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SERVICES AND SOLUTIONS FOR A LIVABLE REGION

METRO VANCOUVER REGIONAL DISTRICT
LIQUID WASTE COMMITTEE

MEETING

Wednesday, July 19, 2023
1:00 pm
Meeting conducted electronically/in-person pursuant to the Procedure Bylaw
28th Floor Committee Room, 4515 Central Boulevard, Burnaby, British Columbia

REVISED AGENDA[1]

1. ADOPTION OF THE AGENDA

1.1 July 19, 2023 Meeting Agenda
That the Liquid Waste Committee adopt the agenda for its meeting scheduled for July 19, 2023 as circulated.

2. ADOPTION OF THE MINUTES

2.1 June 14, 2023 Meeting Minutes *pg 4*
That the Liquid Waste Committee adopt the minutes of its meeting held June 14, 2023 as circulated.

3. DELEGATIONS

4. INVITED PRESENTATIONS

5. REPORTS FROM COMMITTEE OR STAFF

5.1 Draft Liquid Waste 2024 – 2028 Capital Plan *pg 9*
That the Liquid Waste Committee receive for information the report dated June 20, 2023 titled "Draft Liquid Waste 2024 - 2028 Capital Plan".

5.2 Liquid Waste Services Capital Program Expenditure Update as at April 30, 2023 *pg 25*
That the GVS&DD Board receive for information the report dated June 21, 2023, titled "Liquid Waste Services Capital Program Expenditure Update as at April 30, 2023".

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

5.3 Guide to Metro Vancouver Utility Capital Projects for Member Jurisdictions and Impact Mitigation Framework *pg 37*

That the GVWD and GVS&DD Boards receive for information the report dated June 21, 2023 titled "Guide to Metro Vancouver Utility Capital Projects for Member Jurisdictions and Impact Mitigation Framework".

5.4 Greater Vancouver Sewerage and Drainage District Sewer Use Amendment Bylaw No. 366, 2023 *pg 76*

That the GVS&DD Board:

a) give first, second, and third reading to *Greater Vancouver Sewerage and Drainage District Sewer Use Amendment Bylaw No. 366, 2023*; and
b) pass and finally adopt *Greater Vancouver Sewerage and Drainage District Sewer Use Amendment Bylaw No. 366, 2023.*

5.5 Greater Vancouver Sewerage and Drainage District Hospital Pollution Prevention Amendment Bylaw No. 367, 2023 *pg 87*

That the GVS&DD Board:

a) give first, second, and third reading to *Greater Vancouver Sewerage and Drainage District Hospital Pollution Prevention Amendment Bylaw No. 367, 2023*; and
b) pass and finally adopt *Greater Vancouver Sewerage and Drainage District Hospital Pollution Prevention Amendment Bylaw No. 367, 2023*.

5.6 Phase 2 Design Build Consulting Services for the Lions Gate Secondary Wastewater Treatment Plant - Change Order to AECOM Contract PC14-0408 *pg 91*

That GVS&DD Board:

a) approve Phase 2 Design Consulting Services for the Lions Gate Secondary Wastewater Treatment Plant of AECOM Contract PC-0408 through a change order in the amount of $113,000,000, for a total contract value of $153,000,000 (exclusive of taxes), subject to final review by the Commissioner; and
b) authorize the Commissioner and the Corporate Officer to execute the required documentation once the Commissioner is satisfied that the change order should proceed.

5.7 Award of RFP No. 23-121 Technical Services for the North Shore Wastewater Treatment Plant Project *pg 95*

That GVS&DD Board:

a) approve award of RFP No. 23-121 for Technical Services for the North Shore Wastewater Treatment Plant Project, in the amount of $25,000,000 (exclusive of taxes) to Stantec Consulting Ltd., subject to final review by the Commissioner; and
b) authorize the Commissioner and the Corporate Officer to execute the required documentation once the Commissioner is satisfied that the award should proceed.

Revised **5.8 Manager's Report** *pg 98*

That the Liquid Waste Committee receive for information the report dated July 14, 2023 titled "Manager's Report".

6. INFORMATION ITEMS

7. OTHER BUSINESS

8. BUSINESS ARISING FROM DELEGATIONS

9. RESOLUTION TO CLOSE MEETING

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

That the Liquid Waste Committee close its meeting scheduled for July 19, 2023 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.

10. ADJOURNMENT/CONCLUSION

That the Liquid Waste Committee adjourn/conclude its meeting of July 19, 2023.

Membership:

Hurley, Mike (C) – Burnaby
Knight, Megan (VC) – White Rock
Albrecht, Paul – Langley City
Cassidy, Christine – West Vancouver
Ferguson, Steve – Langley Township
Kim, Steve – Coquitlam
Kirby-Yung, Sarah – Vancouver
Kooner, Pardeep – Surrey
Little, Mike – North Vancouver District
Loo, Alexa – Richmond
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 1:00 pm on Wednesday, June 14, 2023 in the 28th Floor Committee Room, 4515 Central Boulevard, Burnaby, British Columbia.

MEMBERS PRESENT:
Chair, Mayor Mike Hurley, Burnaby
Vice Chair, Mayor Megan Knight*, White Rock
Councillor Paul Albrecht, Langley City
Councillor Christine Cassidy, West Vancouver
Councillor Steve Ferguson, Langley Township
Mayor Patrick Johnstone*, New Westminster
Councillor Steve Kim, Coquitlam
Councillor Sarah Kirby-Yung*, Vancouver
Councillor Pardeep Kooner, Surrey
Mayor Mike Little, North Vancouver District (arrived at 1:10 pm)
Councillor Alexa Loo, Richmond
Mayor Brad West*, Port Coquitlam
Councillor Ahmed Yousef*, Maple Ridge

MEMBERS ABSENT:
None.

STAFF PRESENT:
Jerry W. Dobrovolny, Chief Administrative Officer
Peter Navratil, General Manager, Liquid Waste Services
Morgan Mackenzie, Legislative Services Coordinator, Board and Information Services

1. ADOPTION OF THE AGENDA

1.1 June 14, 2023 Meeting Agenda

It was MOVED and SECONDED
That the Liquid Waste Committee adopt the agenda for its meeting scheduled for June 14, 2023 as circulated.

CARRIED

*denotes electronic meeting participation as authorized by section 3.6.2 of the *Procedure Bylaw*

2. ADOPTION OF THE MINUTES

2.1 May 17, 2023 Meeting Minutes

It was MOVED and SECONDED
That the Liquid Waste Committee adopt the minutes of its meeting held May 17, 2023 as circulated.

CARRIED

3. DELEGATIONS

No items presented.

4. INVITED PRESENTATIONS

No items presented.

Agenda Order Varied
The order of the agenda was varied to consider Item 5.2 at this point.

5. REPORTS FROM COMMITTEE OR STAFF

5.2 Change Order to the Contract Resulting from RFP No. 19-007: Northwest Langley Wastewater Treatment Plant - Design and Construction Engineering Services

Report dated June 2, 2023, from Marie-Liesse Marc, Director, Major Projects, Project Delivery, and George Kavouras, Director, Procurement and Real Estate Services, requesting authorization from the GVS&DD Board for a change order to the contract resulting from RFP No. 19-007 Northwest Langley Wastewater Treatment Plant – Design and Construction Services awarded to CH2M Hill Canada Ltd. (CH2M Hill), in the amount of up to $20,655,821 (exclusive of taxes), for services to complete the detailed design and procurement of the Northwest Langley Wastewater Treatment Plant Stage 1 expansion.

It was MOVED and SECONDED
That the GVS&DD Board:

a) approve a change order in the amount of up to $20,655,821 (exclusive of taxes) to CH2M Hill Canada Ltd., subject to final review by the Commissioner; and
b) authorize the Commissioner and the Corporate Officer to execute the required documentation once the Commissioner is satisfied that the award should proceed.

CARRIED

Agenda Order Resumed
The order of the agenda resumed with Item 5.1 before the Committee.

5.1 North Shore Wastewater Treatment Plant Program - Program Overview and Background

Cheryl Nelms, General Manager, Project Delivery, provided the Liquid Waste Committee with a verbal update on the North Shore Wastewater Treatment Plant Program's (NSWWTP) overview and background.

1:10 pm Mayor Little arrived at the meeting.

Members were provided with a presentation on the NSWWTP Program highlighting the program overview, the project history and background, the termination of the contract, the transition, the activities since the transition, and the next steps.

Presentation material titled "North Shore Wastewater Treatment Plant Program" is retained with the June 14, 2023 Liquid Waste Committee agenda.

It was MOVED and SECONDED

That the Liquid Waste Committee receive for information the presentation dated June 14, 2023 titled "North Shore Wastewater Treatment Plant Program".

CARRIED

5.3 Amendment to Central Aggregates Biosolids Management Contract Resulting from SRFEOI 21-018

Report dated June 1, 2023, from George Kavouras, Director, Procurement and Real Estate Services, and Janelle Hunt, Program Manager, Utility Residuals Management, Liquid Waste Services, seeking GVS&DD Board approval of the contract amendment with Lafarge Canada Inc., for the beneficial use of biosolids at their Central Aggregates gravel pit in Abbotsford, BC, to manage additional Iona Island Wastewater Treatment Plant biosolids.

It was MOVED and SECONDED

That the GVS&DD Board:

a) approve an amendment to the contract with Lafarge Canada Inc. resulting from Standing Request for Expressions of Interest No. 21-018: Biosolids Management, in the amount of up to $4,097,000 (exclusive of taxes) for biosolids management at the Central Aggregates gravel pit, subject to final review by the Commissioner; and
b) authorize the Commissioner and the Corporate Officer to execute the required documentation once the Commissioner is satisfied that the amendment should proceed.

CARRIED

5.4 Integrated Liquid Waste and Resource Management Plan: Biennial Reporting for 2021-2022

Report dated June 7, 2023, from Abin Antony, Program Manager, Policy, Planning & Analysis, Liquid Waste Services, requesting the GVS&DD Board to authorize staff to forward the attached biennial report to the Ministry of Environment and Climate

Change Strategy, and arrange for the Liquid Waste Committee to receive public comments at its scheduled meeting of September 13, 2023.

It was MOVED and SECONDED
That the GVS&DD Board direct staff to:

a) submit the "Biennial Report: 2021-2022", attached to the report titled "*Integrated Liquid Waste and Resource Management Plan*: Biennial Report for 2021-2022", dated June 7, 2023, to the Ministry of Environment and Climate Change Strategy, in accordance with the requirements of the *Integrated Liquid Waste and Resource Management Plan*; and
b) arrange for the Liquid Waste Committee to receive public comments on the "Biennial Report: 2021-2022", attached to the report titled "*Integrated Liquid Waste and Resource Management Plan*: Biennial Report for 2021-2022", dated June 7, 2023, at the September 13, 2023 Liquid Waste Committee meeting.

CARRIED

5.5 Manager's Report

Report dated May 31, 2023, from Peter Navratil, General Manager, Liquid Waste Services, providing the Liquid Waste Committee with updates on the Canadian Water and Wastewater Association's position statement on flushability, the 2023 communications initiative to reduce surfactants in wastewater, and the Liquid Waste Committee's 2023 Work Plan.

It was MOVED and SECONDED
That the Liquid Waste Committee receive for information the report dated May 31, 2023 titled "Manager's Report".

CARRIED

6. INFORMATION ITEMS

No items presented.

7. OTHER BUSINESS

No items presented.

8. BUSINESS ARISING FROM DELEGATIONS

No items presented.

9. RESOLUTION TO CLOSE MEETING

It was MOVED and SECONDED
That the Liquid Waste Committee close its meeting scheduled for June 14, 2023 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;

(k) negotiations and related discussions respecting the proposed provision of a municipal service that are at their preliminary stages and that, in the view of the council, could reasonably be expected to harm the interests of the municipality if they were held in public; and

(m) a matter that, under another enactment, is such that the public may be excluded from the meeting."

CARRIED

10. ADJOURNMENT/CONCLUSION

It was MOVED and SECONDED
That the Liquid Waste Committee adjourn its meeting of June 14, 2023.

CARRIED
(Time: 2:06 pm)

Morgan Mackenzie,
Legislative Services Coordinator

Mike Hurley,
Chair

60643674 FINAL

To: Liquid Waste Committee

From: Peter Navratil, General Manager, Liquid Waste Services

Date: June 20, 2023 Meeting Date: July 19, 2023

Subject: **Draft Liquid Waste 2024 - 2028 Capital Plan**

RECOMMENDATION

That the Liquid Waste Committee receive for information the report dated June 20, 2023 titled "Draft Liquid Waste 2024 - 2028 Capital Plan".

EXECUTIVE SUMMARY

The draft 2024 - 2028 Liquid Waste Capital Plan has been prepared based on direction received at the April 19, 2023 Metro Vancouver Board Budget Workshop and continues to meet the goals of the Liquid Waste Customer Level of Service Objectives. As part of Metro Vancouver's focus on enhancing transparency and governance of the Capital Plan, this report allows the Liquid Waste Committee to provide comment on the Draft Capital Plan, which will then be incorporated into the Liquid Waste Financial Plan and included in the Fall budget presentations to the Committees and the Boards.

The estimated 2024 Capital Cash Flow is $736.6M with a total estimated spend of $5.4B over the five years (2024 - 2028). With respect to the common four years compared to the prior cycle's capital plan, the estimated spend has decreased by $486.1 million, or 12.0% primarily due to project schedule changes.

PURPOSE

To present to the Committee the draft Liquid Waste 2024 - 2028 Capital Plan for comments.

BACKGROUND

On April 19, 2023, Metro Vancouver held a Board Budget Workshop with the objective to seek direction for the preparation of the 2024 - 2028 Financial Plan. This report provides the Liquid Waste Committee with the information needed to provide comments on the Capital Plan which will then be incorporated into the 2024 - 2028 Financial Plan scheduled to be presented in the fall.

Liquid Waste Customer Level of Service Objectives

Projects within the draft 2024 - 2028 Capital Plan over the five years are guided by the Liquid Waste Customer Level of Service Objectives specifically:

- Eliminate Discharges from the Sewer System
- Ensure that Authorized WWTP Discharges Meet Regulatory Requirements
- Improve Environmental Stewardship
- Minimize Timeline to recover from a Major Event

On an ongoing basis, staff monitor and evaluate the performance of the Liquid Waste infrastructure and its ability to achieve and/or maintain the service objectives. Where risks to service objectives are identified, mitigation actions are planned and incorporated into annual work plans. These actions may take the form of changes to operating and maintenance activities, changes to infrastructure or the development of emergency response procedures. The projects in the annual capital plan embody the infrastructure changes required to achieve the service objectives.

CAPITAL PLAN HIGHLIGHTS

The draft 2024 - 2028 Capital Plan includes $736.6M for 2024 and a total capital expenditure of $5.4B over the five years, an average of $1.09B per year (see Attachment). The largest four projects make up 69% of the planned capital spending over the next five years. There are 152 projects on the 5-year plan.

Key capital projects planned or ongoing in 2024 - 2028 for Liquid Waste include the following:

Infrastructure Type	Project Name	Infrastructure Driver	Proposed 2024 Cash Flow
Wastewater Treatment	North Shore WWTP Secondary Upgrade, Conveyance and Decommissioning	Upgrade	$187,818,000
Wastewater Treatment	Iona Island Wastewater Treatment Plant	Upgrade	$106,397,000
Wastewater Treatment	Northwest Langley Wastewater Treatment Program	Growth	$78,084,000
Wastewater Treatment	AIWWTP Stage 5 Expansion	Growth	$62,780,000
Collection	Gilbert/Brighouse Trunk Pressure Sewer	Maintenance	$42,095,000
Collection	Burnaby Lake North Interceptor Winston Section	Growth	$34,090,000
Wastewater Treatment	AIWWTP Trickling Filter Media & Distributor Arms & Ducting Replacement	Maintenance	$23,780,000
Wastewater Treatment	AIWWTP Hydrothermal Processing Pilot	Opportunity	$15,550,000
Wastewater Treatment	Annacis Outfall System	Growth	$11,500,000
Collection	Gleneagles Pump Stations Improvements	Maintenance	$8,625,000
Collection	VSA Statutory Right of Way Acquisitions 2024-2026	Maintenance	$8,500,000
Collection	VSA Sewer Relocations and Protections	Maintenance	$7,350,000
Collection	North Road Trunk Sewer	Growth	$6,300,000
Collection	FSA Statutory Right of Way Acquisitions Phase 1	Maintenance	$5,350,000

Infrastructure Type	Project Name	Infrastructure Driver	Proposed 2024 Cash Flow
Wastewater Treatment	LIWWTP Power Reliability	Resilience	$5,301,000
Collection	VSA Emergency Backup Power	Resilience	$5,300,000
Collection	NSI Flow Management	Upgrade	$4,780,000
Collection	Production Way Facility Access and Parking Improvements	Maintenance	$4,600,000
Collection	Sewer Heat Projects	Opportunity	$3,800,000
Collection	FSA Sewer Relocations and Protections	Maintenance	$3,350,000
Wastewater Treatment	LIWWTP Effluent Heat Recovery Project	Opportunity	$3,000,000
Collection	White Rock Forcemain Rehabilitation	Maintenance	$2,200,000
Collection	Stoney Creek Sanitary Trunk	Growth	$1,100,000
Wastewater Treatment	AIWWTP Ammonia Removal – Sidestream	Upgrade	$400,000
	Other Projects	Various	$104,591,000
			$736,641,000

The spending over the next 5 years is driven by infrastructure changes required as a result of:

- growth in the number of residents moving into the region, creating an increased demand for services (Growth);
- changing conditions that impact the ability to meet service objectives like regulatory requirements including the Federally mandated requirement for all wastewater treatment plants in Canada to meet a minimum of secondary level treatment and infrastructure required to achieve a service objective (Upgrade);
- needs for replacement or refurbishment of existing infrastructure to ensure that it continues to perform as required to meet the service objectives (Maintenance);
- ensuring that infrastructure is resilient to major events including power outages, seismic events and the results of climate change (Resilience);
- opportunities to reduce the life-cycle cost of services and/or achieve Board goals such as climate change mitigation (Opportunity).

The capital program for Liquid Waste Services is funded by long-term debt, reserves, contributions from the operating budget, external (interagency and senior level government grants) contributions and development cost charges (DCCs).

Capital Plan Changes

Metro Vancouver's annual capital planning process allows the Board to adjust the capital budget once a year, in the fall, to accommodate changes required to fund projects transitioning from one phase to another (e.g. design phase to construction phase), and in response to new or changing project needs, emerging issues, and changing priorities.

Proposed changes in the draft 2024 - 2028 Capital Plan can be described within the following categories:

- Projected Carryforward – Project expenditures which were forecast to occur in 2023, but are now scheduled to occur in 2024 or after.
- Net Deferral – Project expenditures that have been deferred or re-scheduled beyond 2027.
- Cost Adjustments – Project cash flow changes resulting from project budget changes not related to scope.
- New Scope – Project cash flow changes resulting from project budgets specifically related to project scope change or new projects identified with expenditures in 2024 to 2027.

The following table summarizes the total proposed capital plan adjustments in the draft 2024 - 2028 Capital Plan:

($Millions)

Prior cycle Cash Flow 2023 - 2027	Cash Flow 2023	Adjustments to 2024 - 2027 Capital Plan					Cash-flow 2028	Draft Capital Plan 2024 - 2028
		Projected Carry-Forward	Net Deferral	Cost Adjustments	New Scope	Total		
$4,730	(681.7)	126.8	(790.3)	123.9	53.5	(486.1)	1,863	$5,426

With respect to the common four years compared to the prior cycle's capital plan, the estimated spend has decreased by $486.1 million, or 12.0% primarily due to project schedule changes.

A key contributor to this reduction, shown in Net Deferral, is an adjustment of expected expenditures related to the Northwest Langley and Iona WWTP projects over the next 5 years. This planned deferral relates to updates to project schedules for both of these projects which have been communicated to the Committee in prior reports.

Capital Plan Review Process

Liquid Waste and Project Delivery diligently reviewed the project schedules to accommodate any Carry Forwards and Cost Adjustments by deferring projects, where possible. This review will continue through the summer as conditions change, and adjustments will be made accordingly.

Throughout the capital planning process, Liquid Waste reviews each project to ensure project timing is appropriate, deliverability has been assessed and confirm that service risks and financial risks are properly balanced. This exercise was performed in preparing the Liquid Waste 2024 - 2028 Capital Plan and resulted in the net deferral of $790.3 million in capital expenditures into future years.

ALTERNATIVES

This is an information report. No alternatives are presented.

FINANCIAL IMPLICATIONS

The draft 2024 - 2028 Capital Plan includes $736.6 for 2024 and a total of $5.4B over the five years, an average of $1.09B per year. The intent is that the Liquid Waste Committee provide comments, which will then be incorporated into the Liquid Waste Capital Plan and included in the Fall budget presentations to the Committees and the Board.

CONCLUSION

The 2024 - 2028 Capital Plan is the consolidated list of infrastructure projects required to meet and/or maintain the regional Liquid Waste Customer Level of Service Objectives and the financial impacts of these projects over the next five years.

The presentation of the draft 2024 - 2028 Capital Plan for Liquid Waste provides the opportunity for the Liquid Waste Committee to provide comments, which will then be incorporated into the Liquid Waste Capital Plan and included in the Fall budget presentations to the Committees and the Board.

