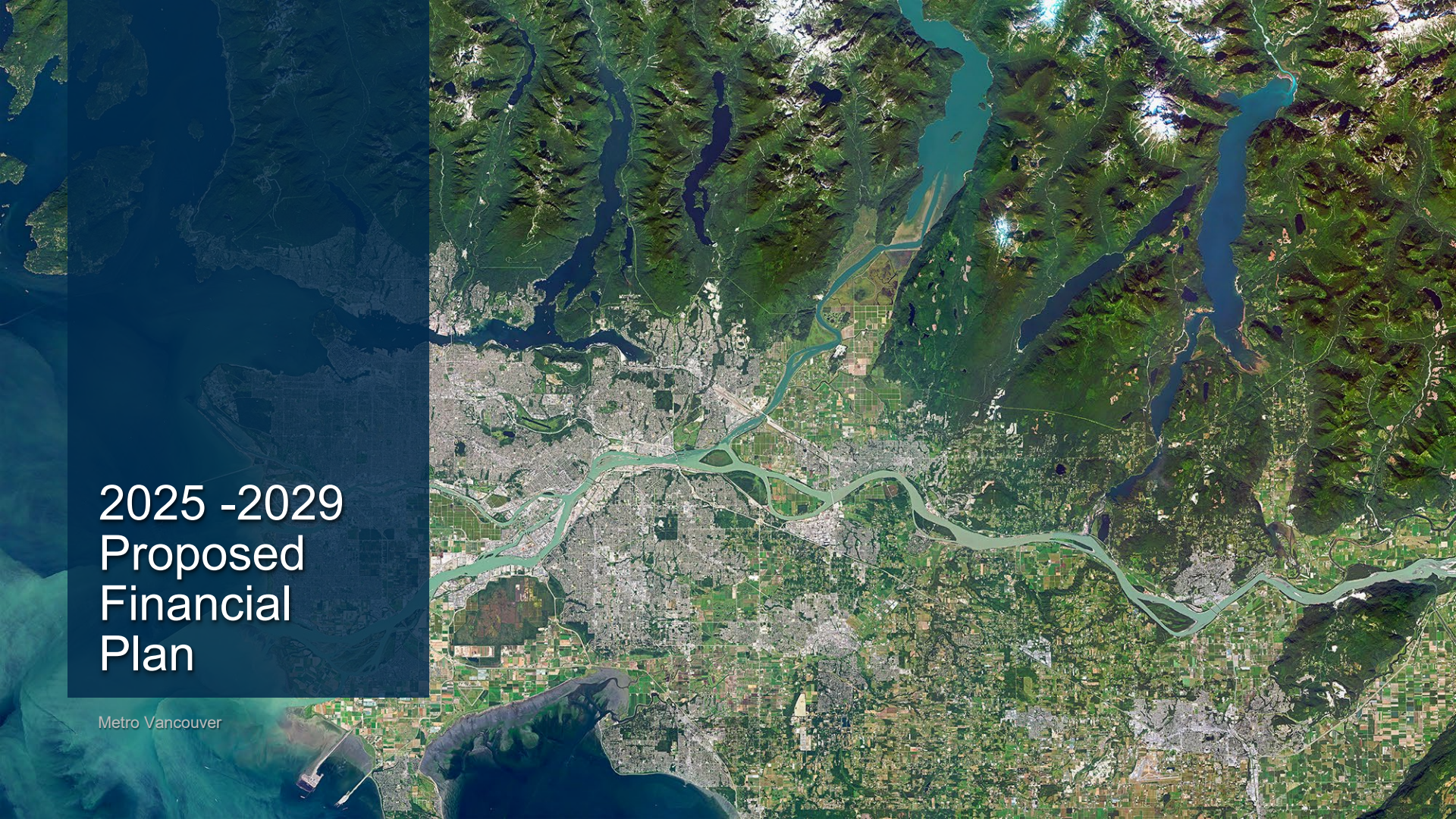



- Air Quality and Climate Action ($16.3M)
- E911 Emergency Telephone Service ($7.3M)
- General Government Administration ($8.8M)
- General Government-Zero Waste Collaboration Initiatives ($700K)
- Housing Planning and Policy ($7.7M)
- Invest Vancouver ($4.8M)
- Regional Emergency Management ($200K)
- Regional Employers Services ($4.4M)
- Regional Global Positioning System ($500K)
- Regional Parks ($89.5M)
- Regional Land Use Policy ($4.8M)
- Sasamat Fire Protection Service ($900K)