Attachments

1. Draft Liquid Waste 2024 - 2028 Capital Plan
2. Draft Liquid Waste 2024 - 2028 Capital Plan Presentation

60321277

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

	CAPITAL BUDGET FOR APPROVAL	2024 CAPITAL CASH FLOW	2025 CAPITAL CASH FLOW	2026 CAPITAL CASH FLOW	2027 CAPITAL CASH FLOW	2028 CAPITAL CASH FLOW	2024 TO 2028 TOTAL CAPITAL CASH FLOW	ACTIVE PHASE	PRIMARY DRIVER
CAPITAL EXPENDUTURES									
Collections									
8th Avenue Interceptor Air Treatment Facilities	$ 500,000	$ -	$ -	$ 500,000	$ 500,000	$ 100,000	$ 1,100,000	Definition	Upgrade
Albert Street Trunk Sewer	10,250,000	450,000	-	-	-	-	450,000	Construction	Growth
Big Bend Forcemain - Gate Replacement	200,000	-	126,000	600,000	650,000	650,000	2,026,000	Design	Maintenance
Burnaby Lake North Interceptor Cariboo Section	1,000,000	50,000	650,000	1,700,000	11,200,000	15,000,000	28,600,000	Design	Growth
Burnaby Lake North Interceptor Winston Section	103,700,000	34,090,000	3,600,000	5,150,000	5,000,000	5,000,000	52,840,000	Construction	Growth
Burnaby South Slope Interceptor	500,000	200,000	250,000	500,000	650,000	4,550,000	6,150,000	Multiple	Growth
Cloverdale Pump Station Capacity Upgrade	11,400,000	570,000	1,260,000	4,830,000	2,800,000	1,850,000	11,310,000	Construction	Growth
Cloverdale Trunk Sewer Capacity Upgrade	1,200,000	450,000	1,800,000	900,000	8,150,000	8,000,000	19,300,000	Design	Growth
Combined Sewer Overflow Sampling Station Enhancements	1,900,000	450,000	-	-	-	-	450,000	Construction	Maintenance
Crescent Beach FM - Replacement	34,850,000	200,000	200,000	150,000	250,000	1,000,000	1,800,000	Construction	Maintenance
Eagle Creek (Lower Section) Channel Restoration	-	-	750,000	-	-	-	750,000	Not Started	Resilience
EMQC-Chemistry Laboratory	900,000	400,000	2,000,000	5,000,000	1,000,000	-	8,400,000	Design	Upgrade
Fraser Sewerage Area Integrated Resource Recovery (IRR) Study	1,200,000	250,000	250,000	250,000	-	-	750,000	Design	Opportunity
Front Street Pressure Sewer Access Hatches Reinforcement	5,000,000	2,000,000	350,000	350,000	150,000	-	2,850,000	Construction	Maintenance
FSA Flow Metering Program	3,500,000	650,000	400,000	-	-	-	1,050,000	Construction	Maintenance
FSA River Crossing Scour Protection Program - Phase 1	6,400,000	1,550,000	630,000	-	-	-	2,180,000	Construction	Maintenance
FSA Sewer Relocations and Protections	11,700,000	3,350,000	200,000	-	-	-	3,550,000	Construction	Maintenance
FSA Statutory Right of Way Acquisitions Phase 1	35,100,000	5,350,000	14,000,000	800,000	-	-	20,150,000	Design	Maintenance
Gilbert/Brighouse Trunk Pressure Sewer	175,200,000	42,095,000	29,965,000	10,130,000	600,000	2,400,000	85,190,000	Multiple	Maintenance
Glenbrook Combined Trunk Kingsway Sanitary Section	8,100,000	7,200,000	-	-	-	-	7,200,000	Construction	Growth
Glenbrook CSO Gate Replacement	5,150,000	50,000	-	-	-	-	50,000	Construction	Maintenance
Gleneagles Forcemain Replacement	15,850,000	6,988,000	3,380,000	1,000,000	-	-	11,368,000	Multiple	Maintenance
Gleneagles Pump Stations Improvements	40,850,000	8,625,000	5,675,000	12,600,000	4,925,000	-	31,825,000	Construction	Maintenance
Harbour PS Air Treatment Facilities	-	-	-	-	-	150,000	150,000	Not Started	Upgrade
Harbour Pump Station Discharge Header Repair and Valve Replacements	4,850,000	4,273,000	-	-	-	-	4,273,000	Construction	Maintenance
Harbour Pump Station Power Distribution Equipment Replacement	3,650,000	2,050,000	400,000	-	-	-	2,450,000	Construction	Maintenance
Harbour Sewerage Pump Station (HRB) - Suction Piping Replacement	5,850,000	850,000	5,000,000	-	-	-	5,850,000	Construction	Maintenance
Highbury Interceptor Diversion Junction Chamber Wall Rehabilitation	500,000	200,000	200,000	5,500,000	-	-	5,900,000	Design	Maintenance
Jervis Pump Station 25kV Voltage Conversion	1,300,000	150,000	-	-	-	-	150,000	Construction	Maintenance
Jervis Sewerage Pump Station (JRV) - Suction Piping Replacement	4,000,000	500,000	3,500,000	-	-	-	4,000,000	Construction	Maintenance
Kent Pump Station High Voltage Switchgear Replacement	3,000,000	1,700,000	150,000	-	-	-	1,850,000	Construction	Maintenance
Lozells Sanitary Trunk Golf Course Section	-	-	50,000	400,000	200,000	1,000,000	1,650,000	Not Started	Growth
LSA Flow Metering Program	300,000	50,000	-	-	-	-	50,000	Construction	Maintenance
Marshend Pump Station	10,500,000	750,000	3,040,000	8,220,000	6,520,000	-	18,530,000	Multiple	Growth
New West Interceptor - Annacis Section 2	42,000,000	400,000	600,000	1,700,000	2,800,000	6,800,000	12,300,000	Construction	Maintenance
New West Interceptor Grit Chamber	1,250,000	400,000	600,000	4,000,000	4,000,000	-	9,000,000	Design	Maintenance
New Westminster Interceptor Annacis Channel Crossing Scour Protection	500,000	500,000	2,000,000	-	-	-	2,500,000	Design	Resilience
New Westminster Interceptor Repair Columbia St. Section	39,850,000	1,500,000	-	-	-	-	1,500,000	Construction	Maintenance
New Westminster Interceptor West Branch and Columbia Extension Rehabilitation	2,900,000	1,150,000	1,200,000	26,800,000	6,000,000	2,100,000	37,250,000	Design	Maintenance
North Road Trunk Sewer	23,600,000	6,300,000	4,550,000	2,500,000	-	-	13,350,000	Construction	Growth
North Surrey Interceptor - Port Mann Section - Odour Control	5,050,000	3,315,000	3,210,000	11,150,000	11,110,000	-	28,785,000	Construction	Upgrade
North Surrey Interceptor Annieville Channel Crossing Scour Protection	4,350,000	50,000	-	-	-	-	50,000	Construction	Maintenance

GREATER VANCOUVER SEWERAGE AND DRAINAGE DISTRICT
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DRAFT 2024 CAPITAL BUDGET AND 2024-2028 CAPITAL PLAN

	CAPITAL BUDGET FOR APPROVAL	2024 CAPITAL CASH FLOW	2025 CAPITAL CASH FLOW	2026 CAPITAL CASH FLOW	2027 CAPITAL CASH FLOW	2028 CAPITAL CASH FLOW	2024 TO 2028 TOTAL CAPITAL CASH FLOW	ACTIVE PHASE	PRIMARY DRIVER
North Surrey Interceptor Improvements	6,000,000	1,950,000	2,950,000	1,000,000	-	-	5,900,000	Multiple	Maintenance
North Surrey Interceptor Roebuck Section Replacement	19,450,000	2,500,000	6,750,000	7,600,000	1,500,000	-	18,350,000	Construction	Maintenance
NSA Flow Metering Program	900,000	450,000	-	-	-	-	450,000	Construction	Maintenance
NSA Scour Protection Upgrades	2,250,000	200,000	1,700,000	-	-	-	1,900,000	Construction	Maintenance
NSI 104th Ave Extension	12,950,000	-	500,000	6,000,000	1,500,000	-	8,000,000	Construction	Growth
NSI Flow Management	94,500,000	4,780,000	12,200,000	3,050,000	20,000,000	30,000,000	70,030,000	Construction	Upgrade
NSI Rehab or Replacement	50,400,000	4,270,000	26,900,000	6,550,000	900,000	900,000	39,520,000	Construction	Maintenance
Ocean Park Trunk Manholes Lining	50,000	50,000	1,000,000	-	-	-	1,050,000	Design	Maintenance
Ocean Park Trunk Sewer - Air Management Facility	7,750,000	805,000	2,135,000	2,920,000	-	-	5,860,000	Construction	Upgrade
NVI Lynn Branch Siphon – SSO Treatment	-	-	750,000	4,800,000	6,150,000	3,800,000	15,500,000	Not Started	Upgrade
NWP Dip Investigation and Repair	1,100,000	550,000	3,950,000	-	-	-	4,500,000	Design	Maintenance
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	1,450,000	1,600,000	1,250,000	16,000,000	38,100,000	58,400,000	Design	Maintenance
Port Moody Pump Station Capacity Upgrade	2,300,000	450,000	1,560,000	1,150,000	10,000,000	10,000,000	23,160,000	Design	Growth
Port Moody South Interceptor Capacity Upgrade	150,000	150,000	150,000	150,000	2,000,000	1,000,000	3,450,000	Design	Growth
Port Moody Storm Drain Rehabilitation	1,600,000	400,000	600,000	600,000	-	-	1,600,000	Construction	Maintenance
Production Way Facility Access and Parking Improvements	4,850,000	4,600,000	-	-	-	-	4,600,000	Construction	Maintenance
Production Way Operation Centre	40,400,000	2,300,000	23,000,000	12,000,000	-	-	37,300,000	Construction	Upgrade
Rosemary Heights Pressure Sewer Capacity Upgrade	-	-	350,000	500,000	700,000	2,500,000	4,050,000	Not Started	Growth
Royal Ave PS Rehabilitation	12,900,000	1,250,000	8,143,000	1,000,000	-	-	10,393,000	Construction	Maintenance
Sapperton Pump Station	97,500,000	520,000	1,200,000	4,100,000	-	-	5,820,000	Multiple	Growth
Sapperton Pump Station Emergency Backup Power	5,000,000	3,400,000	1,000,000	-	-	-	4,400,000	Construction	Resilience
Sewer Heat Projects	57,000,000	3,800,000	11,600,000	12,900,000	17,400,000	16,600,000	62,300,000	Construction	Opportunity
South Surrey Interceptor Johnston Section	84,050,000	850,000	10,450,000	5,965,000	3,000,000	2,650,000	22,915,000	Construction	Growth
South Surrey Interceptor Rehabilitation	65,500,000	3,600,000	2,100,000	15,800,000	30,000,000	13,500,000	65,000,000	Multiple	Maintenance
SSI - King George Section - Odor Control Facility (OCF) and Grit Chamber	19,550,000	50,000	-	-	-	-	50,000	Construction	Growth
SSI Influent Control Chamber Repair and Replace Gates	150,000	-	150,000	1,100,000	-	-	1,250,000	Design	Maintenance
SSI Delta - Air Management Facility Construction	9,700,000	4,000,000	2,450,000	-	-	-	6,450,000	Construction	Upgrade
Still Creek Culvert Rehabilitation (Gilmore section)	100,000	100,000	100,000	1,250,000	-	-	1,450,000	Design	Maintenance
Stoney Creek Sanitary Trunk	67,700,000	1,100,000	3,100,000	11,450,000	12,000,000	15,000,000	42,650,000	Construction	Growth
Surrey Central Valley Capacity Upgrade	-	-	-	150,000	450,000	1,000,000	1,600,000	Not Started	Growth
Surrey Corrosion Control Facility Replacement	7,400,000	1,000,000	4,850,000	-	-	-	5,850,000	Construction	Maintenance
VSA Emergency Backup Power	29,250,000	5,300,000	3,050,000	150,000	4,100,000	-	12,600,000	Construction	Resilience
VSA Flow Metering Program	5,800,000	2,350,000	1,350,000	700,000	-	-	4,400,000	Construction	Maintenance
VSA Grit Chamber Access Improvements	2,700,000	200,000	2,500,000	-	-	-	2,700,000	Construction	Maintenance
VSA Sewer Relocations and Protections	34,850,000	7,350,000	500,000	-	-	-	7,850,000	Construction	Maintenance
VSA Statutory Right of Way Acquisitions 2024-2026	16,000,000	8,500,000	3,000,000	4,500,000	-	-	16,000,000	Construction	Maintenance
Westridge FM Replacement	8,550,000	5,250,000	2,100,000	-	-	-	7,350,000	Construction	Maintenance
Westridge Pump Stations 1 & 2 Refurbishment	8,900,000	1,380,000	3,475,000	6,200,000	6,950,000	-	18,005,000	Construction	Maintenance
White Rock Forcemain Rehabilitation	14,800,000	2,200,000	10,000,000	1,400,000	-	-	13,600,000	Construction	Maintenance
Total Collections	**$ 1,427,550,000**	**$ 216,211,000**	**$ 247,409,000**	**$ 219,965,000**	**$ 202,155,000**	**$ 183,650,000**	**$ 1,069,390,000**		
Treatment Plants									
AIWWTP Ammonia Removal – Sidestream	$ 127,250,000	$ 400,000	$ 800,000	$ 1,100,000	$ 950,000	$ 3,960,000	$ 7,210,000	Construction	Upgrade

GREATER VANCOUVER SEWERAGE AND DRAINAGE DISTRICT
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DRAFT 2024 CAPITAL BUDGET AND 2024-2028 CAPITAL PLAN

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AIWWTP Centrifuge Schwing HPU replacement	1,650,000	620,000	1,000,000	-	-	-	1,620,000	Construction	Maintenance
AIWWTP Chemical Lab UPS System Replacement	900,000	100,000	100,000	-	-	-	200,000	Construction	Maintenance
AIWWTP Cogeneration Backup Power	80,500,000	1,600,000	200,000	-	-	-	1,800,000	Multiple	Resilience
AIWWTP Digester No. 5*	6,900,000	500,000	3,500,000	3,387,000	4,000,000	5,500,000	16,887,000	Design	Growth
AIWWTP Effluent Pump Station	-	-	-	-	-	500,000	500,000	Not Started	Growth
AIWWTP Electrical Distribution System Protection Control and Monitoring	2,650,000	300,000	50,000	400,000	-	-	750,000	Construction	Upgrade
AIWWTP Hydrothermal Processing Pilot	39,350,000	15,550,000	8,900,000	3,400,000	1,550,000	-	29,400,000	Construction	Opportunity
AIWWTP ICS Replacement Program	14,350,000	1,000,000	1,500,000	2,250,000	2,500,000	2,000,000	9,250,000	Construction	Maintenance
AIWWTP Influent System Remediation	22,400,000	750,000	850,000	1,295,000	14,050,000	17,690,000	34,635,000	Design	Maintenance
AIWWTP IPS Gates Replacements	700,000	75,000	-	-	-	-	75,000	Construction	Maintenance
AIWWTP IPS Pump Building Roof Replacement Phase 2	800,000	100,000	500,000	200,000	-	-	800,000	Construction	Maintenance
AIWWTP Lubrication Storage Facility Conversion	500,000	500,000	-	-	-	-	500,000	Construction	Maintenance
AIWWTP O&M Building Refurbishment	100,000	100,000	300,000	1,200,000	3,100,000	1,800,000	6,500,000	Design	Maintenance
AIWWTP Outfall Repair	1,550,000	300,000	750,000	300,000	-	-	1,350,000	Construction	Maintenance
AIWWTP PWD line refurbishment/replacement	150,000	150,000	1,500,000	-	-	-	1,650,000	Design	Maintenance
AIWWTP Replacement of Protective Relays	3,050,000	50,000	500,000	-	-	-	550,000	Construction	Maintenance
AIWWTP Scheduled 64kV Potential & Current Transformer Replacements	400,000	100,000	-	-	-	-	100,000	Design	Maintenance
AIWWTP Scum Pump Replacement	400,000	200,000	150,000	500,000	500,000	-	1,350,000	Design	Maintenance
AIWWTP Secondary Clarifier Corrosion Repair	51,850,000	150,000	100,000	100,000	100,000	-	450,000	Multiple	Maintenance
AIWWTP Sludge Control Building Electrical Room HVAC upgrade	850,000	425,000	-	-	-	-	425,000	Construction	Maintenance
AIWWTP Stage 5 Expansion*	1,004,350,000	62,780,000	65,000,000	80,000,000	75,000,000	91,000,000	373,780,000	Multiple	Growth
AIWWTP Station Battery Replacement	1,250,000	100,000	-	-	-	-	100,000	Multiple	Maintenance
AIWWTP Trickling Filter Media & Distributor Arms & Ducting Replacement	90,700,000	23,780,000	350,000	50,000	-	-	24,180,000	Construction	Maintenance
AIWWTP UPS Condition Monitoring System	550,000	50,000	250,000	250,000	-	-	550,000	Construction	Resilience
All WWTPs Power Quality Monitoring & Outage Alarming Network	3,000,000	100,000	-	-	-	-	100,000	Construction	Upgrade
Annacis Influent System Surge Control Refurbishment	22,000,000	1,650,000	450,000	50,000	50,000	-	2,200,000	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	11,500,000	1,550,000	50,000	50,000	71,650,000	84,800,000	Construction	Growth
Regional Biosolids Dryer – AIWWTP*	24,950,000	500,000	2,500,000	11,000,000	20,090,000	63,500,000	97,590,000	Design	Opportunity
IIWWTP - Biogas Lines Relocation	5,750,000	50,000	-	-	-	-	50,000	Construction	Resilience
IIWWTP Biosolids Dewatering Facility	61,300,000	1,000,000	-	-	-	-	1,000,000	Construction	Upgrade
IIWWTP CEPT Polymer Line Replacement	2,300,000	1,000,000	-	-	-	-	1,000,000	Construction	Maintenance
IIWWTP CEPT Winterization	1,500,000	50,000	-	-	-	-	50,000	Construction	Maintenance
IIWWTP ICS IPS Control Replacement	1,750,000	200,000	-	-	-	-	200,000	Construction	Maintenance
IIWWTP ICS Migration Program	-	-	500,000	3,000,000	4,000,000	3,000,000	10,500,000	Not Started	Maintenance
IIWWTP ICS Replacement Program	750,000	300,000	200,000	150,000	-	-	650,000	Construction	Maintenance
IIWWTP Influent Gate Refurbishment	1,350,000	100,000	-	-	-	-	100,000	Construction	Maintenance
IIWWTP IPS Drive Remediation	2,300,000	550,000	550,000	400,000	550,000	-	2,050,000	Construction	Maintenance
IIWWTP MCC/Power Distribution Assess/Replace - Phase 2	1,000,000	50,000	300,000	-	-	-	350,000	Construction	Maintenance
IIWWTP Non-Domestic Trucked Liquid Waste Alternative	800,000	500,000	150,000	-	-	-	650,000	Construction	Maintenance
IIWWTP Outfall Refurbishment*	20,000,000	2,000,000	3,000,000	3,000,000	63,000,000	72,000,000	143,000,000	Design	Maintenance
IIWWTP PA Tanks Improvement	6,500,000	1,000,000	1,050,000	1,100,000	1,150,000	1,200,000	5,500,000	Construction	Maintenance
IIWWTP PA-Sed Tank & Gallery Wall Refurbishment	950,000	250,000	650,000	-	-	-	900,000	Construction	Maintenance
IIWWTP Replacement of CoGen Control System	2,500,000	200,000	450,000	-	-	-	650,000	Construction	Maintenance
IIWWTP Siphon Chamber Refurbishment	2,150,000	200,000	500,000	900,000	-	500,000	2,100,000	Construction	Maintenance

GREATER VANCOUVER SEWERAGE AND DRAINAGE DISTRICT
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IIWWTP Solids Handling Refurbishment	64,850,000	100,000	50,000	-	-	-	150,000	Multiple	Maintenance
IIWWTP Standby Diesel Generators	2,000,000	100,000	800,000	1,200,000	1,100,000	1,000,000	4,200,000	Design	Resilience
IIWWTP Surge Mitigation	2,000,000	825,000	1,000,000	-	-	-	1,825,000	Construction	Maintenance
Iona Island Control & Instrumentation Replacement 2011	2,750,000	50,000	-	-	-	-	50,000	Construction	Maintenance
Iona Island Wastewater Treatment Plant*	1,060,000,000	106,397,000	212,014,000	239,613,000	337,289,000	728,337,000	1,623,650,000	Construction	Upgrade
LIWWTP Admin Dewatering Building Roof Repair	100,000	100,000	700,000	-	-	-	800,000	Design	Maintenance
LIWWTP Biogas Clean-up Project	13,800,000	750,000	-	-	-	-	750,000	Construction	Opportunity
LIWWTP Effluent Heat Recovery Project	10,000,000	3,000,000	4,000,000	2,250,000	-	-	9,250,000	Construction	Opportunity
LIWWTP Gravity Thickener Redundancy	500,000	425,000	1,000,000	1,175,000	10,000,000	8,000,000	20,600,000	Design	Maintenance
LIWWTP Ground Fault Detection System Replacement	1,550,000	600,000	650,000	50,000	-	-	1,300,000	Construction	Maintenance
LIWWTP High Efficiency Boiler	1,300,000	400,000	400,000	150,000	-	-	950,000	Construction	Maintenance
LIWWTP ICS Electrical Distribution System Migration Program	2,250,000	500,000	1,750,000	3,500,000	1,250,000	-	7,000,000	Design	Maintenance
LIWWTP ICS Replacement Program	6,750,000	2,000,000	1,250,000	-	-	-	3,250,000	Construction	Maintenance
LIWWTP PA-Sed Tank Refurbishment	4,150,000	300,000	300,000	3,000,000	-	-	3,600,000	Construction	Maintenance
LIWWTP Pilot Digestion Optimization Facility	5,200,000	500,000	300,000	100,000	50,000	-	950,000	Construction	Opportunity
LIWWTP Power Reliability	12,400,000	5,301,000	2,875,000	350,000	-	-	8,526,000	Construction	Resilience
LIWWTP SCL Refurbishment	850,000	300,000	500,000	700,000	1,000,000	450,000	2,950,000	Design	Maintenance
LIWWTP Trickling Filter Refurbishment	54,450,000	1,100,000	10,300,000	10,000,000	10,000,000	6,000,000	37,400,000	Construction	Maintenance
NLWWTP 25 kV Substation Replacement	10,100,000	50,000	-	-	-	-	50,000	Construction	Maintenance
NLWWTP Screw Pump Replacement	1,550,000	100,000	-	-	-	-	100,000	Construction	Maintenance
NLWWTP Standby Diesel Generator	1,000,000	500,000	300,000	-	-	-	800,000	Construction	Resilience
North Shore WWTP Secondary Upgrade, Conveyance and Decommissioning*	1,057,900,000	187,818,000	63,883,000	14,579,000	6,612,000	-	272,892,000	Construction	Upgrade
Northwest Langley Wastewater Treatment Program*	2,280,600,000	78,084,000	95,605,000	223,971,000	485,882,000	601,556,000	1,485,098,000	Multiple	Growth
WWTPs Electrical System Studies & Upgrades	1,900,000	200,000	550,000	400,000	250,000	-	1,400,000	Construction	Resilience
Total Treatment Plants	**$ 6,570,850,000**	**$ 520,430,000**	**$ 496,927,000**	**$ 615,120,000**	**$ 1,044,073,000**	**$ 1,679,643,000**	**$ 4,356,193,000**		
TOTAL CAPITAL EXPENDITURES	**$ 7,998,400,000**	**$ 736,641,000**	**$ 744,336,000**	**$ 835,085,000**	**$ 1,246,228,000**	**$ 1,863,293,000**	**$ 5,425,583,000**		