# METRO VANCOUVER HOUSEHOLD IMPACT % CHANGE

Proposed 2025–2029 Financial Plan





# 2025 -2029 Proposed Financial Plan

Metro Vancouver

# METRO VANCOUVER OPERATING BUDGET

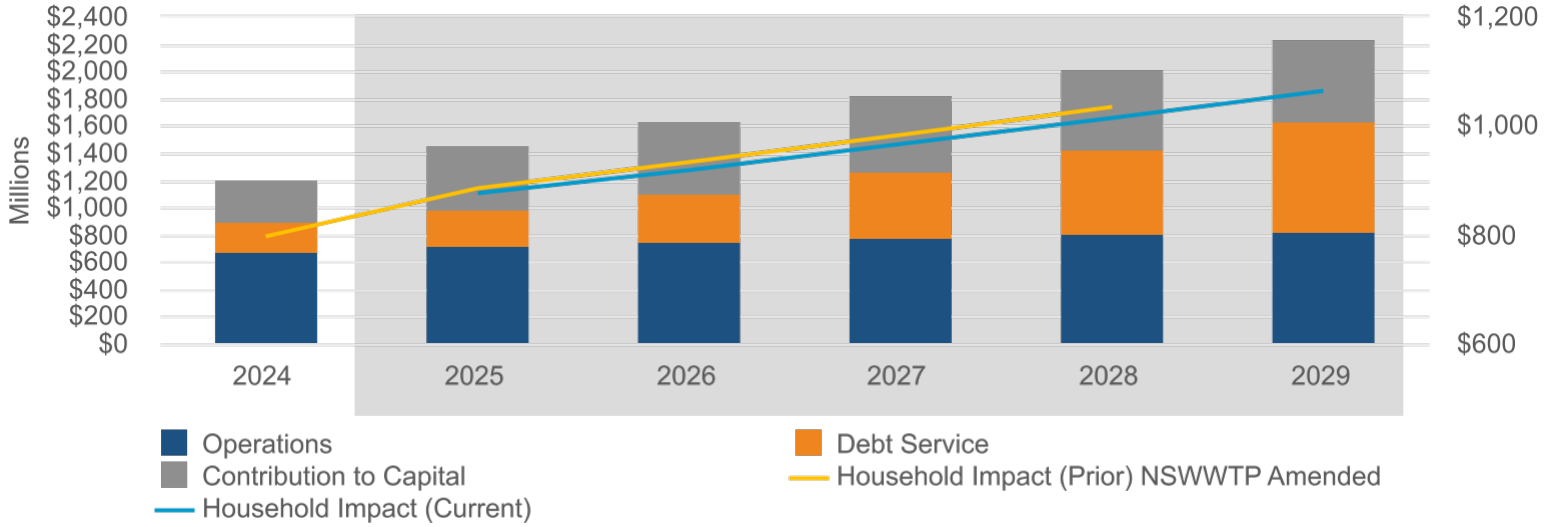
## Expenditures

**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

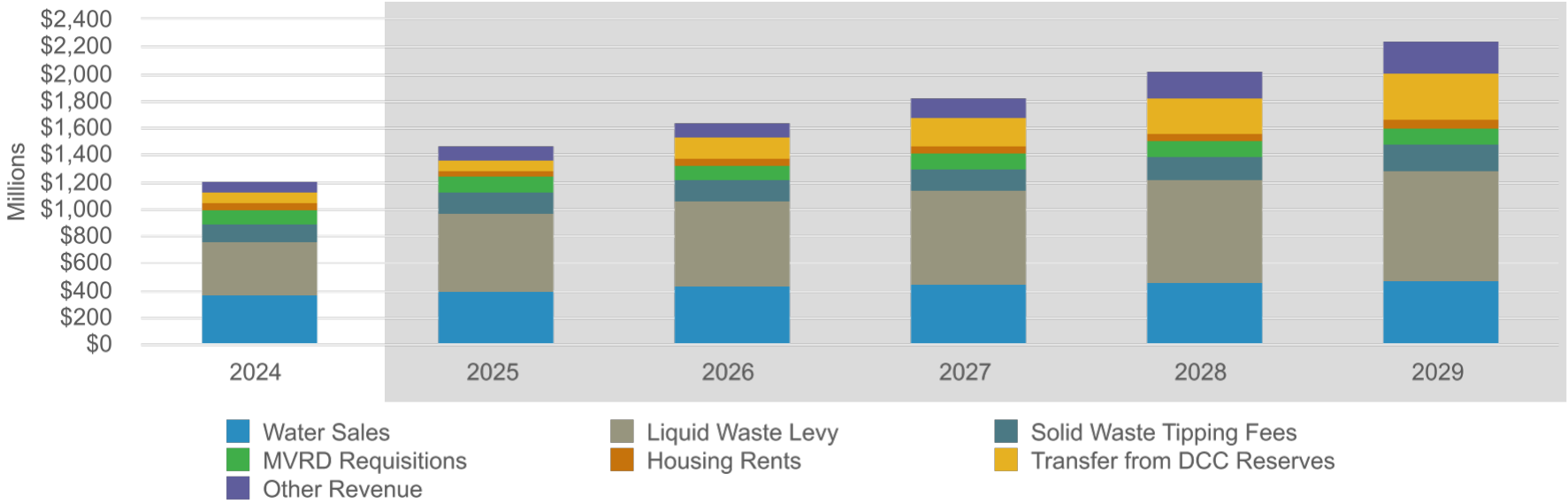
## Revenues

### 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

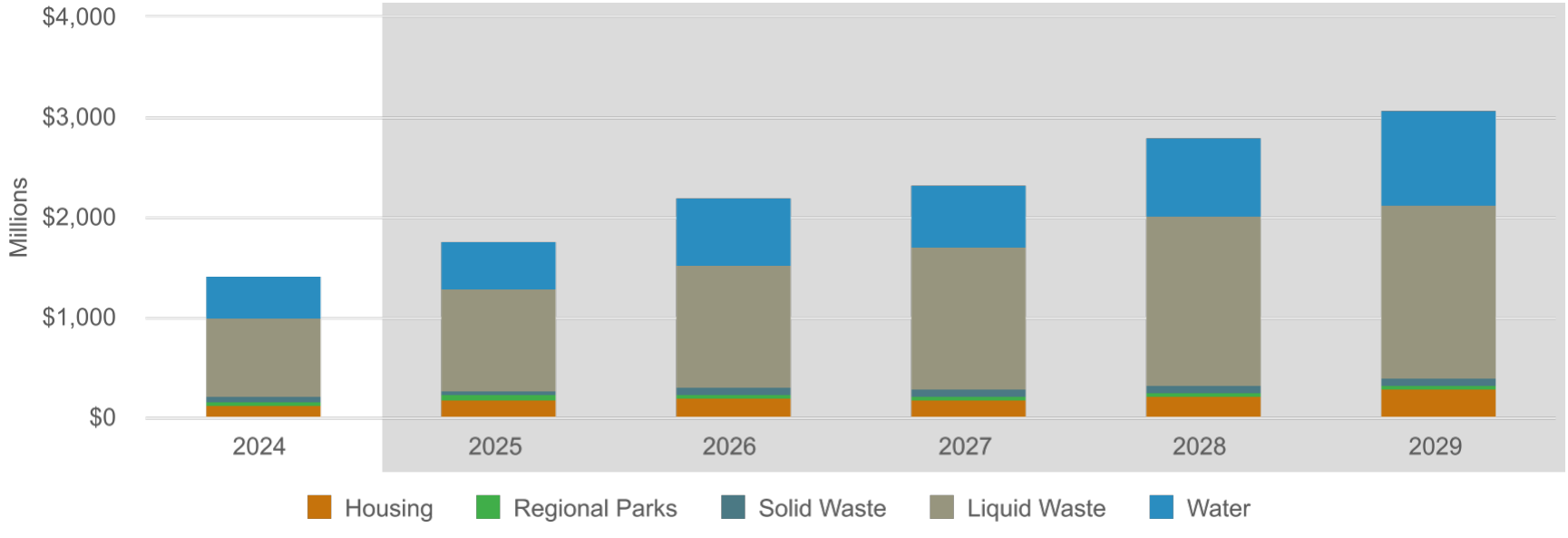
## Expenditures

**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 Spirt Regional Park

# Questions?

metrovancouver

E2

Howe Sound / Salish Sea

# 2025 – 2029 FINANCIAL PLAN

## LIQUID WASTE SERVICES


Peter Navratil, P.Eng, MPA

General Manager, Liquid Waste Services

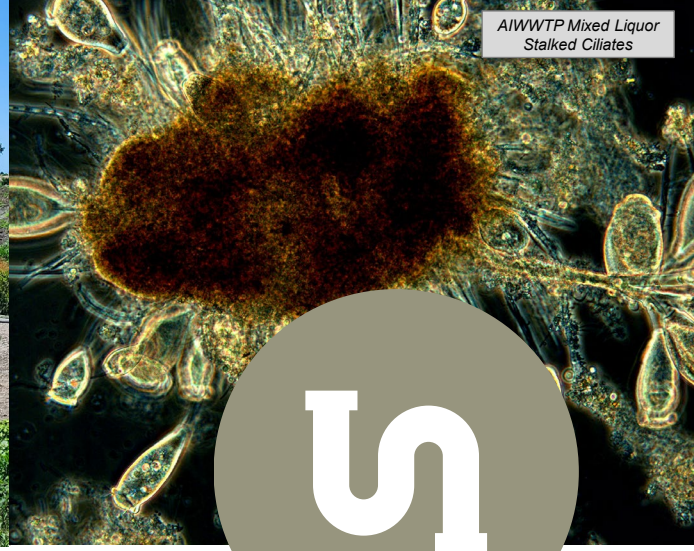

Liquid Waste Committee – October 10, 2024

68633643

metrovancouver

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

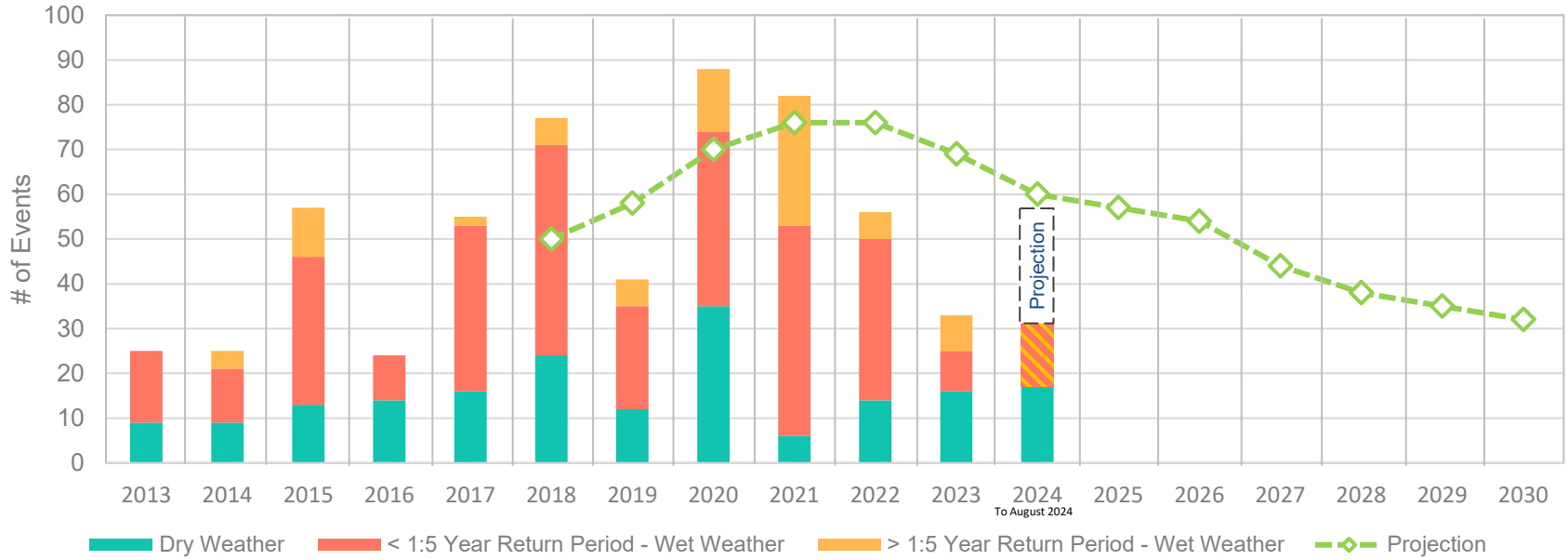
3 Urban Drainage Areas: Still Creek/Brunette, Port Moody/Coquitlam and University