SUMMARY BY DRIVER							
Growth	$ 4,124,350,000	$ 207,694,000	$ 198,615,000	$ 361,123,000	$ 629,152,000	$ 837,756,000	$ 2,234,340,000
Maintenance	1,112,800,000	175,981,000	183,694,000	145,600,000	185,925,000	178,090,000	869,290,000
Resilience	138,850,000	17,001,000	11,985,000	3,350,000	8,450,000	1,000,000	41,786,000
Upgrade	2,470,900,000	311,615,000	322,492,000	295,112,000	383,611,000	766,347,000	2,079,177,000
Opportunity	151,500,000	24,350,000	27,550,000	29,900,000	39,090,000	80,100,000	200,990,000
Total	**$ 7,998,400,000**	**$ 736,641,000**	**$ 744,336,000**	**$ 835,085,000**	**$ 1,246,228,000**	**$ 1,863,293,000**	**$ 5,425,583,000**

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

ATTACHMENT 2



Annacis Island WWTP

LIQUID WASTE SERVICES

2024 – 2028 DRAFT CAPITAL PLAN

Peter Navratil
General Manager, Liquid Waste Services

Liquid Waste Committee Meeting - July 19, 2023
60568958

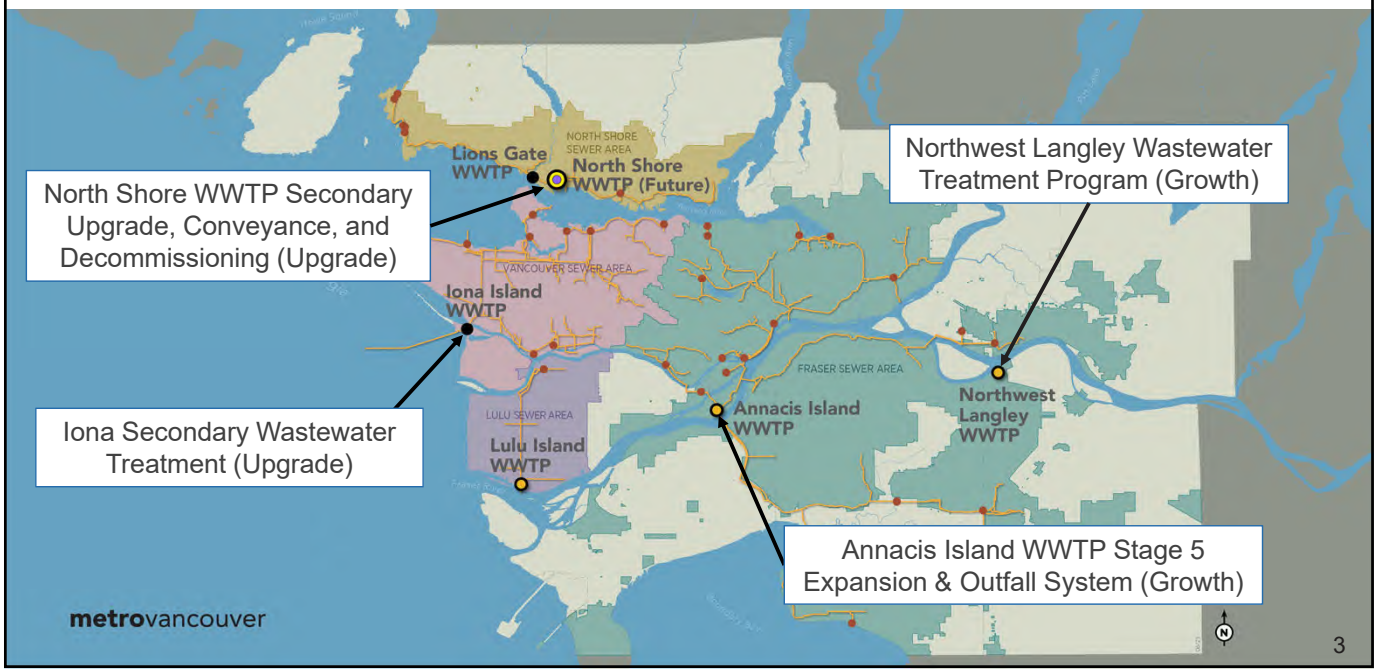
metrovancouver

CUSTOMER LEVEL OF SERVICE OBJECTIVES

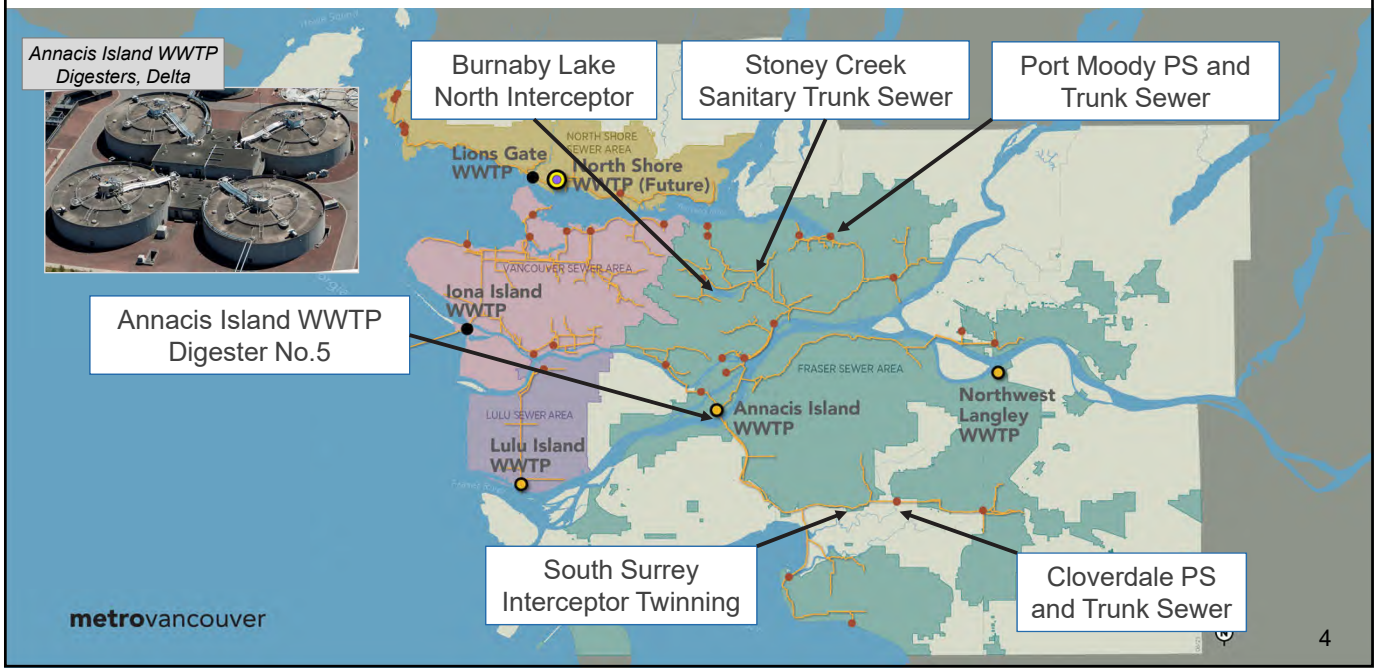
Liquid Waste

1. Eliminate discharges from the sewer system
2. Ensure that authorized wastewater treatment plant discharges meet regulatory requirements
3. Improve environmental stewardship
   (nutrient recovery, energy use, greenhouse gas and odour emissions)
4. Minimize timeline to recover from a major event
   (seismic, power interruption, and climate change)

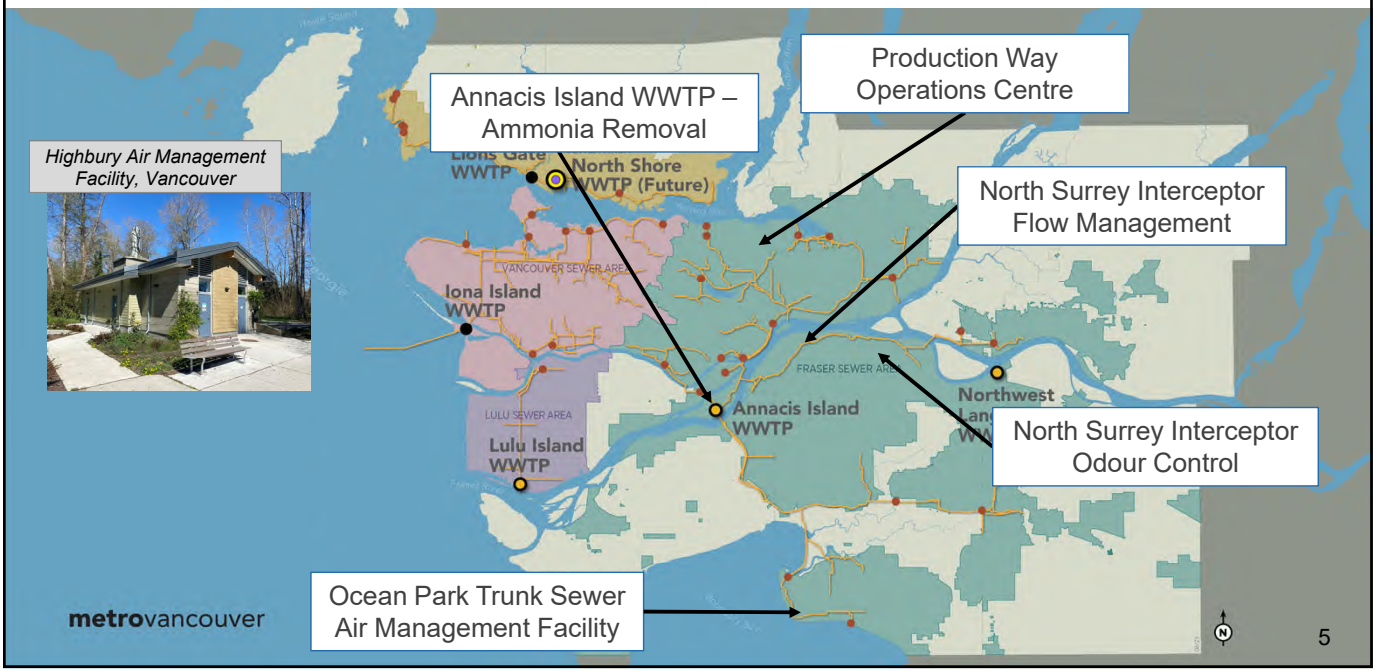
HIGHEST VALUE, RISK, AND CONSEQUENCE PROJECTS



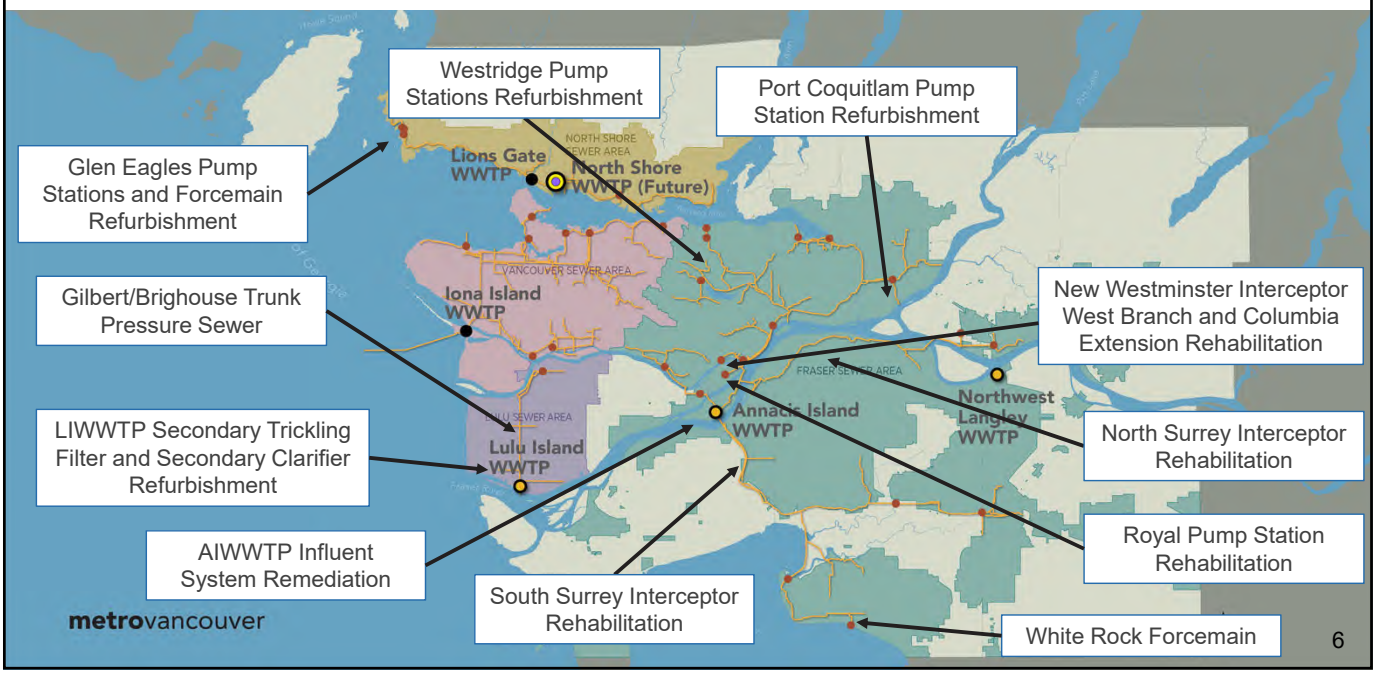
KEY PROJECTS – GROWTH



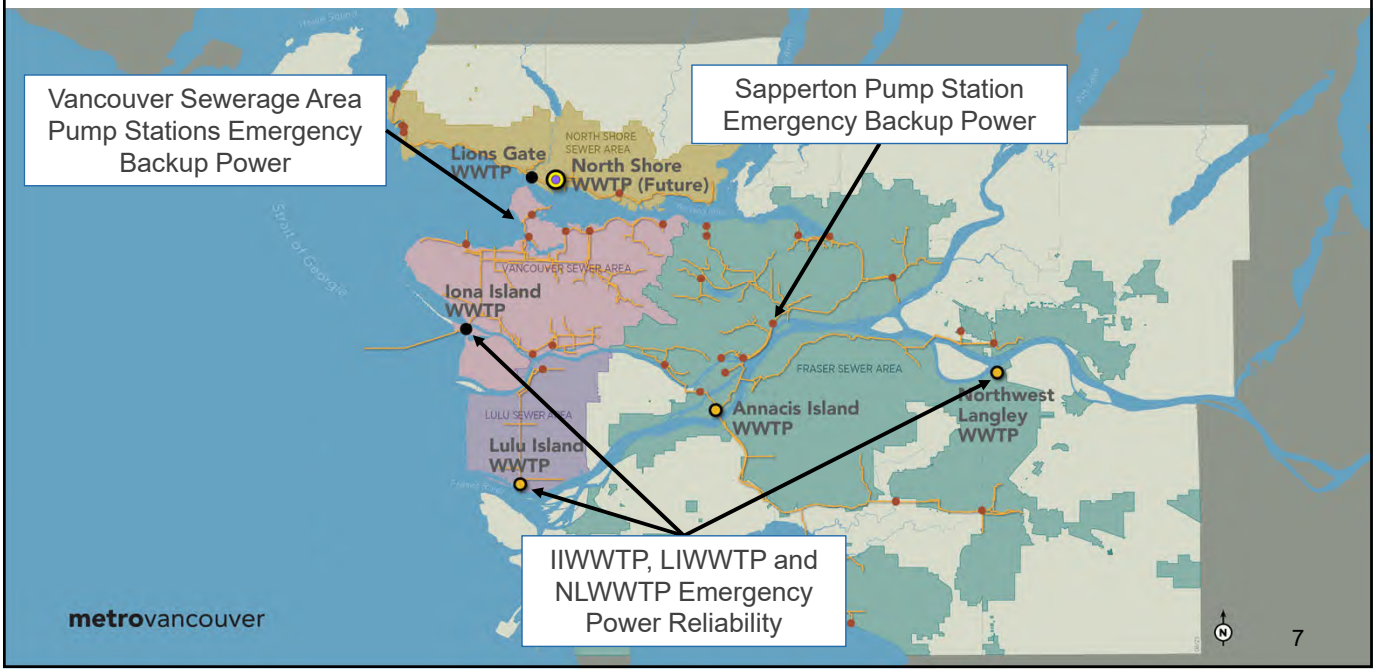
KEY PROJECTS – UPGRADES



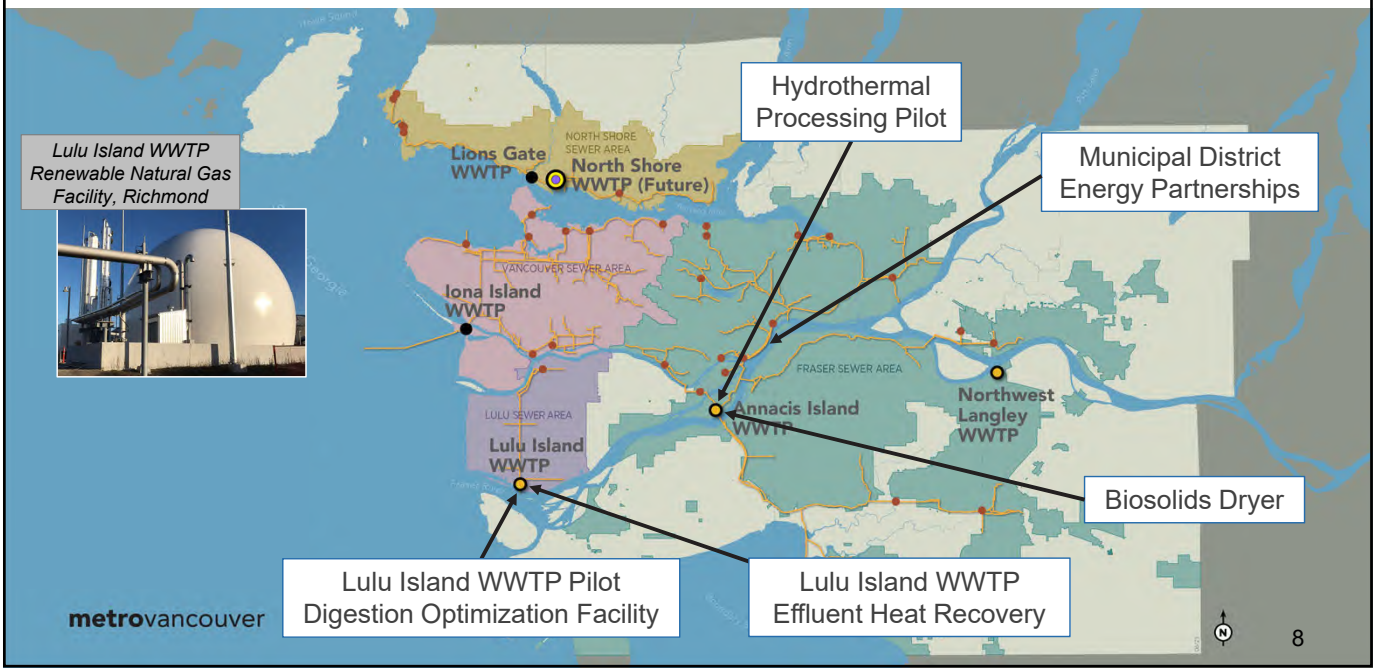
KEY PROJECTS – MAINTENANCE



KEY PROJECTS – RESILIENCE



KEY PROJECTS – OPPORTUNITY



LIQUID WASTE

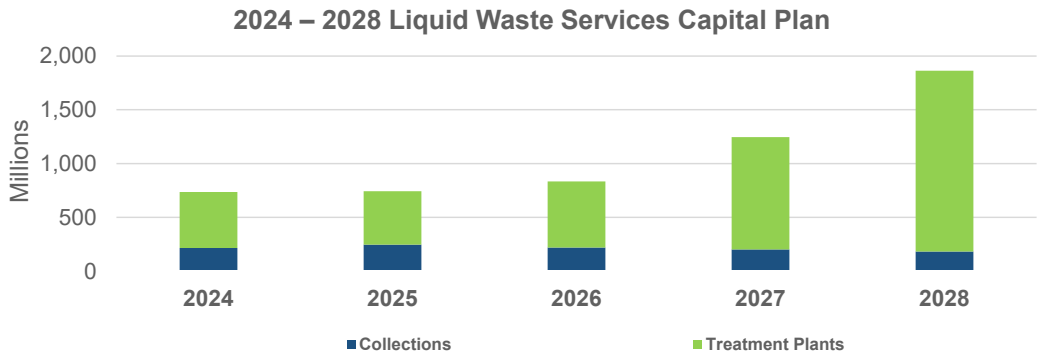
2024 - 2028 CAPITAL PLAN EXPENDITURES

Overview:

- 2024 - 2028 Capital Plan: $5.4B
- 2024 Cash Flow: $736.6M

Drivers:

- Tertiary Treatment Upgrade (NSWWTP / IIWWTP)
- FSA Treatment Expansions (AIWWTP / NLWWTP)
- Maintenance



DEFERRALS THROUGH FINANCIAL PLANNING TASK FORCE

- Market capacity and reality check on project delivery
- Growth projects
  - NSI 104th Ave Extension
  - Rosemary Heights Pressure Sewer Capacity Upgrade
  - Lozells Sanitary Trunk Golf Course Section
  - Surrey Central Valley Capacity Upgrade

PROPOSED CAPITAL PLAN CHANGES

($ Millions)

Prior Cycle Cash flow 2023 - 2027	Cash flow 2023	Adjustments to 2024 - 2027 Capital Plan					Cash flow 2028	Draft Capital Plan 2024 - 2028
		Carry-Forward	Net Deferrals	Cost Adjustments	New Scope	Total		
$4,730	(681.7)	126.8	(790.3)	123.9	53.5	(486.1)	1,863	$5,426

NEXT STEPS

- Consider Committee comments on the 2024-2028 Capital Plan
- Present revised 2024-2028 Capital Plan and 2024 Operating and Capital Budgets for Committee and Board consideration in October





Fraser River – Northwest Langley WWTP, Barnston Island and Surrey Bend Regional Park

Thank you

metrovancouver

To: Liquid Waste Committee

From: Colin Meldrum, Director, Engineering, Design & Construction, Liquid Waste Services

Date: June 21, 2023 Meeting Date: July 19, 2023

Subject: **Liquid Waste Services Capital Program Expenditure Update as at April 30, 2023**

RECOMMENDATION

That the GVS&DD Board receive for information the report dated June 21, 2023, titled "Liquid Waste Services Capital Program Expenditure Update as at April 30, 2023".