# 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) |

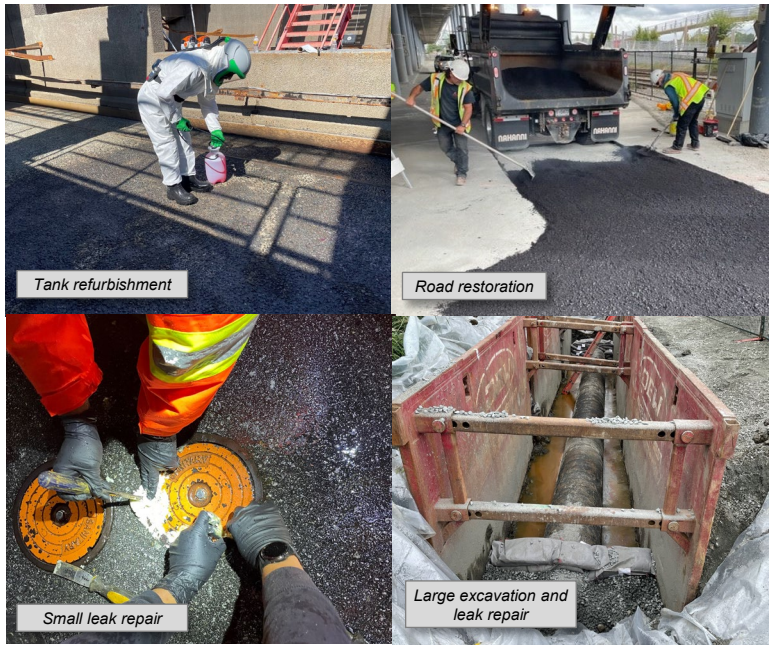
# SANITARY SEWER OVERFLOW TREND

## Demand Side Management is critical



# CONTINUOUS IMPROVEMENT - 2024

## Contracted-in Construction Crew

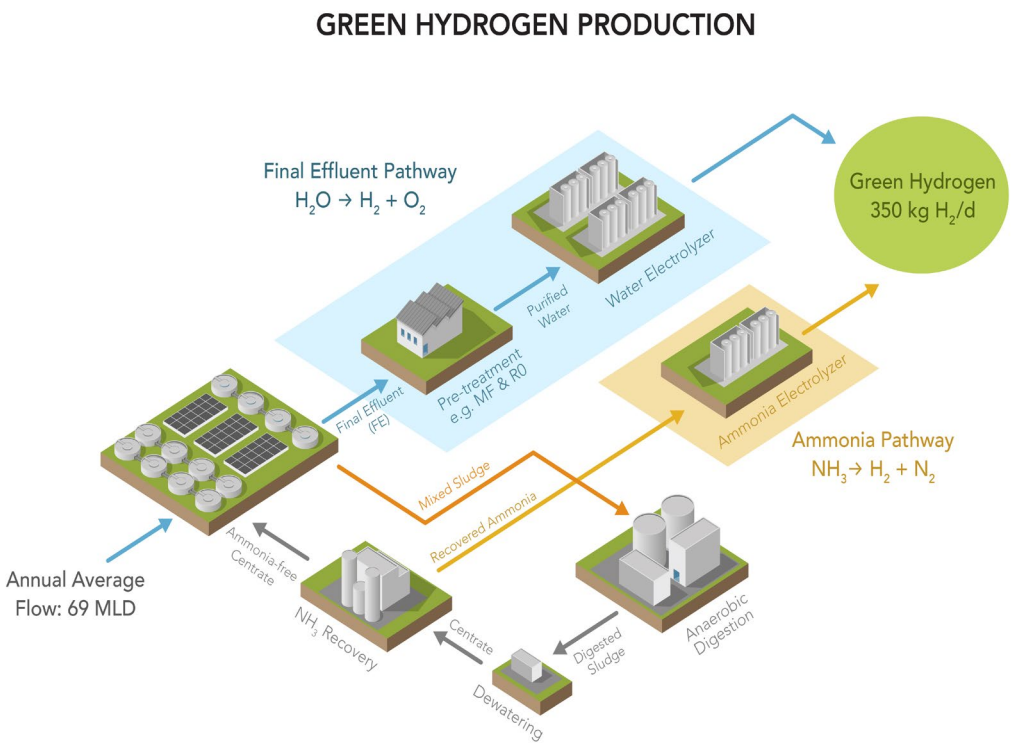



| Benefits |
| --- |
| Savings between 15-20% in labor costs |
| Reduced administration and procurement costs associated with tendering |
| Enhanced expertise within the department |
| Improved ability to adapt to changing construction scheduling demands and urgent emergency or high-priority projects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