EXECUTIVE SUMMARY

The capital expenditure reporting process as approved by the GVS&DD Board provides for regular status reports on capital expenditures three times per year. This is the first report for 2023 which includes the overall capital program for Liquid Waste Services with a multi-year view of capital projects, and the actual capital spending for the 2023 fiscal year to April 30, 2023 in comparison to the annual Capital Cash Flow. As of April 30, 2023, the capital expenditures for Liquid Waste Services are $69.1 million, compared to a prorated annual Capital Cash Flow of $227.3 million. This shortfall is primarily due to invoicing and project delays and the timing of some construction work for the latter portions of the year.

Forecasted expenditures for the current Liquid Waste Services capital program generally remain within the annual Capital Cash Flow planned for 2023.

PURPOSE

To report on the status of the Liquid Waste Services' capital program and financial performance for the 2023 fiscal year to April 30, 2023.

BACKGROUND

The capital expenditure reporting process as approved by the GVS&DD Board provides for regular status reports on capital expenditures with interim reports sent to the Liquid Waste, and Zero Waste Committees, in July and October, with a final year-end report to the Committees and the Boards in April of each year. This report covers GVS&DD capital projects managed by both the Liquid Waste Services and the Project Delivery Departments.

The series of three reports for 2023 look at both the overall capital program for Liquid Waste Services with a multi-year view of capital projects and the actual capital spending for the 2023 fiscal year to April 30, 2023 in comparison to the prorated annual Capital Cash Flow.

2023 CAPITAL EXPENDITURES

Capital Program Funding

The capital spending for Liquid Waste Services is funded through the Liquid Waste Operating Budget by a combination of contribution to capital (pay-as-you-go funding) and debt service costs

(principal and interest payments) which is generated annually from the regional ratepayers. As a result, the annual impact on the ratepayers is significantly less than the level of budgeted capital expenditures.

Overall Capital Program

The overall capital program for Liquid Waste Services includes capital projects which require multiple years to complete. These projects are broken down into various phases such as project definition, pre-design, detailed design and construction. With the completion of each phase, more information is learned for the appropriate costing of subsequent phases.

It is expected that the capital spending on the Liquid Waste Services capital projects completed in 2023 or ongoing at some point in 2023 will be over the estimated total project cost by approximately $334.0 million, or 1.9% of total estimated cost. These estimated costs are generally being adjusted as part of the 2024 – 2028 Financial Plan and will be further adjusted through BY2024 capital planning process. For the most part, all of the projects include contingencies in their budgets. Often, these amounts are not fully expended, and will result in projects being completed under budget.

Attachments 1A and 1B provide the details behind the summary information including specific capital projects, summary financial information and notes where required. Attachment 2 provides additional project status information for some of the key projects being completed by the LWS Department. Projects being completed by the Project Delivery Department are excluded from Attachment 2 as they are generally the subject of separate reports.

2023 Capital Program Progress

The Metro Vancouver financial planning process includes Board approval of both an annual Operating Budget (operations, contribution to capital and debt service) and an annual Capital Cash Flow for the planned capital infrastructure projects. The annual Capital Cash Flow comprises the projected spending for a list of capital projects either continuing or to be started within the calendar year.

Table 1 provides a summary of the 2023 actual capital spending to April 30, 2023 compared to the total annual Capital Cash Flow. As of April 30, 2023, capital expenditures for Liquid Waste Services were $69.1 million compared to the annual prorated Capital Cash Flow of $227.3 million. These projects are managed either by the Project Delivery Department or internally by the Liquid Waste Services Department.

Table 1 – April 2023 Capital Spending Summary

Liquid Waste Total	2023 Cash Flow to April 30, 2023	Actual Expenditures to April 30, 2023	% of 2023 Prorated Cash Flow
Collections	$ 67,692,000	$ 24,674,689	37%
Treatment Plants	$ 159,560,000	$ 44,408,770	28%
Total	**$ 227,252,000**	**$ 69,083,459**	**30%**

The underspend is due to three general factors including:

- delays in invoicing for active construction projects, as contractor invoicing is a minimum of 1 month behind progress;
- project delays either in tendering works, initiating construction, or due to design delays; supply chain issues, protracted property negotiations and/or permitting delays; and
- projects which will ramp up construction activities later in the year.

With respect to this last item, Gilbert Road Trunk Sewer South and Central Sections, the South Surrey Interceptor Johnston Road Section, Gleneagles Pump Stations 4 and 5 and the North Road Trunk Sewer have all been awarded construction contracts, but have had limited expenditures in the first four months of the year. Progress and expenditures will increase throughout the year on these and other projects.

Ongoing Capital Program Impacts from COVID-19 and Current Economic Climate
During these unprecedented times of health and economic uncertainty, all departments have been monitoring the impacts of the pandemic, inflation and supply chains on their operations. This includes capital program expenditures.

Direct impacts due to the pandemic appear to have disappeared. Ongoing supply chain issues continue to affect the schedule of projects as certain components are having longer delivery times than anticipated. Staff are looking at measures to reduce these risks. The inflationary environment is also requiring staff to review project budgets and update estimates, and staff are monitoring impacts on their projects regularly.

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

FINANCIAL IMPLICATIONS
Capital expenditures are funded internally (pay as you go) and through debt service costs (interest and principal payments). As capital expenditures are incurred, short term financing is secured and converted twice per year to long term debt through the Municipal Finance Authority.

CONCLUSION
Although the 2023 Liquid Waste Services capital expenditures are less than the planned amounts, the variance is generally a result of cash flow timing, with a number of projects having expenditures deferred to future years. Any surplus resulting from a 2023 underspend will be used to directly fund capital in 2024 and avoid future borrowing.

Attachments
1A. Capital Project Update – Liquid Waste Services
1B. Capital Project Update – Liquid Waste – Project Delivery
2. Liquid Waste Services Capital Project Status Information

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ATTACHMENT 1A

Metro Vancouver
Liquid Waste Services - Capital Project Update
As of April 30, 2023

Definition | Preliminary Design | Detailed Design | Construction

Project Name	Primary Driver	Project Location	Years (2023-2027 Capital Plan: 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032)	Approved Capital Budget	Current Estimated Total Project Cost	% Complete	Comment
Collections							
8th Avenue Interceptor Air Treatment Facilities	Upgrade	Vancouver		500,000	14,200,000	3%	Project deferred to address property and siting
Albert Street Trunk Sewer	Growth	Port Moody		10,250,000	10,250,000	98%	substantially complete
Big Bend Forcemain - Gate Replacement	Maintenance	Richmond		200,000	2,700,000	3%	project deferred
Burnaby Lake North Interceptor Cariboo Section	Growth	Burnaby		-	41,000,000	0%	Future project
Burnaby Lake North Interceptor Winston Section	Growth	Burnaby		116,950,000	116,950,000	32%	The project experienced a 4 month delay due to ground conditions, but is progressing.
Burnaby South Slope Interceptor	Growth	Burnaby		500,000	22,700,000	0%	project deferred
Cloverdale Pump Station Capacity Upgrade	Growth	Surrey		3,400,000	103,400,000	1%	Estimates shown is for a new pump station and a
Cloverdale Trunk Sewer Capacity Upgrade	Growth	Surrey		1,200,000	29,000,000	1%	
Combined Sewer Overflow Sampling Station Enhancements	Maintenance	Regional		1,900,000	1,900,000	51%	
Crescent Beach FM - Replacement	Maintenance	Surrey		26,850,000	47,100,000	72%	Project delayed. Budget issues due to unforseen ground conditions and archaeology issues.
Eagle Creek (Lower Section) Channel Restoration	Resilience	Burnaby		-	750,000	0%	no change, future project.
EMQC-Chemistry Laboratory	Upgrade	Delta		250,000	8,650,000	0%	
Lozells Sanitary Trunk Golf Course Section	Growth	Burnaby		-	27,650,000	0%	future project
Manitoba Street Combined Trunk Sewer Separation	Upgrade	Vancouver		-	93,750,000	0%	Future project
Production Way Operation Center Design and Construction	Upgrade	Burnaby		31,000,000	40,400,000	1%	
Fraser Sewerage Area Integrated Resource Recovery (IRR) Study	Opportunity	Regional		1,200,000	1,200,000	13%	
Front Street Pressure Sewer Access Hatches Reinforcement	Maintenance	New Westminster		5,000,000	5,000,000	40%	construction being deferred to 2024 due to third party (MOTI) activities
FSA Flow Metering Program	Maintenance	Regional		2,500,000	3,500,000	54%	
FSA River Crossing Scour Protection Program - Phase 1	Maintenance	Regional		4,200,000	6,400,000	50%	
FSA Sewer Relocations and Protections	Maintenance	Regional		11,700,000	11,700,000	0%	multiple projects inc. Patullo Bridge, CPR, Fraser Surrey Docks. Timing and amount of some project costs dependent on third parties
FSA Statutory Right of Way Acquisitions Phase 1	Maintenance	Delta/Port Moody		35,100,000	35,100,000	31%	ongoing program, funds used as required for OSRW purchases.
Gilbert/Brighouse Trunk Pressure Sewer	Maintenance	Richmond		169,650,000	198,400,000	50%	
Glen Eagles Forcemain Replacement	Maintenance	WestVancouver		15,850,000	15,850,000	35%	Phase 1 completed several years ago. Phase 2 work is designed but awaiting a permit from CN Rail.
Gleneagles Pump Stations Improvements	Maintenance	WestVancouver		33,300,000	40,850,000	7%	Construction beginning on two of five sites in July 2023.
Glenbrook Combined Trunk Kingsway Sanitary Section	Growth	Burnaby		7,200,000	8,100,000	11%	Construction deferred to 2024 to address City of Burnaby concerns.
Glenbrook CSO Gate Replacement	Maintenance	New Westminster		5,150,000	5,150,000	50%	Construction tendered, but may be delayed to 2024 due to supply chain issues
Harbour Pump Station Discharge Header Repair and Valve Replacements	Maintenance	Vancouver		2,500,000	4,850,000	40%	
Harbour Pump Station Power Distribution Equipment Replacement	Maintenance	Vancouver		1,600,000	3,650,000	12%	
Hastings-Cassiar Intake Connection	Growth	Vancouver		5,350,000	5,350,000	98%	Project substantially complete
Highbury Interceptor Diversion Junction Chamber Wall Rehabilitation	Maintenance	Vancouver		500,000	6,000,000	0%	
Highbury Interceptor North Arm Crossing - Upgrade of Siphons	Resilience	Vancouver		12,500,000	12,500,000	99%	Project substantially complete

Metro Vancouver
Liquid Waste Services - Capital Project Update
As of April 30, 2023



Project Name	Primary Driver	Project Location	Years	Approved Capital Budget	Current Estimated Total Project Cost	% Complete	Comment
			2023-2027 Capital Plan 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032				
Jervis Pump Station 25kV Voltage Conversion	Maintenance	Vancouver		1,300,000	1,300,000	14%	Project delayed due to supply chain issues
Kent Pump Station High Voltage Switchgear Replacement	Maintenance	Vancouver		1,150,000	3,000,000	9%	
Surrey Central Valley Capacity Upgrade	Growth	Surrey		-	60,800,000	0%	future project
Production Way Facility Access and Parking Improvements	Maintenance	Burnaby		4,850,000	4,850,000	5%	
LSA Flow Metering Program	Maintenance	Richmond		300,000	300,000	25%	
Marshend Pump Station	Growth	Burnaby		10,500,000	21,150,000	9%	Project delayed to properly define scope.
New CSO Management Gates for New Westminster Interceptor	Upgrade	New Westminster		3,250,000	400,000	11%	Project will be cancelled as costs outweigh benefits
New West Interceptor - Annacis Section 2	Maintenance	Delta		42,000,000	42,000,000	17%	
New West Interceptor Grit Chamber	Maintenance	New Westminster		1,250,000	9,300,000	2%	
New Westminster Interceptor Repair Columbia St. Section	Maintenance	New Westminster		39,550,000	39,850,000	65%	Main contract is substantially complete. Additional work to be undertaken after Pattulo Bridge completion.
New Westminster Interceptor West Branch and Columbia Extension Rehabilitation	Maintenance	New Westminster		2,900,000	37,900,000	5%	
North Road Trunk Sewer	Growth	Coquitlam		11,700,000	13,600,000	59%	majority of Phase 1 done. Remainder delayed due to dispute with BNSF
North Road Trunk Sewer Phase 2	Growth	Coquitlam		8,450,000	10,000,000	14%	Phase 2 contract awarded, with construction to start in summer 2023
North Surrey Interceptor - Port Mann Section - Odour Control	Upgrade	Surrey		5,050,000	29,600,000	1%	Conceptual design nearing completion
North Surrey Interceptor Annieville Channel Crossing Scour Protection	Maintenance	Regional		4,350,000	4,350,000	48%	
North Surrey Interceptor Improvements	Maintenance	Surrey		3,000,000	6,000,000	0%	
North Surrey Interceptor Roebuck Section Replacement	Maintenance	Surrey		1,600,000	19,450,000	1%	
NSA Flow Metering Program	Maintenance	West Vancouver		500,000	900,000	30%	
NSA Scour Protection Upgrades	Maintenance	Regional		2,250,000	2,250,000	5%	construction rescheduled to 2024 to address concerns from local First Nations
NSI 104th Ave Extension	Growth	Surrey		12,950,000	12,950,000	38%	project on hold to address scoping
NSI Flow Management	Upgrade	Surrey		11,500,000	94,500,000	10%	
NSI Rehab or Replacement	Maintenance	Surrey		16,450,000	50,400,000	12%	
Ocean Park Trunk Manholes Lining	Maintenance	Surrey		-	1,050,000	0%	future project
Ocean Park Trunk Sewer - Air Management Facility	Upgrade	Surrey		2,750,000	7,750,000	20%	Property acquired. Preliminary engineering starting.
Port Coquitlam Pump Station Refurbishment	Maintenance	Port Coquitlam		5,950,000	75,600,000	1%	Feasibility Study completed, Preliminary Design not
Port Moody Pump Station Capacity Upgrade	Growth	Port Moody		2,300,000	23,850,000	3%	A conceptual design phase to investigate upgrade options is being completed. Current estimate is for upgrading the existing station.
Port Moody South Interceptor Capacity Upgrade	Growth	Port Moody		-	3,450,000	0%	future project
Port Moody Storm Drain Rehabilitation	Maintenance	Port Moody		200,000	1,600,000	0%	
Rosemary Heights Pressure Sewer Capacity Upgrade	Growth	Surrey		-	10,750,000	0%	future project
Royal Ave PS Rehabilitation	Maintenance	New Westminster		10,100,000	12,900,000	17%	99% design completed, Construction not yet started.
Sapperton Pump Station	Growth	New Westminster		97,500,000	97,500,000	92%	New Sapperton PS was substantially complete July 2021. Demolition of old Sapperton PS pending completion of other work on site and adjacent projects.
Sapperton Pump Station Emergency Backup Power	Resilience	New Westminster		5,000,000	5,000,000	3%	
Sewer Heat Projects	Opportunity	Regional		21,400,000	71,500,000	0%	
South Surrey Interceptor Johnston Section	Growth	Surrey		84,050,000	84,050,000	62%	
South Surrey Interceptor Rehabilitation	Maintenance	Delta		1,800,000	65,500,000	0%	
SSI - King George Section - Odor Control Facility (OCF) and Grit Chamber	Growth	Surrey		19,550,000	19,550,000	98%	Project substantially complete
SSI Influent Control Chamber Repair and Replace Gates	Maintenance	Delta		150,000	1,300,000	0%	project deferred to focus on higher priority work
SSI Sulfide Odour and Corrosion Control	Upgrade	Delta		9,550,000	9,700,000	20%	equipment procured.
Stoney Creek Sanitary Trunk	Growth	Burnaby		3,700,000	67,700,000	5%	

Metro Vancouver
Liquid Waste Services - Capital Project Update
As of April 30, 2023

Definition | Preliminary Design | Detailed Design | Construction

Project Name	Primary Driver	Project Location	Years (2023-2027 Capital Plan: 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032)	Approved Capital Budget	Current Estimated Total Project Cost	% Complete	Comment
Surrey Corrosion Control Facility Replacement	Maintenance	Surrey		7,300,000	7,400,000	10%	
VSA Emergency Backup Power	Resilience	Vancouver		24,300,000	29,250,000	56%	5 out of the 9 genset projects are complete. (This includes the 2 temporary gensets for Chilco and Jervis)
VSA Flow Metering Program	Maintenance	Regional		1,900,000	5,800,000	14%	
VSA Grit Chamber Access Improvements	Maintenance	UEL - UEL		2,000,000	2,700,000	0%	
VSA Sewer Relocations and Protections	Maintenance	Regional		32,050,000	32,050,000	30%	multiple projects inc. Broadway Skytrain, VFPA, CPR, Senakw. majority of expenditure expected in 2023-24, but dependent on timing of third parties.
Westridge FM Replacement	Maintenance	Burnaby		7,600,000	8,550,000	27%	project delayed due to archaeological concerns and coordination with municipal works
Westridge Pump Stations 1 & 2 Refurbishment	Maintenance	Burnaby		2,800,000	19,750,000	8%	
White Rock Forcemain Rehabilitation	Maintenance	White Rock/Surrey		1,200,000	14,800,000	10%	
Works Yard	Maintenance	Burnaby		32,000,000	32,000,000	83%	land purchased
Total Collections				**1,066,300,000**	**2,099,900,000**		
Treatment Plants							
AIWWTP Ammonia Removal – Sidestream	Upgrade	Delta		1,000,000	127,250,000	1%	project being accelerated, but still in scoping stages
AIWWTP Chemical Lab UPS System Replacement	Maintenance	Delta		600,000	900,000	11%	
AIWWTP Cogen Building Refurbishment	Maintenance	Delta		1,500,000	1,500,000	97%	
AIWWTP Cogeneration Backup Power	Resilience	Delta		80,500,000	80,500,000	97%	contract substantially complete.
AIWWTP Electrical Distribution System Protection Control and Monitoring	Upgrade	Delta		2,650,000	2,650,000	53%	
AIWWTP Hydrothermal Processing Pilot	Opportunity	Delta		28,650,000	39,350,000	10%	
AIWWTP ICS Replacement Program	Maintenance	Delta		14,350,000	14,350,000	1%	3 areas of plant are being tendered for design
AIWWTP Influent System Remediation	Maintenance	Delta		2,400,000	82,600,000		project being rescoped to address adjacent works
AIWWTP IPS Gates Replacements	Maintenance	Delta		700,000	700,000	75%	1 gate remaining. Remaining gates built under hydraulic gate replacement project
AIWWTP IPS Pump Building Roof Replacement Phase 2	Maintenance	Delta		-	800,000		
AIWWTP Lubrication Storage Facility Conversion	Maintenance	Delta		500,000	500,000	0%	
AIWWTP O&M Building Refurbishment	Maintenance	Delta		-	9,600,000		Deferred to start in 2024
AIWWTP Outfall Repair	Maintenance	Delta		1,550,000	1,550,000		Contingency in case repair is required until new outfall and bypass pipe are complete
AIWWTP Replacement of ICS Equipment	Maintenance	Delta		4,450,000	4,450,000	97%	A few minor projects are progressing
AIWWTP Replacement of Protective Relays	Maintenance	Delta		3,350,000	3,050,000	71%	
AIWWTP Scheduled 64kV Potential & Current Transformer Replacements	Maintenance	Delta		800,000	400,000	30%	
AIWWTP Scum Pump Replacement	Maintenance	Delta		-	1,350,000	0%	future project
AIWWTP Secondary Clarifier Corrosion Repair	Maintenance	Delta		57,800,000	51,850,000	99%	substantially complete
AIWWTP Secondary Effluent Discharge Flowmeter Replacement	Maintenance	Delta		400,000	400,000	99%	substantially complete
AIWWTP Sludge Control Building Electrical Room HVAC upgrade	Maintenance	Delta		850,000	850,000	0%	
AIWWTP Spare Trickling Filter Pump & Motor Purchase	Maintenance	Delta		1,950,000	1,950,000	88%	Expected to finish this year.
AIWWTP Station Battery Replacement	Maintenance	Delta		1,250,000	1,250,000	99%	substantially complete
AIWWTP Trickling Filter Media & Distributor Arms & Ducting Replacement	Maintenance	Delta		90,700,000	90,700,000	70%	3 of 4 units refurbished, last unit deferred to 2024, with some additional duct work in 2025.
AIWWTP UPS Condition Monitoring System	Resilience	Delta		-	550,000	0%	future project
All WWTPs Power Quality Monitoring & Outage Alarming Network	Upgrade	Regional		3,000,000	3,000,000	95%	substantially complete
Annacis Influent System Surge Control Refurbishment	Growth	Delta		22,000,000	22,000,000	42%	

Metro Vancouver
Liquid Waste Services - Capital Project Update
As of April 30, 2023



Project Name	Primary Driver	Project Location	Years	Approved Capital Budget	Current Estimated Total Project Cost	% Complete	Comment
			2023-2027 Capital Plan 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032				
Annacis MCC 80 051, 80 070, 80 071 Replacement	Maintenance	Delta		2,850,000	2,850,000	95%	
Ferguson Road Paving Refurbishment	Upgrade	Richmond		2,100,000	1,000,000	98%	substantially complete
IIWWTP - Biogas Lines Relocation	Resilience	Richmond		5,750,000	4,800,000	95%	substantially complete
IIWWTP Biosolids Dewatering Facility	Upgrade	Richmond		61,300,000	61,300,000	97%	substantially complete, but warranty issues are delaying final commissioning.
IIWWTP CEPT Polymer Line Replacement	Maintenance	Vancouver		300,000	2,300,000	0%	work to be tendered this year
IIWWTP CEPT Winterization	Maintenance	Vancouver		1,500,000	1,500,000	0%	work to be tendered this year
IIWWTP ICS IPS Control Replacement	Maintenance	Richmond		1,750,000	1,750,000	30%	Design being reviewed. Construction to start this
IIWWTP ICS Migration Program	Maintenance	Vancouver		-	12,000,000	0%	future project
IIWWTP ICS Replacement Program	Maintenance	Richmond		750,000	750,000	1%	some smaller system designs started
IIWWTP Influent Gate Refurbishment	Maintenance	Richmond		1,350,000	1,350,000	41%	
IIWWTP IPS Drive Remediation	Maintenance	Richmond		1,400,000	2,300,000	4%	
IIWWTP MCC/Power Distribution Assess/Replace - Phase 2	Maintenance	Richmond		1,000,000	1,000,000	60%	
IIWWTP Non-Domestic Trucked Liquid Waste Alternative	Maintenance	Regional		800,000	800,000	0%	Project deferred to work on higher priority items
IIWWTP PA Tanks Improvement	Maintenance	Richmond		6,500,000	6,500,000	0%	project delayed due to staffing issues
IIWWTP PA-Sed Tank & Gallery Wall Refurbishment	Maintenance	Richmond		200,000	950,000	0%	project delayed due to staffing issues
IIWWTP Replacement of CoGen Control System	Maintenance	Richmond		2,500,000	2,500,000	70%	
IIWWTP Siphon Chamber Refurbishment	Maintenance	Richmond		200,000	2,150,000	0%	project delayed due to staffing issues
IIWWTP Surge Mitigation	Maintenance	Vancouver		250,000	2,000,000	0%	scoping underway
IIWWTP Solids Handling Refurbishment	Maintenance	Richmond		64,850,000	64,850,000	98%	substantially complete
IIWWTP Standby Diesel Generators	Resilience	Richmond		2,000,000	5,000,000	1%	on hold for scoping
Iona Island Control & Instrumentation Replacement 2011	Maintenance	Richmond		2,750,000	2,750,000	77%	ICS logic tests planned for summer
LIWWTP Admin Dewatering Building Roof Repair	Maintenance	Richmond		100,000	800,000	0%	past repairs have been successful. Defer to 2024
LIWWTP Biogas Clean-up Project	Opportunity	Richmond		13,800,000	13,800,000	99%	substantially complete
LIWWTP CCT Isolation Gates	Maintenance	Richmond		2,050,000	2,050,000	98%	substantially complete
LIWWTP Effluent Heat Recovery Project	Opportunity	Richmond		10,000,000	10,000,000	2%	preliminary design complete
LIWWTP Gravity Thickener Redundancy	Maintenance	Richmond		500,000	21,400,000	0%	delayed due to staffing
LIWWTP Ground Fault Detection System Replacement	Maintenance	Richmond		1,550,000	1,550,000	2%	
LIWWTP High Efficiency Boiler	Maintenance	Richmond		1,300,000	1,300,000	17%	
LIWWTP ICS Electrical Distribution System Migration Program	Maintenance	Richmond		-	7,000,000	0%	future project
LIWWTP ICS Replacement Program	Maintenance	Richmond		6,750,000	6,750,000	24%	Design being reviewed
LIWWTP PA-Sed Tank Refurbishment	Maintenance	Richmond		4,150,000	4,150,000	10%	design complete
LIWWTP Pilot Digestion Optimization Facility	Opportunity	Richmond		4,850,000	5,200,000	90%	facility in commissioning phase
LIWWTP Power Reliability	Resilience	Richmond		12,400,000	12,400,000	26%	equipment procured. Installation contract for voltage regulators awarded. Generator contract to be let later this year.
LIWWTP SCL Refurbishment	Maintenance	Richmond		850,000	34,000,000	0%	delayed due to staffing
LIWWTP Trickling Filter Refurbishment	Maintenance	Richmond		500,000	54,450,000	0%	delayed due to staffing
NLWWTP Screw Pump Replacement	Maintenance	Langley Township		1,550,000	1,550,000	84%	substantially complete
NLWWTP Standby Diesel Generator	Resilience	Langley Township		1,000,000	1,000,000	0%	project in scoping
NLWWTP 25 kV Substation Replacement	Maintenance	Langley Township		10,100,000	10,100,000	93%	substantially complete
WWTPs Electrical System Studies & Upgrades	Resilience	Regional		750,000	1,900,000	20%	
Total Treatment Plants				**553,250,000**	**913,850,000**		
Grand Total Liquid Waste Services				**1,619,550,000**	**3,013,750,000**		

ATTACHMENT 1B

Metro Vancouver
Liquid Waste - Project Delivery - Capital Project Update
As of April 30, 2023



Project Name	Primary Driver	Project Location	Years	Approved Capital Budget	Current Estimated Total Project Cost	% Complete	Comment
			2023-2027 Capital Plan 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032				
Treatment Plants							
AIWWTP Digester No. 5	Growth	Delta		6,900,000	455,700,000	0%	Delayed due to staff availability.
AIWWTP Stage 5 Expansion	Growth	Delta		944,100,000	1,004,350,000	53%	Detailed design of Phase 2 works delayed. Completion of construction anticipted in 2030.
Annacis Outfall System	Growth	Delta		356,050,000	356,050,000	85%	Outfall construction is approximately 85% complete.
Biosolids Dryer	Opportunity	Delta		22,700,000	448,150,000	3%	Feasibility study being updated. Overall project start delayed due to staff availability.
IIWWTP Outfall Refurbishment	Maintenance	Vancouver		20,000,000	325,000,000	1%	
Iona Secondary Wastewater Treatment - Phase 1	Upgrade	Richmond		1,060,000,000	9,944,800,000	2%	Baseline budget and schedule has been established as part of final Project Definition Report and Stage Gate 1 approval in March 2022. Schedule is 5-years beyond regulatory deadline.
North Shore WWTP Secondary Upgrade, Conveyance and Decommissioning	Upgrade	Dist of North Van		1,057,900,000	1,057,900,000	55%	Construction of treatment plant 37% complete. Design Build Finance contract terminated. New Designer and Contractor engaged for detailed design and construction execution planning. Update expected Q3 2023.
Northwest Langley Wastewater Treatment Program	Growth	Langley Township		2,280,650,000	2,280,650,000	15%	Program delayed due to unexpected archeological findings on the WWTP site. Budget has been updated in the 2023 capital plan.
Total Treatment Plants				**5,748,300,000**	**15,872,600,000**		
Grand Total Liquid Waste - Project Delivery				**5,748,300,000**	**15,872,600,000**		

Capital Project Status Information
April 30, 2023

GREATER VANCOUVER SEWERAGE & DRAINAGE DISTRICT (Liquid Waste Services)

The majority of projects under the GVS&DD Capital Program are delivered by the Liquid Waste Services Department. The following narrative provides details and status updates on the more significant of these projects. Seven projects (as identified in Attachment 1B), are being delivered by the Project Delivery Department. As those projects provide separate updates to the Liquid Waste Committee and GVS&DD Board, no additional information on them is provided here.

Infrastructure Growth Program

- **FSA – Burnaby Lake North Interceptor – Winston Street Section** – Phase 1 of the work was completed in 2021. In 2022, GVS&DD awarded Pomerleau Bessac Infrastructure (PBI) a contract for Phase 2 of the project, which involves 2.9 km of 2134 mm diameter plastic-lined concrete pipe, to be installed by tunneling. The tunneled section follows Winston Street, starting 140m south of Greenwood Street, extending east up to approximately 500m west of the junction with Brighton Avenue. Construction began in May 2022. Currently, there is a schedule delay of about 4 months due to tunneling issues. Projected completion date is Q4 2024. To date, 4 of 5 shafts have been completed, and 750 m of sewer has been installed.

- **FSA - Annacis Island WWTP Outfall – Surge Control** - This project involves the replacement of four hydraulic gates as well as ancillary equipment in the Influent Control Chamber. The work will mitigate the risk of transient surges (water hammer) to upstream infrastructure. The GVS&DD awarded the construction contract to Maple Reinders Construction Limited in March 2021. Long lead equipment submittals have been approved for fabrication, and construction is approximately 45% complete. The project is delayed by one year to allow safe access during the low flow summer period. Substantial completion is expected in late-Q3 2024. During the summer low flow period in 2023, work in the east channel is scheduled to be completed. Work in the west channel was expected to be completed in the summer of 2023, however has been moved to Summer 2024.

- **FSA - North Road Trunk Sewer No. 2** – Construction of Phase 1A covering the sections between Brunette River and Lougheed Highway was completed in 2020. Construction of Phase 1B involving a railway crossing is pending for resolution of property issue with Burlington Northern Santa Fe Railway. Phase 2, involving replacement of the existing 250mm/300mm diameter sewer with 1.3 km of new 450mm and 600mm diameter sewer between Lougheed Highway and Clarke Road, was tendered in the Q4 2022 and is now seeking construction award approval by the GVS&DD Board in March 2023. Construction of Phase 2 will begin in the summer of 2023, and completion is expected in 2025.

Infrastructure Maintenance Program

- **LSA – Gilbert Trunk Sewer Twinning** – The Gilbert Trunk Sewer No 2 project was divided into four phases, and the construction of Phase 1 and 2 is complete. The remaining 2 Phases have a total length of 4.7 km consisting of 1.8 m diameter sewers. Phase 3 is between Blundell Road and Steveston

Highway, and Phase 4 goes from Steveston Highway to the Lulu Island WWTP. BD Hall is the contractor for Phase 3 and Jacob Brothers is the contractor for Phase 4. Construction for both phases began in Spring 2023 and is ongoing. Both phases are expected to be complete in fall 2025.

- **NSSA – Gleneagles Pump Station Improvements –** This project involves upgrading or replacing five existing wastewater pump stations located in West Vancouver in order to replace aging equipment, expand system capacity, and meet seismic standards. A $14M contract was awarded to Industra Construction in December 2022 for major upgrades to both Gleneagles 4 and 5. Construction will begin at Gleneagles 5 in mid-2023 with completion in 2024, followed by construction at Gleneagles 4 in 2024-2025. Gleneagles 3 began the conceptual design phase in December 2022, which is expected to conclude in 2023. Gleneagles 1 and 2 are in the preliminary design phase and staff are working closely with the District of West Vancouver in order to optimize design and construction. Preliminary design for Gleneagles 1 and 2 is scheduled to be complete in 2023.

- **FSA – River Scour Protection Program – Scour Protection at Maple Ridge Forcemain, Fraser River Crossing -** The Maple Ridge Forcemain under the Fraser River was constructed in 1981 and consists of twin 762 mm diameter steel pipe. The crossing is about 400 m downstream of Barnston Island where the river is about 600 m wide. The river channel has recently experienced scour, which posed a risk to the forcemain. This project involves adding additional rip rap to the existing scour protection apron. The work was tendered in Q4 2022 and JJM Construction began construction on January 3rd 2023 and was substantially completed on February 8th 2023. Additional scour protection projects will be completed in 2023 and 2024 at other crossings.

- **FSA – River Scour Protection Program – Scour Protection at North Surrey Interceptor / Annacis Main No. 3, Fraser River Crossing** – North Surrey Interceptor / Annacis Water Main No. 3, Fraser River Crossing was constructed in 1973 and consists of three stacked lines: 1-1200mm steel pipe (NSI); 1-660mm steel sewer pipe (NSI) and 1-1200mm steel water pipe (AN3). The AN3/NSI passes under the South Arm approximately 900m downstream of the trifurcation point. The work includes the supply and installation of a scour protection apron. The west portion of the apron blends into the existing 1995 blended rock apron and extends the scour protection further upstream and downstream of the pipeline alignment. The east portion of the apron extends 25m upstream and downstream of the pipeline alignment. Both portions are 1m thick. The contract was awarded in December 2022. Construction began on January 31st 2023 and was substantially completed on February 28th 2023.

- **FSA - Crescent Beach FM Replacement** – This project involves the design and construction of approximately 2 km of 1.2 m diameter sanitary force main to replace the existing 500 mm diameter FRP (fiber reinforced plastic) pipe which is aging and in poor condition. The GVS&DD awarded the construction contract to JJM Construction in July 2021. Construction started in the fall of 2021, and unforeseen ground conditions and property challenges has delayed the project. The project is now planned to be complete by the end of 2023. As of the end of April 2023, 970 m of pipe has been installed, including the trenchless crossings of Highway 99 and the BCR railway.

- **FSA - New Westminster Interceptor Repair – Columbia Street Section** – This project involves the rehabilitation of 1.6 km of the 1.5 m diameter New Westminster Interceptor from Front St. to McBride Blvd in New Westminster. Oscar Renda Contracting of Canada was awarded the construction contract starting July 2021. The contract achieved completion at the end of April. Some portions of the work have been removed from ORCC's contract due to schedule and access issues with the Patullo Bridge Replacement Project, and will be completed at future date.

- **FSA – Annacis Island WWTP Trickling Filter Media, Distributor and FOA Duct Replacement** – This project involves replacing the rotary distributors, plastic media and foul air ducting for the four Trickling Filters (TF) at the AIWWTP. These components have been in service for over 20 years and are reaching the end of their service life. The distributors and ducting have experienced significant corrosion, resulting in equipment failures that required emergency maintenance. Construction is being completed under two contracts. The first contract was awarded to Maple Reinders Construction Ltd., in 2019 for the rehabilitation of TF 1 and 3, and has been completed. The work for TF 2 and TF 4 was awarded to Pomerleau in 2021. A significant portion of Pomerleau's contract work has been completed to date. However, due to foreseen mechanical issues with the TFs (unrelated to this contract), the remaining work in TF 4 and TF 2 will be completed in 2024 and 2025, respectively.

Infrastructure Resilience Program

- **VSA – Emergency Backup Power** - This project involves design, supply and installation of standby emergency backup generators at the Chilco, Columbia, Harbour, Hudson, Jervis, Kent and Willingdon pump stations to allow the stations to remain operational during power failure events and reduce the risk of a spill. The construction at Harbour, Hudson, Kent and Willingdon pump stations were completed in early 2021 and the generators were commissioned. The Columbia PS generator was completed and commissioned in Q4 of 2021. The two remaining pump stations are Chilco and Jervis, which will have temporary generators installed by end of 2023 or early 2024. The Vancouver Parks Board approved the Jervis PS generator concept in the fall of 2019, the detailed design and RFP are completed and permitting and property negotiations for the permanent Jervis facility are advancing. The permanent works are expected to be tendered later in 2023. The Chilco facility concept is currently being reviewed by the Vancouver Parks Board, prior to starting the detailed design.

Infrastructure Upgrade Program

- **VSA – Iona Island WWTP Biosolids Dewatering Facility** – This project involves the construction of a biosolids dewatering facility. This facility will significantly increase the dryness of biosolids produced the Iona Island WWTP. MV incurs significant cost to haul biosolids to reuse and disposal sites. By increasing biosolids dryness, the weight and volume of the hauled material will be reduced, resulting in cost, fuel and greenhouse gas emission reductions. This facility will allow the decommissioning of the four existing digested sludge lagoons and the sludge drying area, which in turn will provide space for construction of new tertiary treatment facilities at Iona Island WWTP. The $52 million design-build contract for the project was awarded to NAC Constructors in April, 2019. The design phase was completed in 2020 and construction was completed in December, 2022. The contractor is currently addressing an equipment deficiency discovered during commissioning. The dewatering facility is expected to be handed over for owner-commissioning by MV Staff in Q3 2023.

Opportunity Program

- **FSA – Annacis Island WWTP Hydrothermal Liquefaction** – This project involves the design and construction of a demonstration-scale plant to convert wastewater biosolids to bio-crude oil, which can be used as a low carbon fuel. The demonstration scale plant will be used to assess technology performance and feasibility of full-scale implementation of the hydrothermal liquefaction technology at WWTPs. The HTL system design is anticipated to be completed in Q3 2023. The entire HTL demonstration plant is scheduled to be constructed in 2025 and gradually put in operation from 2025 to 2027.

- **LSA – LIWWTP Pilot Digestion Optimization Facility (PDOF)** - The PDOF was designed to enable evaluation of optimization techniques for the existing anaerobic digestion process, as well as the development of emerging anaerobic digestion processes. The facility would allow testing of these processes without risking full-scale operations. Lessons learned at the pilot scale would be incorporated in MV facilities, potentially resulting in improved efficiency of the existing digesters, will postpone the need for digester system expansion. The PDOF is designed to be adaptable and transportable (being built in modules) to other MV facilities (such as AIWWTP or ARC) for further research and testing purposes. Staff from O&M and PPA, in cooperation with UBC Okanagan research staff, will be conduct experimentation following the commissioning of the facility.

  The GVS&DD awarded the PDOF fabrication and installation contract to Tritech in Q1 2021. Fabrication and installation nearly complete. The system will be pre-commissioned and tested in mid-2023, and is expected to be commissioned and turned over to Lulu Operations & Maintenance in early Q3 2023.

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To: Water Committee and Liquid Waste Committee

From: Jennifer Crosby, Director, Project Management Office, Project Delivery
Nermine Tawfik, Supervisor Community Engagement, External Relations

Date: June 21, 2023 Meeting Date: July 12, 2023
July 19, 2023

Subject: **Guide to Metro Vancouver Utility Capital Projects for Member Jurisdictions and Impact Mitigation Framework**

RECOMMENDATION

That the GVWD and GVS&DD Boards receive for information the report dated June 21, 2023 titled "Guide to Metro Vancouver Utility Capital Projects for Member Jurisdictions and Impact Mitigation Framework".

EXECUTIVE SUMMARY

Metro Vancouver currently mitigates and compensates member jurisdictions for the impact of projects taking place within their jurisdiction through various means, which are generally negotiated on a case-by-case basis. Mitigation and compensation for member jurisdictions may take the form of changes to a design resulting in higher project costs, addition of community amenities, upgrades to member's infrastructure, provision of resources to our members to handle increased workload resulting from our projects, as well as payment of fees for various permits, lost revenue, letters of credit, and other charges.

Metro Vancouver staff continue to work with member jurisdictions to review practices with a goal to create a predictable, consistent and equitable approach to mitigating and compensating member jurisdictions for the impacts to their community during construction of region-serving infrastructure. This report provides an update on this work, including publishing the *Guide to Metro Vancouver Utility Capital Projects for Member Jurisdictions.*

PURPOSE

To provide the GVWD and GVS&DD Boards an update on progress with developing an equitable impact mitigation framework for member jurisdictions in which Metro Vancouver is undertaking capital project construction, including publishing the *Guide to Metro Vancouver Utility Capital Projects for Member Jurisdictions* (Attachment 1).

BACKGROUND

Each year, Metro Vancouver delivers projects to ensure that the region has reliable access to clean drinking water, safe wastewater removal and treatment, and waste disposal and recycling. The purpose of delivering these services on behalf of the members is to provide infrastructure at a scale that is more efficient than if each member or participant delivered the services separately. As a result, the services offer efficiencies that benefit all members. Members participate in the core services based on the understanding that not only will the benefits of the service be equitably

shared amongst participants, but the impacts and costs of delivering those services are also equitably shared.

Over the years, members have raised concerns regarding impacts to their communities through noise, dust, and traffic disruption, as well as impacts to their staffing time and resources due to capital project construction. Currently, impacts and corresponding mitigation measures are negotiated on a case-by-case basis with the member jurisdiction within which the construction project is taking place. This has resulted in unequal levels of compensation and mitigation to our members as well as unpredictable material impacts to the scope, schedule, and budget of Metro Vancouver capital projects.

In 2018, the Metro Vancouver Board rescinded the existing Capital Projects Policy and recommended that Metro Vancouver staff work with advisory committees to develop a capital projects framework, which would capture the approach and process of how Metro Vancouver utility capital projects are planned, managed, and communicated. Since then, Metro Vancouver has been engaging with member jurisdictions through a Regional Engineers Advisory Committee (REAC) working group consisting of members from the City of Coquitlam, District of North Vancouver, and the cities of Surrey and Vancouver, along with Metro Vancouver staff. The group discussed many important topics and issues and made practical suggestions toward creating more equitable and consistent approaches to improve the processes and communication between our organizations.

The working group came to agreement on a number of improvements and also identified areas where consensus was not possible. Some of the improvement solutions related to stronger coordination and communication have been implemented through a process Metro Vancouver staff just piloted with the City of New Westminster and are now implementing with the City of Burnaby. Recommendations related to improved tendering and procurement are being implemented on current projects. The balance of recommended improvement solutions/ideas (where there was and was not consensus) will be progressed through development of two key deliverables, which are further discussed in the following sections.