# 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



# CONTINUOUS IMPROVEMENT – 2024 ONGOING

## Liquid Waste Services

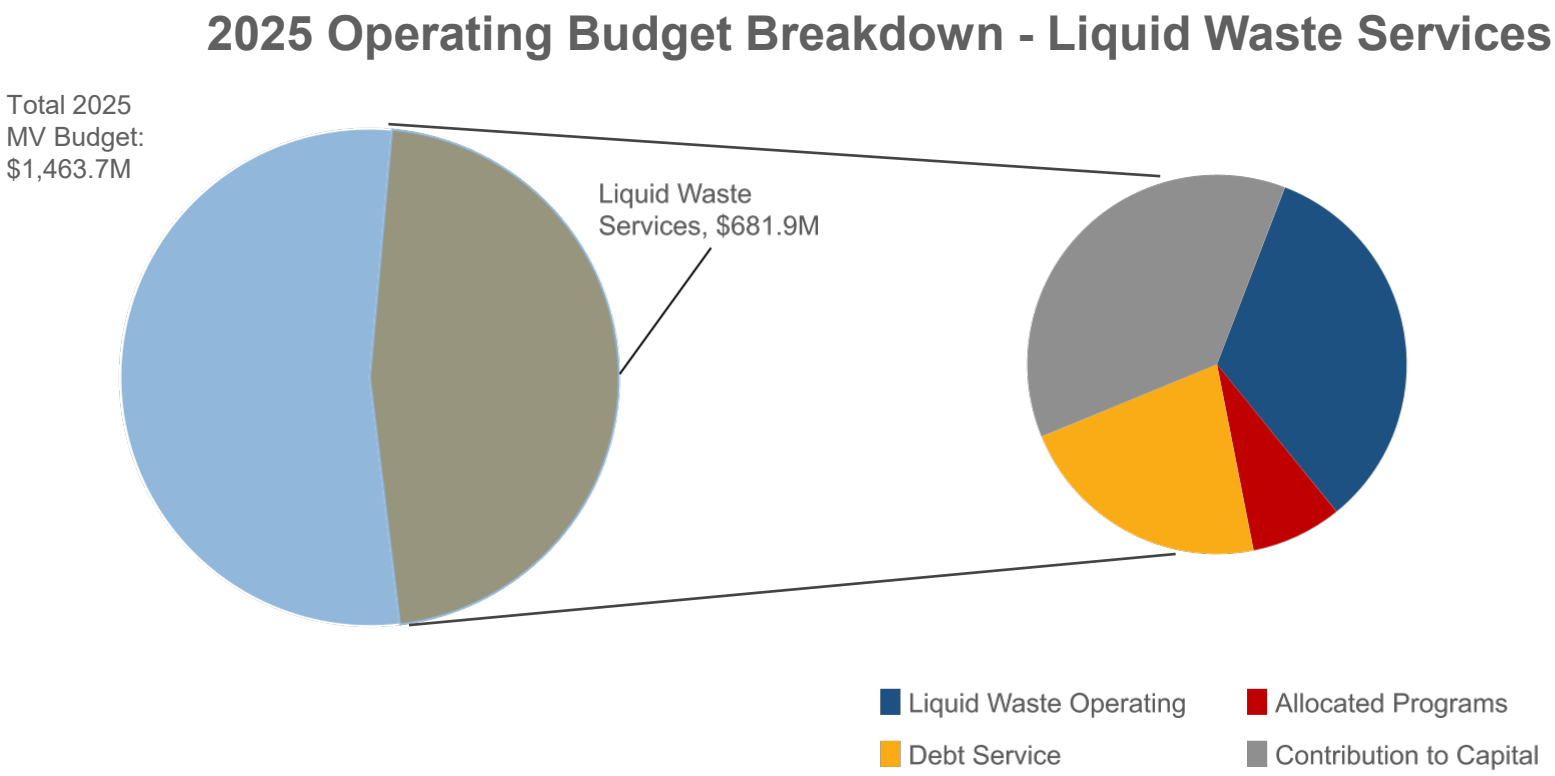
| Initiative | Outcomes |
|---|---|
| Conservation versus Infrastructure to manage excess rainwater | Work with members to provide and share tools, experiences, public communications to reduce I&I into private laterals |
| Science World activation | Interactive display that highlights the connection 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 |