Guide to Metro Vancouver Utility Capital Projects for Member Jurisdictions

A guide has been developed to describe the phases of most Metro Vancouver utility capital projects and provides a high-level, consistent, and transparent roadmap that will help member jurisdictions plan their involvement in a Metro Vancouver utility capital project. It identifies the key responsibilities and decision points for both Metro Vancouver and member jurisdiction staff throughout the project lifecycle (from initiation through to close out). The audience for the guide is Metro Vancouver and member jurisdictions staff involved with Metro Vancouver water, liquid waste, and solid waste utility capital projects. The guide describes current practices only, not desired or future state, Metro Vancouver, in collaboration with member jurisdictions, consultants, and contractors is actively and continuously improving these practices and the guide will be updated periodically to reflect changes.

The guide was shared with all REAC members at the Metro Vancouver Conference Day held on May 12, 2023. The document will be available to member jurisdictions staff through the Metro Vancouver website.

Impact Mitigation Framework

In a report to the GVWD and GVS&DD Boards at their October 28, 2022 meeting (Attachment 2), Metro Vancouver staff outlined some of the current issues related to mitigation and compensation practices for Metro Vancouver capital projects construction. Building upon the outcomes from the REAC working group, an impact mitigation framework will be developed to enable predictable, consistent, and equitable approaches to mitigating construction impacts to their communities during construction. This will allow Metro Vancouver to strengthen its relationships with member jurisdictions and the public. The specific objectives for this work include:

- Clarify expectations for how Metro Vancouver and member jurisdictions work together to deliver regional infrastructure
- Standardize the process for assessing and mitigating the impacts of utility capital projects on member jurisdictions
- Reduce risk and uncertainty related to the delivery of Metro Vancouver utility capital projects which in turn reduces impacts on costs and schedules

To support this, Metro Vancouver has outlined a three-part facilitated workshop series with all REAC members starting in 2023 as follows:

Workshop 1 **May 12, 2023 - COMPLETE**	**Workshop 2** **Target Q4 2023**	**Workshop 3** **TBD**
Purpose: Explore the impacts of Metro Vancouver capital projects construction on member jurisdictions	**Purpose**: Share Metro Vancouver's tools and approaches for identifying impacts and improving intergovernmental coordination Build a framework for mitigation practices (guiding principles, impact assessment tool, defining mitigation)	**Purpose**: Revise and finalize the framework for mitigation practices
Outcome: Establish a shared understanding of the impacts of capital projects construction	**Outcome**: Identify elements of an equitable framework	**Outcome**: Framework to be presented to RAAC and Metro Vancouver Boards

The workshop on May 12 was attended by 25 REAC and REAC Subcommittee members representing 17 out of 21 GVWD and GVS&DD members. Following a short contextual presentation, members participated in a facilitated discussion to identify the impacts of Metro Vancouver's capital project construction, from project initiation through to close-out, and discussed the magnitude and

complexity of these impacts. Participants shared their experiences and the group heard diverse perspectives from each member jurisdiction.

The workshops are intended to be an iterative process to inform the framework development. Metro Vancouver staff will integrate feedback from the workshops and prior discussions from the REAC working group into recommended guiding principles and approaches to different forms of mitigation to develop a predictable, equitable, and consistent regional approach. The proposed framework will go to REAC and Regional Administrators Advisory Committee (RAAC) prior to coming to the Water and Liquid Waste Committees and the GVWD and GVS&DD Boards for review and approval.

ALTERNATIVES
This is an information report. No alternatives are presented

FINANCIAL IMPLICATIONS
The development of standardized, region-wide approaches to mitigation and compensation for projects undertaken in member jurisdictions would help to manage project costs, maintain project schedules, mitigate scope creep and change orders on construction projects, as well as ensure a transparent and equitable approach across all member jurisdictions.

CONCLUSION
Metro Vancouver is committed to the continuous improvement of its processes and coordination with member jurisdictions to deliver regional capital projects efficiently and cost effectively, and to mitigate the impacts of these projects. Development of the *Guide to Metro Vancouver Utility Capital Projects for Member Jurisdictions* is now complete and has been shared with REAC at the Metro Vancouver Conference Day on May 12, 2023 as well as RAAC on June 22, 2023.

The first workshop on May 12, 2023 is one of a three-part workshop series with REAC to engage with members on the development of a framework for mitigation practices for member jurisdictions in which Metro Vancouver is undertaking capital project construction. Planning is underway to prepare for the second workshop, which is targeted to be held in Q4 2023.

Attachments
1. Guide to Metro Vancouver Utility Capital Projects (59308623)
2. Compensation Practices Related to Metro Vancouver's Delivery of Projects, report dated September 28, 2022 (53943312)
3. Guide to Metro Vancouver Utility Capital Projects for Member Jurisdictions and Impact Mitigation Framework - Presentation

60662303



Guide to Metro Vancouver Utility Capital Projects for Member Jurisdictions

April 2023

Guide to Metro Vancouver Utility Capital Projects for Member Jurisdictions

April 2023

For more information or to provide feedback please contact Metro Vancouver Information Centre and mention the "Utility Capital Projects Guide"

Phone: 604-432-6200

Email: icentre@metrovancouver.org

Metro Vancouver acknowledges that the region's residents live, work, and learn on the shared territories of many Indigenous peoples, including 10 local First Nations: qićəý (Katzie), qʷɑ:ńəń (Kwantlen), kʷikʷəəm (Kwikwetlem), máthxwi (Matsqui), xʷməθkʷəyəm (Musqueam), qiqéyt (Qayqayt), se'mya'me (Semiahmoo), Swxwú7mesh Uxwumixw (Squamish), scəẃaθən məsteyəxʷ (Tsawwassen), and sə́lílwətaʔɬ (Tsleil-Waututh). Metro Vancouver respects the diverse and distinct histories, languages, and cultures of First Nations, Métis, and Inuit, which collectively enrich our lives and the region.

metrovancouver
SERVICES AND SOLUTIONS FOR A LIVABLE REGION

FRONT COVER: PHOTO OF THE PORT MANN MAIN TUNNEL SHAFT CONSTRUCTION IN COQUITLAM

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Introduction

Metro Vancouver plans and delivers utility capital projects to meet the needs of a growing population, maintain and upgrade aging infrastructure, and increase the region's resilience to the impacts of climate change, seismic events, wildfires, power failures, and natural disasters.

Metro Vancouver is a federation of 21 municipalities, one Electoral Area, and one Treaty First Nation. While each member jurisdiction provides services to its local community, each jurisdiction also works in cooperation with Metro Vancouver to deliver regional utility services and infrastructure. Metro Vancouver operates within a regulatory framework including, but not limited to the Greater Vancouver Sewerage and Drainage District Act (GVS&DD Act), Greater Vancouver Water District Act (GVWD Act) and certain provisions of the Local Government Act and the Community Charter.

Metro Vancouver's Member Jurisdictions

- Village of Anmore
- Village of Belcarra
- Bowen Island Municipality
- City of Burnaby
- City of Coquitlam
- City of Delta
- Electoral Area A
- City of Langley
- Township of Langley
- Village of Lions Bay
- City of Maple Ridge
- City of New Westminster
- City of North Vancouver
- District of North Vancouver
- City of Pitt Meadows
- City of Port Coquitlam
- City of Port Moody
- City of Richmond
- City of Surrey
- Tsawwassen First Nation
- City of Vancouver
- District of West Vancouver
- City of White Rock

Purpose of the Utility Capital Projects Guide

This Utility Capital Projects Guide describes the lifecycle of a Metro Vancouver utility capital project and identifies the key responsibilities for Metro Vancouver and member jurisdiction staff. It provides a high-level, consistent, and transparent roadmap that will help member jurisdictions plan their involvement in a Metro Vancouver utility capital project.

This guide is intended for member jurisdiction staff in all departments involved with Metro Vancouver utility capital projects. It was developed following interviews and working group meetings with Metro Vancouver staff and member jurisdictions.

This guide refers to the Metro Vancouver utility capital projects for water, liquid waste, and solid waste. Metro Vancouver utility capital projects include construction of new infrastructure as well as the expansion or replacement of existing infrastructure. Utility capital projects can be site-specific, such as a wastewater treatment plant, or a linear alignment, such as a drinking water main.

This guide outlines the capital project process that applies to most Metro Vancouver utility capital projects. It describes the phases, stages, and activities most projects have in common and describes current practices only. Metro Vancouver, in collaboration with member jurisdictions, consultants and contractors is actively and continuously improving these practices and this guide will be updated periodically to reflect changes.

Property acquisition is not addressed in this guide.

Metro Vancouver engages with First Nations throughout the lifecycle of its capital projects. This process is not included in this guide.



NEWTON PUMP STATION

By working together, Metro Vancouver and member jurisdictions can continue to build a healthy and resilient region.

At Metro Vancouver we make decisions that impact the 2.8 million residents that live in our region. Metro Vancouver is committed to engaging with member jurisdictions, First Nations, businesses, and the general public on utility capital projects in their communities. Community engagement can take many forms, from online surveys to open houses to working groups. By participating in our engagement opportunities, our partners and the public can help minimize project impacts and develop better projects.

Metro Vancouver Utility Capital Projects

Metro Vancouver provides reliable, clean, safe drinking water to its member jurisdictions through a system of water supply areas, dams, treatment facilities, reservoirs, pump stations, and water mains. Metro Vancouver operates five wastewater treatment plants that process over one billion litres of wastewater every day, and is responsible for waste reduction, recycling planning, and the operation of a series of solid waste facilities to meet the needs of our growing region.

Metro Vancouver utility capital projects are required to maintain the quality and reliability of these systems and continue to protect public health and the environment.

The purpose of delivering these services to member jurisdictions is to provide infrastructure at a scale that is more efficient than if each member or participant delivered the services separately. As a result, the services offer efficiencies that benefit all member jurisdictions.

Consistent with the Metro Vancouver Board Strategic Plan 2019-2022, Metro Vancouver plans and delivers utility capital projects that:

- Meet the current needs of the region and respond to population growth
- Promote a healthy and functioning ecosystem
- Ensure resilience to seismic events, wildfires, power failures, and natural disasters
- Are financially responsible and affordable
- Anticipate and meet regulatory requirements

In all its construction projects, Metro Vancouver works to minimize construction impacts on the community. Before selecting a site or alignment option, Metro Vancouver investigates multiple options and uses comparative analysis of options to evaluate the potential environmental, financial, social, and constructability/ technical impacts of each option.

Wherever possible, Metro Vancouver works with member jurisdictions to consider and minimize project impacts. Metro Vancouver staff attend meetings across the region to share information about upcoming utility capital projects with member jurisdiction staff.

Identifying Utility Capital Projects

Utility capital projects are essential to maintain the quality and reliability of the region's drinking water, wastewater, and solid waste management services. Preparing for and responding to population growth, aging infrastructure, seismic events, natural disasters, climate impacts, and changes to regulatory requirements all drive the need to construct, expand, and replace the region's utility infrastructure.

Metro Vancouver works with member jurisdictions to anticipate and plan for these changing conditions. Climate 2050, Metro 2050 (Regional Growth Strategy), the Integrated Liquid Waste and Resource Management Plan, the Drinking Water Management Plan, and the Integrated Solid Waste and Resource Management Plan are among the many plans that reflect and respond to the current and future needs of the region and Metro Vancouver's member jurisdictions and help set the course for a safe and healthy future.

Water Capital Projects

Examples of recent Metro Vancouver water utility capital projects that have helped ensure reliable, safe drinking water:

- Douglas Road Water Main
- Dam Safety Enhancements Programs
- Jericho Reservoir
- Port Mann Water Supply Tunnel



JERICHO RESERVOIR

Liquid Waste Capital Projects

Examples of recent Metro Vancouver liquid waste utility capital projects that have helped improve sewer service to residents and businesses in member jurisdictions:

- Iona Biosolids Dewatering Facility
- Sapperton Pump Station Upgrade
- Hastings Cassiar Sewer Upgrade
- Albert Street Trunk Sewer



SAPPERTON PUMP STATION

Solid Waste Capital Projects

Examples of recent Metro Vancouver solid waste utility capital projects that have helped improve solid waste management in member jurisdictions:

- Central Surrey Recycling and Waste Centre
- United Boulevard Recycling and Waste Centre



CENTRAL SURREY RECYCLING AND WASTE CENTRE

The Lifecycle of a Metro Vancouver Utility Capital Project

Metro Vancouver's utility capital projects follow a consistent six-stage planning and construction process. While large Metro Vancouver projects may take 10 to 15 years to move through the stages, other projects are completed in a much shorter time frame.

The table below provides member jurisdictions with a high-level overview of the purpose and key outcomes of each stage of a Metro Vancouver utility capital project. This process will vary depending on the complexity and unique requirements of the capital project.

PHASES	INITIATION	DEFINITION	DESIGN
STAGES	Initiation	Definition	Preliminary Design
	PURPOSE To confirm the high level scope of a capital project that is required to address an issue with delivering a service.	**PURPOSE** To define the project including the objectives and the scope of the alignment or site options under consideration. To evaluate the options and identify a recommended option.	**PURPOSE:** To conduct further investigation into the requirements of the capital project and start to develop the design of the capital project.
	KEY OUTCOMES **Technical** • Draft Project Charter	**KEY OUTCOMES** **Technical** • A recommended option • Project Charter • Project Definition Report and/or Conceptual Design	**KEY OUTCOMES** **Technical** • Preliminary Design Report • Various studies (e.g., Geotechnical, Environmental, Archaeological, Arborist, Traffic, etc.) • Permitting assessment • Confirm the site or alignment option **Communications and Engagement** • Early key messages • Early project description • Communications and Engagement Strategy • Communications Protocol • Early engagement

CONSTRUCTION

Detailed Design

PURPOSE:
To progress the design of the capital project in preparation for construction.

KEY OUTCOMES

Technical

- Final Design Reports (30/60/90%)
- Permit applications
- Various studies (e.g., traffic, noise)
- Tender documents

Communications and Engagement

- Project fact sheet and website
- Notify community/ neighbourhoods
- Seek input through online and in-person engagement events

Construction

PURPOSE
To take the project from tender award through to construction completion.

KEY OUTCOMES

Technical

- Ongoing permit applications (e.g., highway use permit, noise variance)
- Project commissioning and tie-ins

Communications and Engagement

- Construction communications
- Community relations

Close-out

PURPOSE
To hand the project over to Metro Vancouver operations and maintenance.

KEY OUTCOMES

Technical

- Certificate of Completion/ Final Acceptance

Communications and Engagement

- Project completion communications

Metro Vancouver and Member Jurisdiction Roles on Utility Capital Projects

Member jurisdictions play a critical role in the design and delivery of regional utility capital projects. Metro Vancouver works closely with member jurisdictions throughout the lifecycle of Metro Vancouver utility capital projects.

For each utility capital project, Metro Vancouver designates a point-of-contact to liaise with member jurisdictions in the project area. Member jurisdictions should expect to participate in regular meetings, to receive timely updates, to provide input at key stages in the project, and to provide timely review of key project documents and permit applications.

Metro Vancouver staff, including senior management, project staff, capital planning, policy, procurement, real estate, Indigenous relations, and community engagement, will work with member jurisdiction staff as required.

Member jurisdictions should plan to keep their senior leadership team and all relevant departments aware and involved, as required. This includes, but is not limited to, the Chief Administrative Officer, General Manager(s), planning, engineering, transportation, building, public works, parks, and communications and engagement.



Linked Activities by Project Stages

Metro Vancouver and member jurisdiction each have key roles and responsibilities throughout the lifecycle of a Metro Vancouver utility capital project.

This section describes key Metro Vancouver activities that are linked to corresponding activities from the member jurisdiction. Metro Vancouver activities include those carried out by parties contracted to act on Metro Vancouver's behalf.

Initiation

During the Initiation stage of a new utility capital project, Metro Vancouver staff will contact the member jurisdiction to introduce the project, share information, seek initial input, and build an understanding of how to work together to deliver the project.

PURPOSE

To confirm the high level scope of a capital project that is required to address an issue with delivering a service.

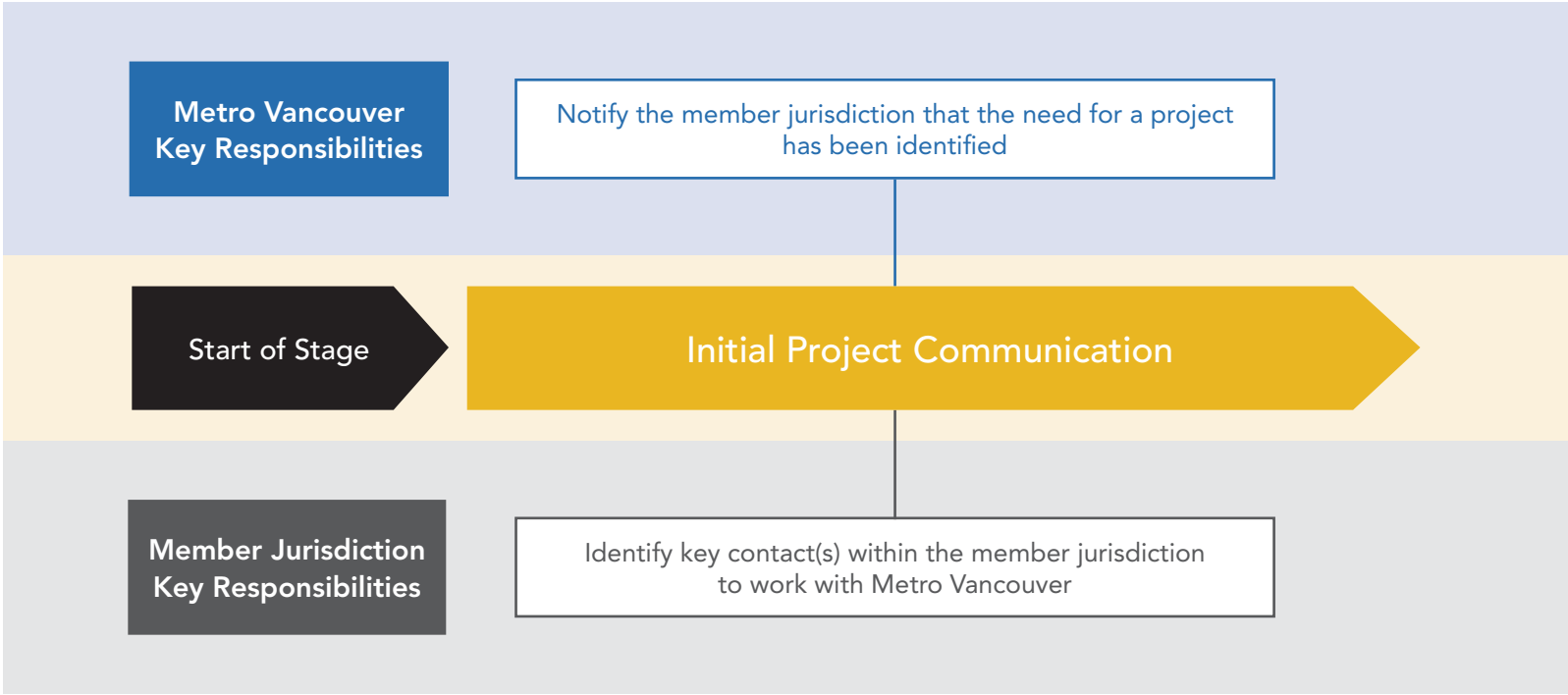
KEY OUTCOMES

Technical

- Draft Project Charter

Linked Activities by Project Stage

This diagram describes key Metro Vancouver activities that are linked to a corresponding activity from the member jurisdiction. It does not provide a comprehensive list of Metro Vancouver or member jurisdiction activities.



Initiation | Definition | Preliminary Design | Detailed Design | Construction | Close-out



Stage Completion

Definition

During the Definition stage, Metro Vancouver will define the project including its objectives and the scope of the alignment or site options under consideration. Meetings will be held with member jurisdictions to share information and seek input about the options. During this stage, Metro Vancouver will evaluate the options to select an option based on environmental, financial, social, technical/constructability considerations. At the end of this stage, Metro Vancouver will produce a Project Definition Report and/or Conceptual Design with a recommended site or alignment option.

PURPOSE

To define the project including the objectives and the scope of the alignment or site options under consideration.

To evaluate the options and identify a recommended option.

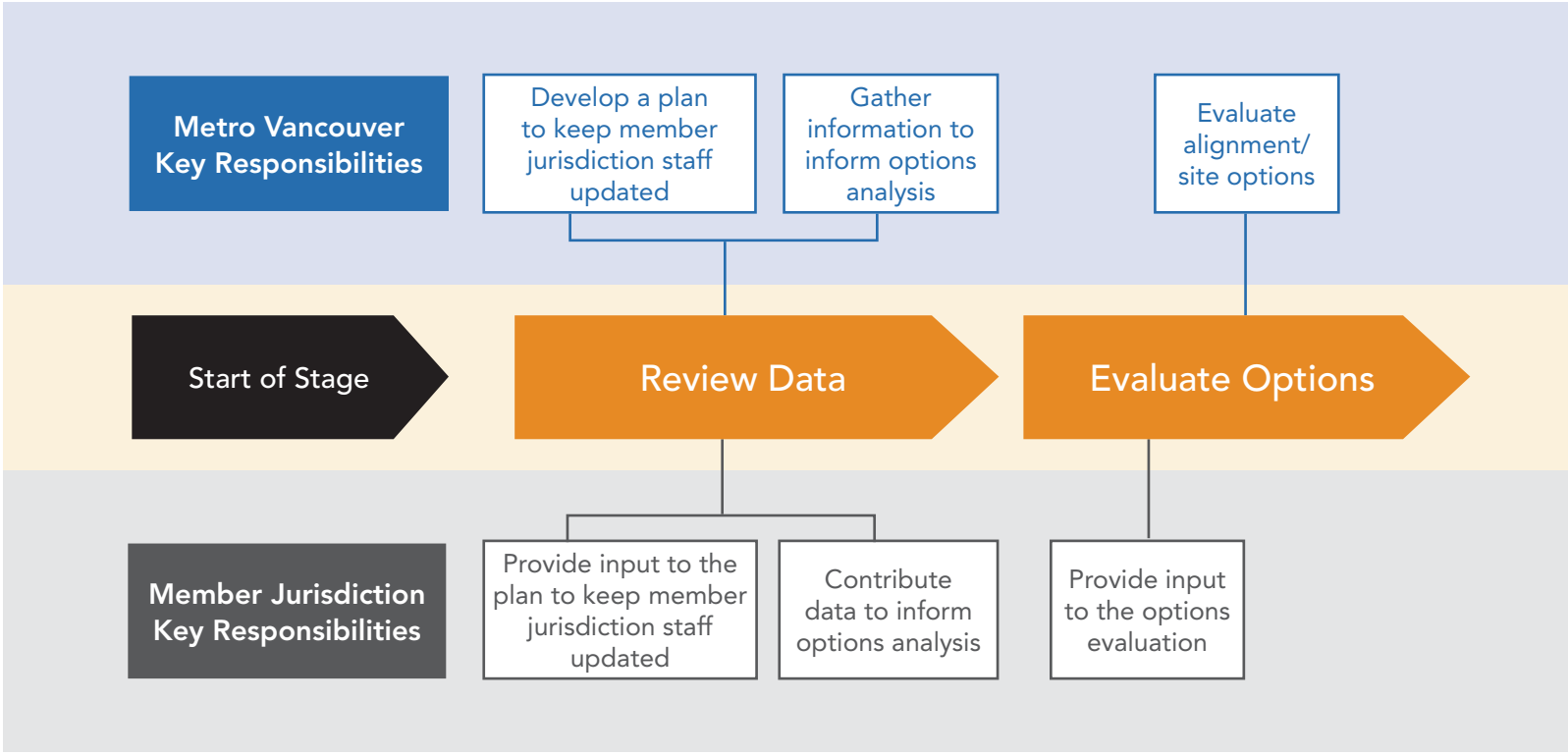
KEY OUTCOMES

Technical

- A recommended option
- Project Charter
- Project Definition Report and/or Conceptual Design

Linked Activities by Project Stage

This diagram describes key Metro Vancouver activities that are linked to a corresponding activity from the member jurisdiction. It does not provide a comprehensive list of Metro Vancouver or member jurisdiction activities.



Initiation | **Definition** | Preliminary Design | Detailed Design | Construction | Close-out



Select a recommended option

Communicate the recommended option to the member jurisdiction

Select Recommended Option → **Confirm Option** → **Stage Completion**

Provide input to recommended option

Acknowledge recommended option

Preliminary Design

Now that one option has been selected, Metro Vancouver prepares the preliminary design of the selected site or alignment. Engineering work in this stage includes conducting preliminary properties, traffic, geotechnical, social, archaeological, and environmental investigations, analysing feasibility, and preparing a Permit Summary. The Communications and Engagement Strategy and Communications Protocol are developed, and on some projects, early engagement begins. At the end of this stage, Metro Vancouver will produce a Preliminary Design Report.

PURPOSE:
To conduct further investigation into the requirements of the capital project and start to develop the design of the capital project.

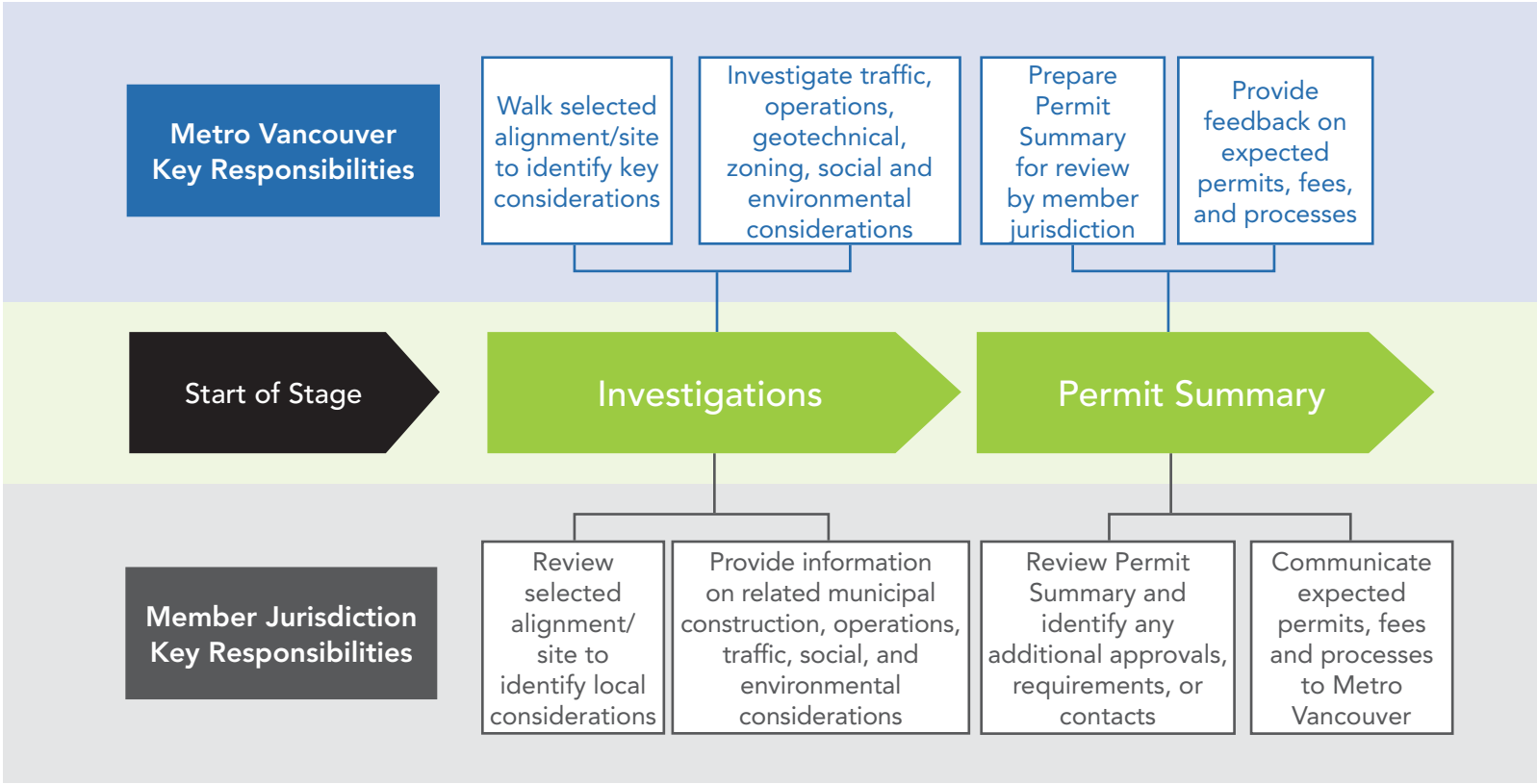
KEY OUTCOMES

Technical
- Preliminary Design Report
- Various studies (e.g., Geotechnical, Environmental, Archaeological, Arborist, Traffic, etc.)
- Permitting assessment and Permit Summary

Communications and Engagement
- Early key messages
- Early project description
- Communications and Engagement Strategy
- Communications Protocol
- Early engagement

Linked Activities by Project Stage

This diagram describes key Metro Vancouver activities that are linked to a corresponding activity from the member jurisdiction. It does not provide a comprehensive list of Metro Vancouver or member jurisdiction activities.



Initiation | Definition | **Preliminary Design** | Detailed Design | Construction | Close-out



Communicate information from preliminary design such as alignment/site details for member jurisdiction confirmation

Draft the Communications and Engagement Strategy by project stage

Develop Communications Protocol to outline how Metro Vancouver and the member jurisdiction will share, be involved with, and/or execute public information initiatives related to the project

Preliminary Design Report → **Communications and Engagement Strategy** → **Communications Protocol** → **Stage Completion**

Review information and provide input

Review and provide input to the Communications and Engagement Strategy

Contribute to the Communications Protocol

Detailed Design

During Detailed Design, Metro Vancouver prepares the detailed design of the selected site or alignment. Detailed Design Reports are typically produced when the design work is 30%, 60%, and 90% complete. At this stage, traffic management plans are developed, construction impacts are further assessed and mitigation strategies are developed, permits are approved, and the construction tender documents are prepared and issued. The posting of the tender documents signals the end of the Detailed Design stage.

Public communication about the project begins during this stage, with the implementation of the Communications and Engagement Strategy.

PURPOSE:
To progress the design of the capital project in preparation for construction.

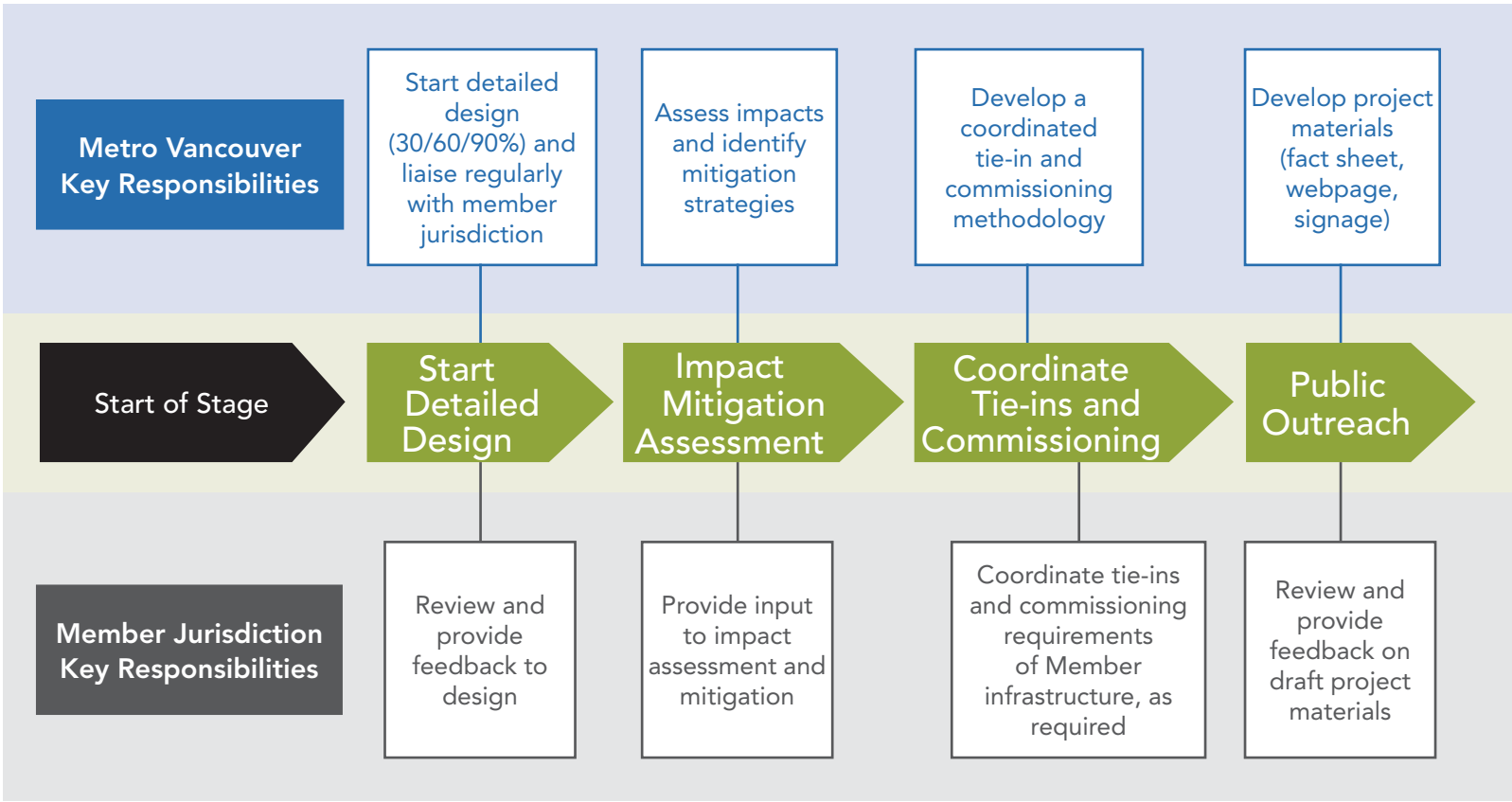
KEY OUTCOMES

Technical
- Final Design Reports (30/60/90%)
- Permit applications
- Various studies (e.g., traffic, noise)
- Tender documents

Communications and Engagement
- Project fact sheet and website
- Notify community/neighbourhoods
- Seek input through online and in-person engagement events

Linked Activities by Project Stage

This diagram describes key Metro Vancouver activities that are linked to a corresponding activity from the member jurisdiction. It does not provide a comprehensive list of Metro Vancouver or member jurisdiction activities.



Initiation | Definition | Preliminary Design | **Detailed Design** | Construction | Close-out



Start implementing communications and engagement

Update Permit Summary and submit permit applications

Finalize construction plan including traffic and noise management strategies and schedule

Prepare and issue construction tender documents

Communications and Engagement → **Permitting and Fees** → **Finalize Detailed Design and Issue Construction Tender** → **Stage Completion**

Participate in communications and engagement

Process permit applications

Provide input to construction planning (e.g., traffic, noise management, schedule)

Construction

During Construction, Metro Vancouver will take the construction project from tender award through to the completion of construction. This involves managing and administering the construction contract including monitoring progress, problem solving and sharing information with the member jurisdictions involved with the project. Throughout this stage, Communications and Engagement continues to implement the Communications and Engagement Strategy and is actively communicating construction activities to the public and key stakeholders through newsletters, project updates, notices and meetings as required. This stage ends with project commissioning and tie-ins.

PURPOSE

To take the project from tender award through to construction completion.

KEY OUTCOMES

Technical

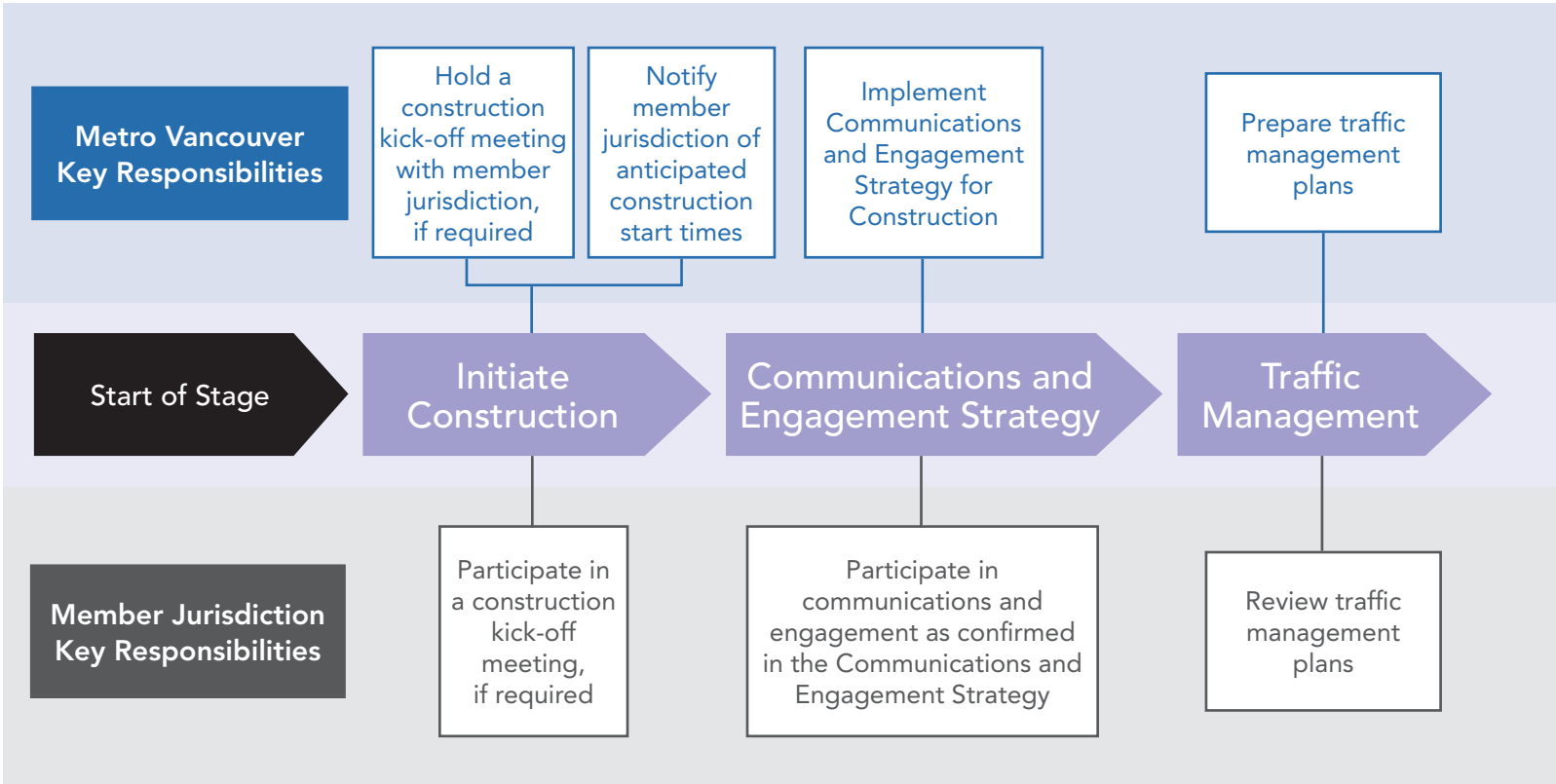
- Ongoing permit applications (e.g., highway use permit, noise variance)
- Project commissioning and tie-ins

Communications and Engagement

- Construction communications
- Community relations

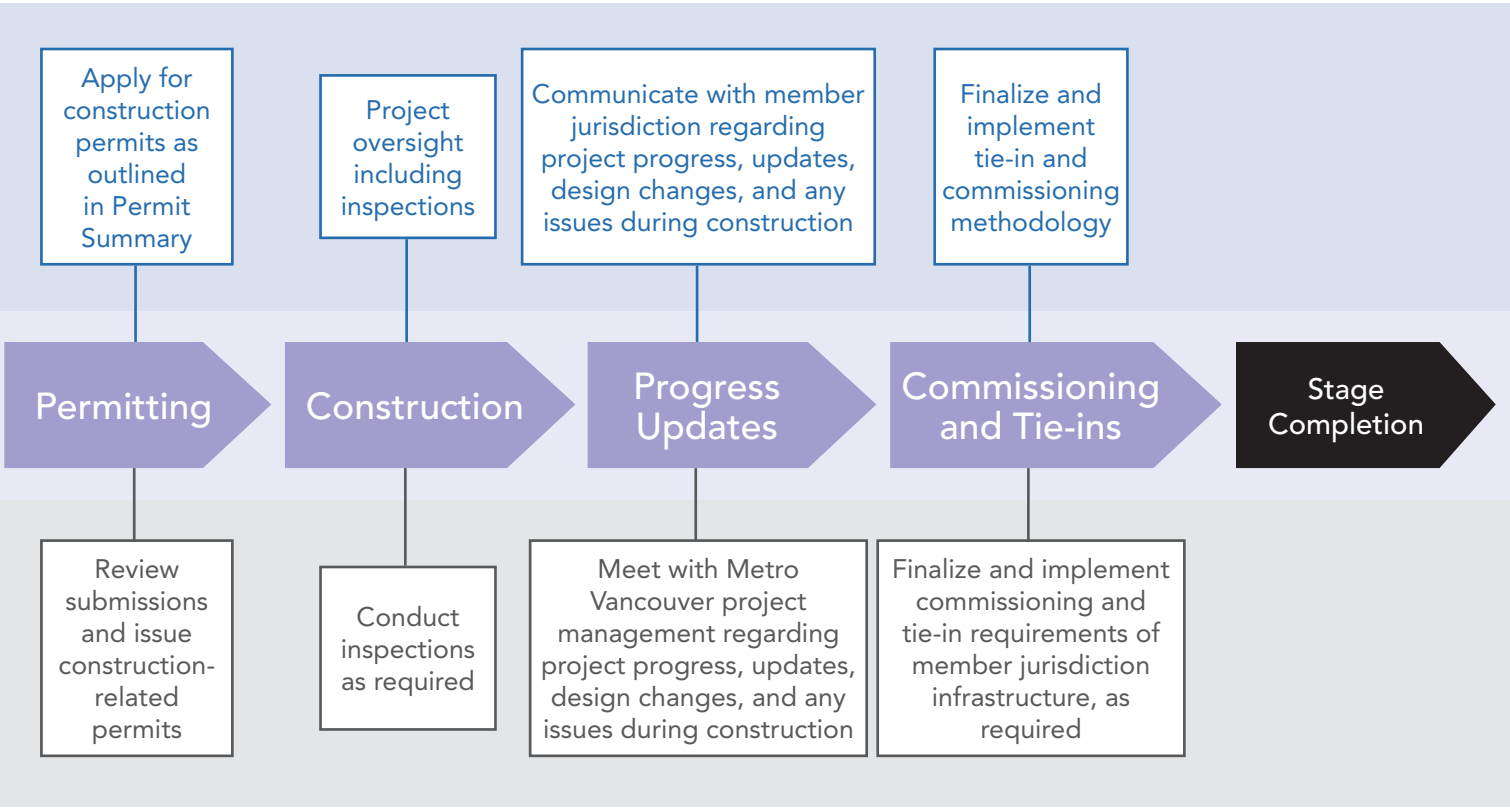
Linked Activities by Project Stage

This diagram describes key Metro Vancouver activities that are linked to a corresponding activity from the member jurisdiction. It does not provide a comprehensive list of Metro Vancouver or member jurisdiction activities.



Initiation | Definition | Preliminary Design | Detailed Design | **Construction** | Close-out





Close out

Close out marks the last stage of a Metro Vancouver utility capital project. During the close out stage, the project is handed over from the Metro Vancouver capital project team to Metro Vancouver operations and maintenance staff.