# 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 $CO_2e$ 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 |

# BUDGET OVERVIEW



# OPERATING EXPENDITURES

## Liquid Waste Services Financial Plan

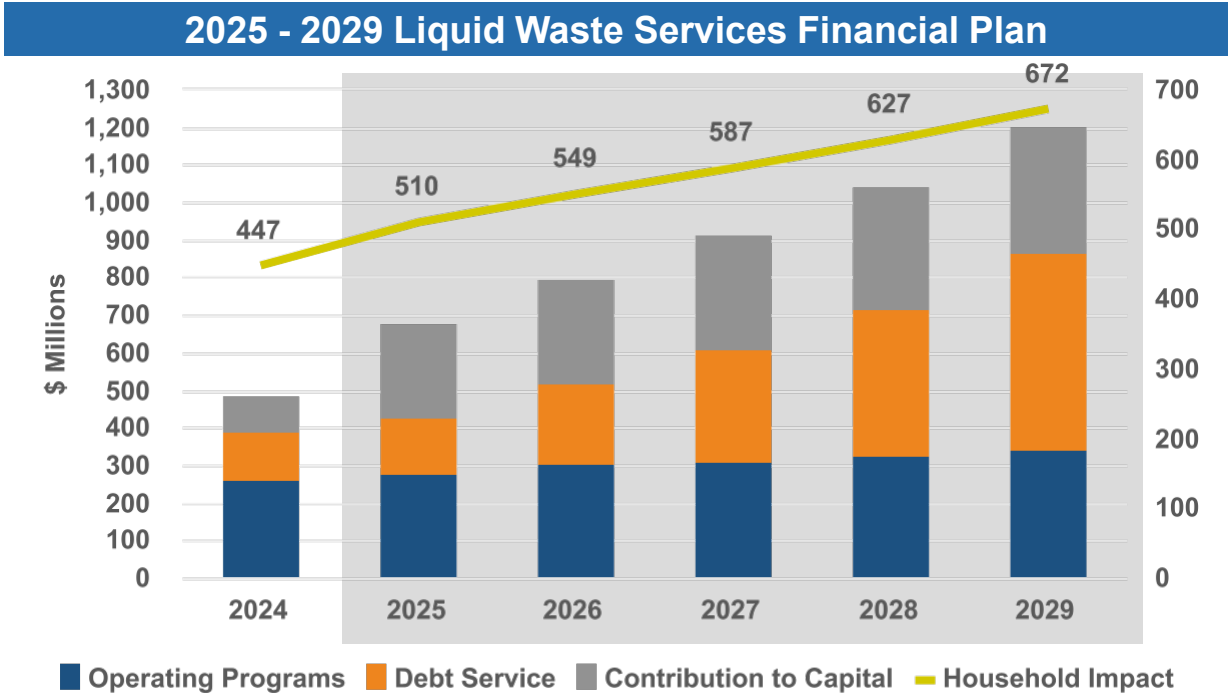
### Overview:

**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



# OPERATING FUNDING

## Liquid Waste Services Financial Plan

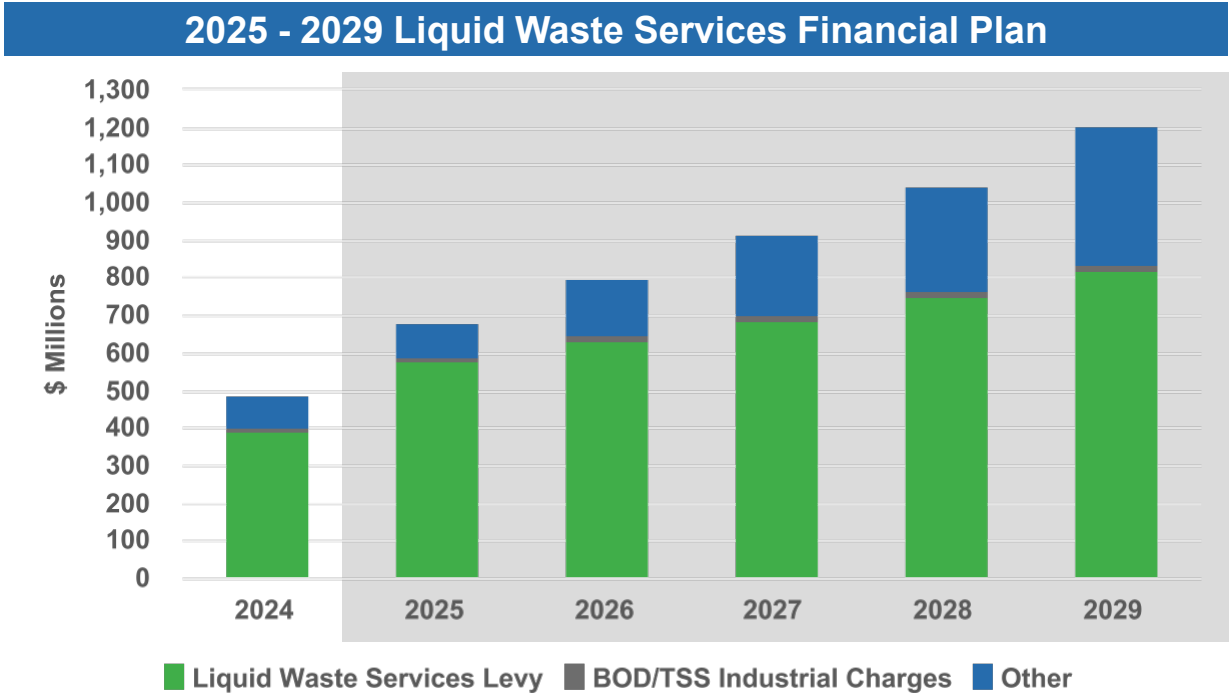
### Overview:

**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



# 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 |

# CAPITAL EXPENDITURES

## Liquid Waste Services Capital Plan

### Overview:

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

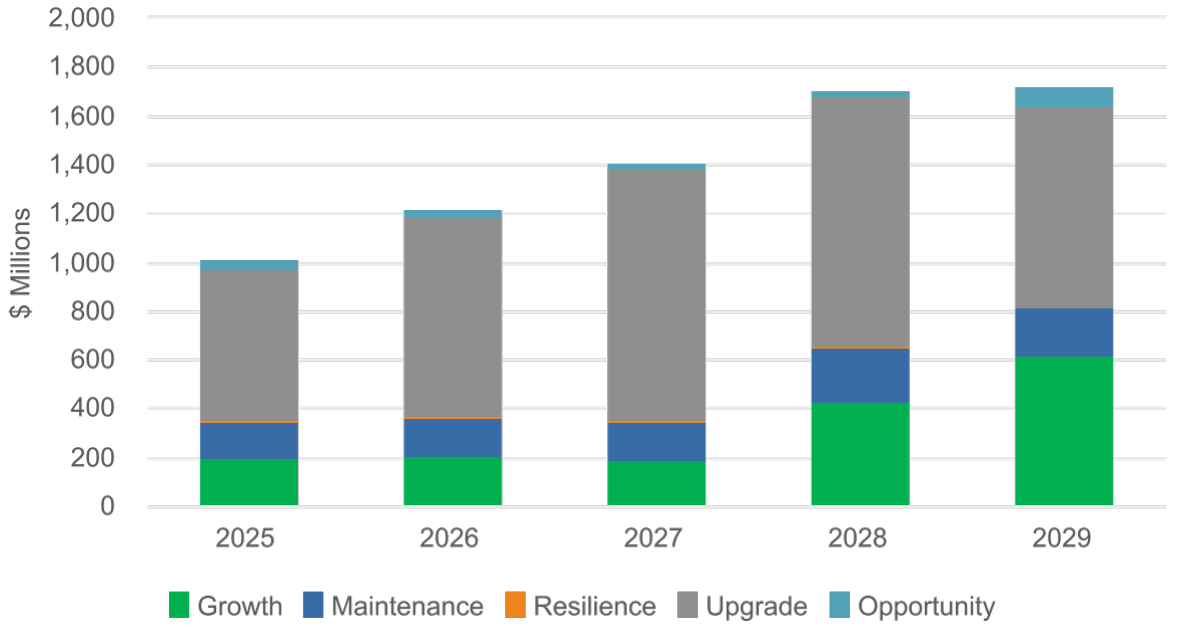
**2025** Capital Cash Flow: **$1,010.4M**

**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 / Brighouse Trunk Sewer

### 2025 – 2029 Liquid Waste Services Capital Cash Flow



# CAPITAL FUNDING

## Liquid Waste Services Capital Plan

### Overview:

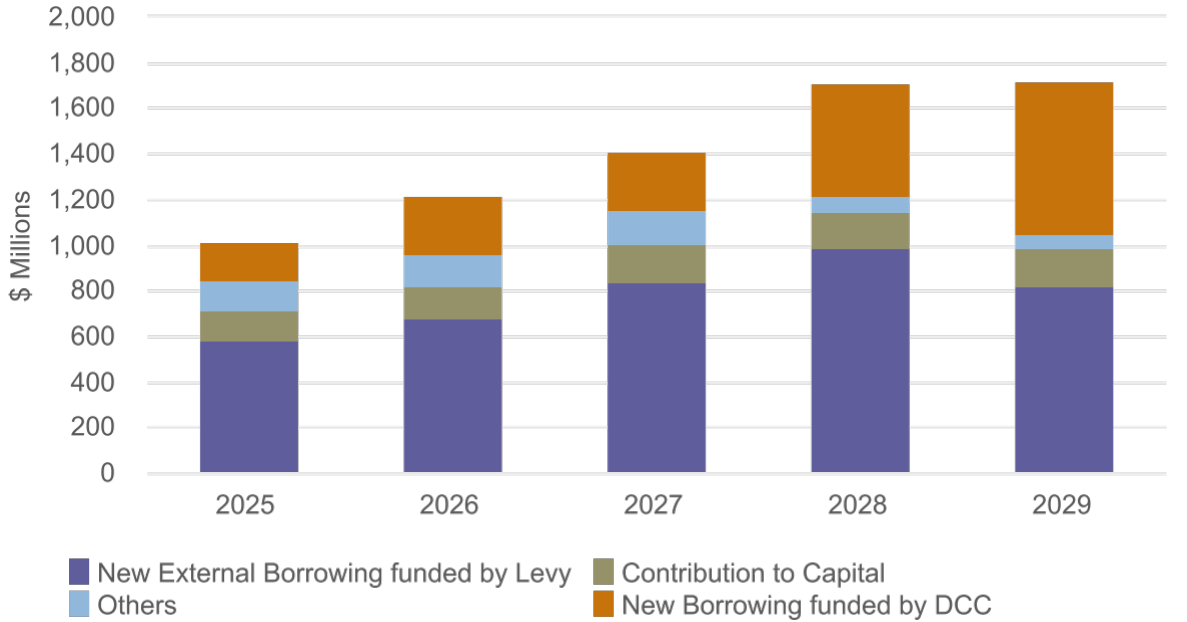
**2024** Capital Cash Flow: **$781.2M**
**2025** Capital Cash Flow: **$1,010.4M**

**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**

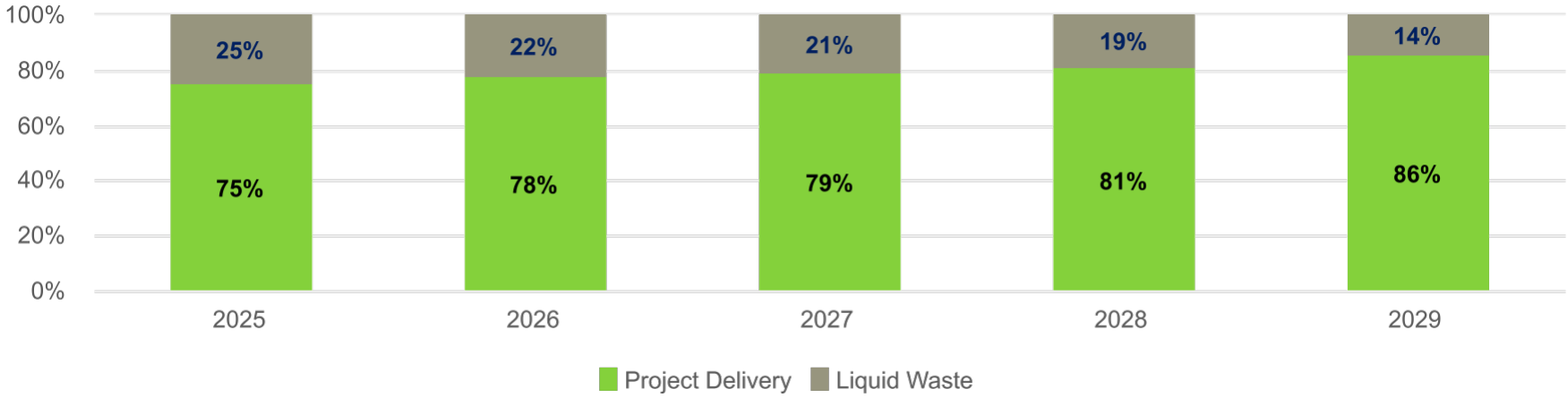


# LIQUID WASTE 2025 - 2029 CAPITAL PLAN

| | 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



# CAPITAL PROGRAM HIGHLIGHTS

## Liquid Waste Services

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

# 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*

# 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*

# 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*

# 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*

# 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*

# LIQUID WASTE SERVICES FINANCIAL PLAN SUMMARY Drainage

## 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<br>(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.


Annacis Island Wastewater Treatment Plant

# Questions?

metrovancouver