PURPOSE
To hand the project over to Metro Vancouver operations and maintenance.

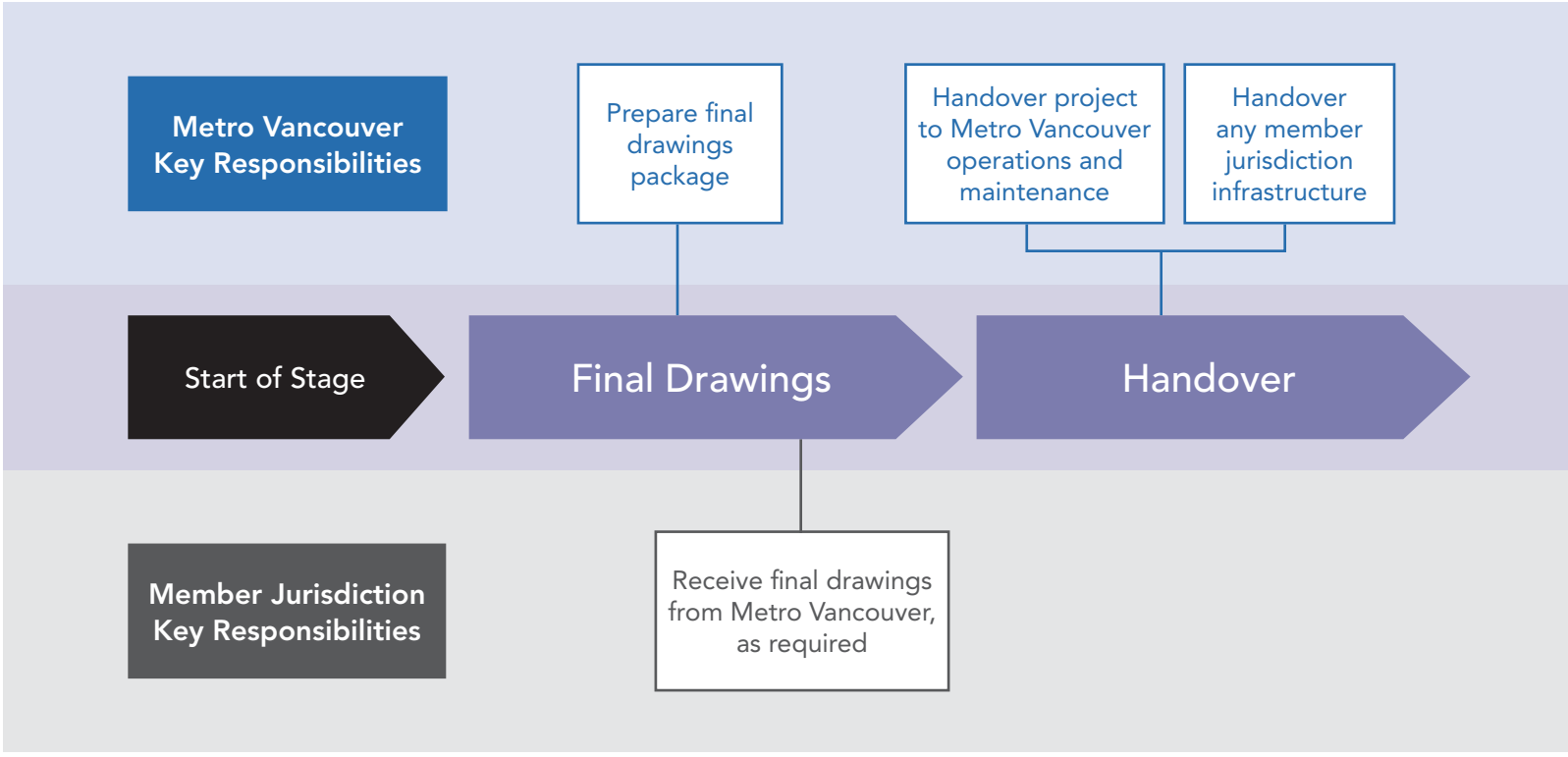
KEY OUTCOMES

Technical
- Certificate of Completion/Final Acceptance

Communications and Engagement
- Project completion communications

Linked Activities by Project Stage

This diagram describes key Metro Vancouver activities that are linked to a corresponding activity from the member jurisdiction. It does not provide a comprehensive list of Metro Vancouver or member jurisdiction activities.



Initiation | Definition | Preliminary Design | Detailed Design | Construction | Close-out





Stage Completion


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SERVICES AND SOLUTIONS FOR A LIVABLE REGION

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SERVICES AND SOLUTIONS FOR A LIVABLE REGION

5.5

To: Liquid Waste Committee and Water Committee

From: Cheryl Nelms, General Manager, Project Delivery

Date: September 28, 2022 Meeting Dates: October 5, 2022
October 6, 2022

Subject: **Compensation Practices Related to Metro Vancouver's Delivery of Projects**

RECOMMENDATION

That the GVS&DD and GVWD Boards receive for information the report dated September 28, 2022, titled "Compensation Practices Related to Metro Vancouver's Delivery of Projects".

EXECUTIVE SUMMARY

Metro Vancouver currently mitigates and compensates member jurisdictions for the impact of projects taking place within their jurisdiction through various means, which are generally negotiated on an ad-hoc basis. Mitigation and compensation for member jurisdictions may take the form of changes to a design resulting in higher project costs, addition of community amenities, upgrades to member's infrastructure, provision of resources to our members to handle increased workload resulting from our projects, as well as payment of fees for various permits, lost revenue, letters of credit, and other charges.

Metro Vancouver is currently reviewing practices underway with a goal to create a predictable, consistent and equitable approach to mitigating and compensating member jurisdictions for the impacts to their community during construction of region-serving infrastructure. Staff intend to bring back future reports that will recommend guiding principles and approaches to different forms of compensation.

PURPOSE

To provide the GVS&DD and GVWD Boards an overview of current practices used by Metro Vancouver when delivering projects, to either mitigate or compensate for the impacts to communities during construction.

BACKGROUND

Each year, Metro Vancouver delivers projects to ensure that the region has reliable access to clean drinking water, safe wastewater removal and treatment, and waste disposal and recycling. Additionally, Metro Vancouver develops regional parks for use by the public and builds housing to support low-income residents. The purpose of delivering these services on behalf of the members is to provide infrastructure at a scale that is more efficient than if each member or participant delivered the services separately. As a result, the services offer efficiencies that benefit all members. Members participate in the core services based on the understanding that not only will the benefits of the service be equitably shared amongst participants, but the impacts and costs of delivering those services are also equitably shared.

Construction, particularly the linear construction that is required to build or replace large regional water and sewer mains, has impact to communities through noise, dust, and traffic disruption.

Currently Metro Vancouver addresses impacts on a case-by-case basis. Addressing the impacts may be through mitigation and/or compensation, and are identified in collaboration with member jurisdictions within which the construction project is taking place.

Forms of mitigation can include changes to construction methodology. For example, choosing to do a tunneling method rather than open cut to reduce local community impacts, can significantly increase the cost of a project. Forms of compensation may include adding amenities (washrooms, trails), compensating for lost revenue or paying fees that Metro Vancouver may or may not be legally obligated to pay.

In 2018, the Board rescinded the existing Capital Projects Policy and recommended that Metro Vancouver staff work with staff advisory committees to develop a capital projects framework, which would capture the approach and process of how Metro Vancouver projects are planned, managed, constructed, and communicated. Since then, Metro Vancouver has been engaging with member jurisdictions through a Regional Engineers Advisory Committee (REAC) working group. In conversations with the working group, members have expressed interest in working collaboratively to reduce impacts of Metro Vancouver projects on the community, reduce impacts of Metro Vancouver projects on staff capacity, and address the impact of hosting Metro Vancouver facilities in their community. Various recommendations have been made by the group, and Metro Vancouver is now beginning a review of mitigation and compensation practices, as well as what types of costs should be considered compensation.

Metro Vancouver's intent is to develop predictable, consistent, and equitable approaches to mitigating construction impacts and compensating member jurisdictions for the impacts to their community during construction. This will allow Metro Vancouver to strengthen our relationships with member jurisdictions and the public. Specific objectives for this work include:

- Creating a more equitable and transparent project delivery process across all member jurisdictions
- Reducing project delivery timelines and costs
- Reducing overall impact on the region's ratepayers
- Addressing how members' permit processes and fees are applied to capital projects

The review will also take into consideration whether Metro Vancouver should or should not be participating in existing municipal payment frameworks used for developers.

AREAS OF MITIGATION AND COMPENSATION UNDER REVIEW

Statutory Rights of Way

Currently, statutory rights of way (SRW) are negotiated on a case-by-case basis with member jurisdictions and others when projects are underway. Increasingly, Metro Vancouver is being asked to pay current market value for land that has either been previously purchased in the public interest

or is an existing municipal asset. A full policy proposal will be brought forward to the Metro Vancouver Board in 2023 for consideration.

Community Amenities
Currently, Metro Vancouver works collaboratively with member jurisdictions to provide amenities in tandem with construction on a case-by-case basis. Examples include things such as water features, staircases, multi-use or bike paths, parking stalls, washrooms, park upgrades, public plazas, public art, and interpretive elements. These contributions can vary in cost and percentage of the project budget. Currently, there is no standard or limit set, and the extent of the provision is balanced with other project impacts as well as priorities in a local community.

Other Fees
Other types of fees that Metro Vancouver either pays or has been asked to pay in the course of delivering infrastructure include; Development Cost Charges (DCCs), Community Amenity Charges (CACs), payment in lieu of taxes, and permit fees (e.g. building permits, development permits, highway use permits, etc.).

The REAC working group has been discussing the appropriateness of these types of payments by Metro Vancouver to member jurisdictions. This feedback, along with Metro Vancouver's evaluation will inform the development of a guide that will reference considerations when levying fees on Metro Vancouver projects to help assess whether fees are applicable.

Compensation for Lost Revenue, Restoration of Damage, and Other
Metro Vancouver currently compensates members for any damage caused and restoration of disturbed areas and specific to temporary work areas, lost revenues (such as from parking lots), and additional items as may be negotiated between Metro Vancouver and its members.

Other Forms of Mitigation
Metro Vancouver also works closely with communities to design and deliver projects with low impact. On occasion, this mitigation can increase costs of a project by a significant amount. One example is Metro Vancouver agreeing to tunnel mains to reduce impacts on the community and traffic, which can increase project costs. These mitigation efforts will also be taken into consideration as how it adds into the overall mitigation and compensation costs that Metro Vancouver pays to deliver projects.

ADDITIONAL TOOLS UNDER DEVELOPMENT

Capital Projects Impact Assessment Tool
Metro Vancouver is evaluating the creation of an impact assessment tool that would allow the organization to evaluate more consistently and systematically the impacts of Metro Vancouver construction projects on the local communities and identify potential mitigation and/or compensation measures.

Capital Projects Guide

A Capital Projects Guide is under development with input from the REAC working group. The purpose of a Capital Projects Guide is to capture the approach and process of how Metro Vancouver projects are planned, managed, constructed, and communicated. This will help promote a transparent and consistent process that ensures all members and partners know what to expect. The guide will:

- Set expectations and improve communication between Metro Vancouver and its members.
- Document how Metro Vancouver plans and delivers its capital projects and the milestones for member input/participation.
- Facilitate a consistent and transparent process for the delivery and communication of capital projects within host member jurisdictions.

In addition to this forward looking work, Metro Vancouver staff continue to work with member jurisdictions to set up regular coordination meetings to talk about upcoming work, protocols, and collectively mitigate impacts of how Metro Vancouver projects intersect with work being delivered by that member jurisdiction.

ALTERNATIVES

This is an information report. No alternatives are presented.

FINANCIAL IMPLICATIONS

The development of standardized, region-wide approaches to mitigation and compensation for projects undertaken in member jurisdictions would help to manage project costs, maintain project schedules, mitigate scope creep and change orders on construction projects, as well as ensure a transparent and equitable approach across all member jurisdictions.

CONCLUSION

Each year, Metro Vancouver delivers projects to ensure that the region has access to clean drinking water, safe wastewater removal and treatment, and waste disposal and recycling. Additionally, Metro Vancouver develops regional parks for use by the public and builds housing to support low-income residents. The purpose of delivering these services on behalf of the members is to provide infrastructure at a scale that is more efficient than if each member or participant delivered the services separately. As a result, the services offer efficiencies that benefit all members. Members participate in the core services based on the understanding that not only will the benefits of the service be equitably shared amongst participants, but the impacts and costs of delivering those services are also equitably shared.

Currently Metro Vancouver addresses project impacts on a case-by-case basis. The development of standardized, region-wide approaches to mitigation and compensation for projects happening in any member jurisdiction would help to manage project costs and schedule, and mitigate scope creep on design, or changes resulting in construction claims once construction has begun, as well as ensure a transparent and equitable approach across all member jurisdictions.

Staff will return to the Board with additional reports containing recommendations on guiding principles and approaches to different forms of compensation.

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ATTACHMENT 3



Port Mann Water Supply Tunnel Shaft

Guide to MV Utility Capital Projects and Impact Mitigation Framework

Jennifer Crosby
Director, Project Management Office, Project Delivery

Nermine Tawfik
Supervisor, External Relations

Liquid Waste Committee Meeting – July 19, 2023
60658786

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AGENDA

- Objective
- Introduce the *Guide to Metro Vancouver Utility Capital Projects for Member Jurisdictions*
- MV Conference Day - Impact Mitigation Framework Workshop

OBJECTIVE

Why are we here?

- Current mitigation and compensation practices vary widely across the region
- The goal is to create a predictable, consistent, and equitable approach to mitigating and compensating member jurisdictions



Sapperton Pump Station Public Washrooms



Jericho Reservoir Plaza and Interpretive Elements

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REAC WORKING GROUP

Goal: Discuss and recommend guidelines to promote consistency in how Metro Vancouver projects are processed within member jurisdictions.

Working Group participants:

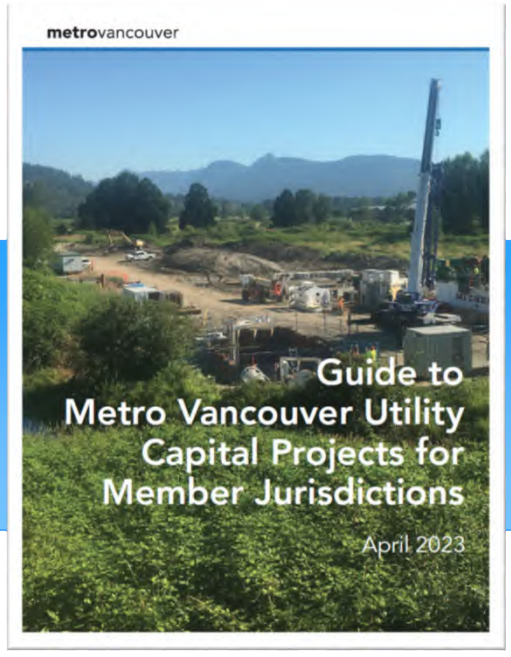
- Four municipalities - Coquitlam, District of North Vancouver, Surrey, and Vancouver
- Metro Vancouver - Water Services, Liquid Waste Services, Project Delivery, External Relations

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REAC WORKING GROUP

Idea	Status
Utility Capital Projects Guide	Drafted
Improved coordination and communication process with members	Started with New Westminster and Burnaby
Project tendering and procurement improvements	Being implemented
Impact Mitigation Framework	In development

Introducing the Capital Projects Guide



SCOPE OF THE CAPITAL PROJECTS GUIDE

- The guide presents the capital project process that applies to **most** projects
- Describes the phases and stages that most projects have in common, **not** exceptions
- Describes **current practices only**, not desired or future state.
- Refers to utility capital projects for water, liquid waste, and solid waste

PURPOSE OF THE GUIDE

- Describes the **lifecycle** of a Metro Vancouver utility capital project
- Identifies the **key responsibilities** for Metro Vancouver and member jurisdiction staff
- Provides a **high-level, consistent, and transparent roadmap** that will help member jurisdictions plan their involvement in a Metro Vancouver utility capital project

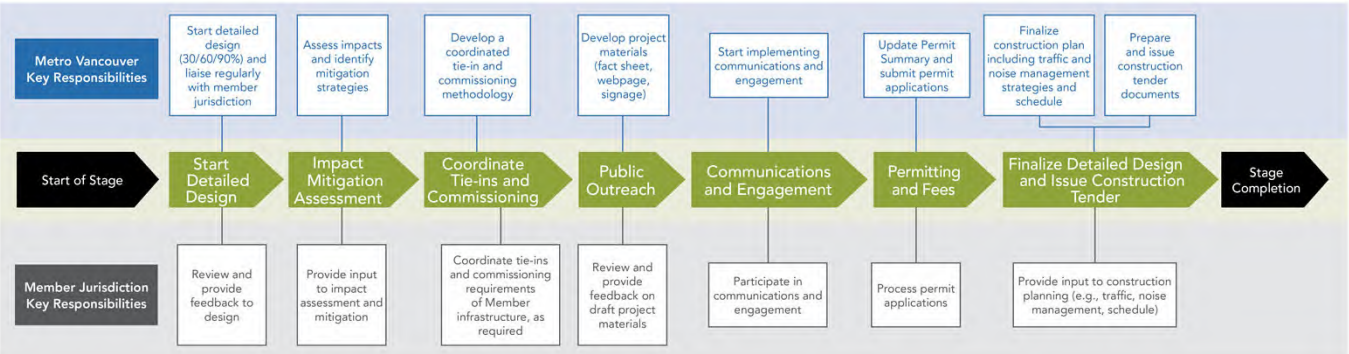
EXCERPT FROM GUIDE

PURPOSE AND KEY OUTCOMES BY PROJECT LIFECYCLE STAGE

PHASES	INITIATION	DEFINITION	DESIGN		CONSTRUCTION	
STAGES	Initiation	Definition	Preliminary Design	Detailed Design	Construction	Close-out
	PURPOSE To confirm the high level scope of a capital project that is required to address an issue with delivering a service.	PURPOSE To define the project including the objectives and the scope of the alignment or site options under consideration. To evaluate the options and identify a recommended option.	PURPOSE: To conduct further investigation into the requirements of the capital project and start to develop the design of the capital project.	PURPOSE: To progress the design of the capital project in preparation for construction.	PURPOSE To take the project from tender award through to construction completion.	PURPOSE To hand the project over to Metro Vancouver operations and maintenance.
	KEY OUTCOMES **Technical** • Draft Project Charter	KEY OUTCOMES **Technical** • A recommended option • Project Charter • Project Definition Report and/or Conceptual Design	KEY OUTCOMES **Technical** • Preliminary Design Report • Various studies (e.g., Geotechnical, Environmental, Archaeological, Arborist, Traffic, etc.) • Permitting assessment • Confirm the site or alignment option **Communications and Engagement** • Early key messages • Early project description • Communications and Engagement Strategy • Communications Protocol • Early engagement	KEY OUTCOMES **Technical** • Final Design Reports (30/60/90%) • Permit applications • Various studies (e.g., traffic, noise) • Tender documents **Communications and Engagement** • Project fact sheet and website • Notify community/ neighbourhoods • Seek input through online and in-person engagement events	KEY OUTCOMES **Technical** • Ongoing permit applications (e.g., highway use permit, noise variance) • Project commissioning and tie-ins **Communications and Engagement** • Construction communications • Community relations	KEY OUTCOMES **Technical** • Certificate of Completion/ Final Acceptance **Communications and Engagement** • Project completion communications

RESPONSIBILITIES BY PROJECT STAGE

DETAILED DESIGN STAGE EXAMPLE



Excerpt from *Guide to Metro Vancouver Utility Capital Projects for Member Jurisdictions*



DEVELOP IMPACT MITIGATION FRAMEWORK

- Clarify expectations for how Metro Vancouver and member jurisdictions work together to deliver regional infrastructure
- Standardize the process for assessing and mitigating the impacts of utility capital projects on member jurisdictions
- Reduce risk and uncertainty related to the delivery of Metro Vancouver utility capital projects which in turn reduces impacts on costs and schedules

MV CONFERENCE DAY WORKSHOP

REAC WORKSHOP SERIES TO DEVELOP IMPACT MITIGATION FRAMEWORK

Workshop 1- Held on May 12	Workshop 2 – Target Q4 2023	Workshop 3 - TBD
Purpose: Explore the impacts of MV capital projects on member jurisdictions	**Purpose:** Share tools and approaches for identifying impacts and improving intergovernmental coordination Build a framework for mitigation practices (guiding principles, impact assessment tool, defining mitigation)	**Purpose:** Revise and finalize the framework for mitigation practices
Outcome: Establish a shared understanding of the impacts of capital projects	**Outcome:** Identify elements of an equitable framework	**Outcome**: Framework for mitigation practices to be presented to RAAC, and Metro Vancouver Boards

14



Lulu Island Wastewater Treatment Plant

Thank you

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14

To: Liquid Waste Committee

From: Dana Zheng, Program Manager, Policy, Planning Analysis, Liquid Waste Services

Date: July 11, 2023 Meeting Date: July 19, 2023

Subject: **Greater Vancouver Sewerage and Drainage District Sewer Use Amendment Bylaw No. 366, 2023**

RECOMMENDATION

That the GVS&DD Board:

a) give first, second, and third reading to *Greater Vancouver Sewerage and Drainage District Sewer Use Amendment Bylaw No. 366, 2023*; and

b) pass and finally adopt *Greater Vancouver Sewerage and Drainage District Sewer Use Amendment Bylaw No. 366, 2023*.

EXECUTIVE SUMMARY

The Greater Vancouver Sewerage and Drainage District Sewer Use Amendment Bylaw No. 366, 2023 (SUB Amendment Bylaw) is presented for GVS&DD Board adoption. There are 24 proposed amendments, with multiple instances of the same changes in different sections of the bylaw. Changes include terminology and consistency improvements to address operational and enforceability issues, improve administration, and improve accuracy and clarity of the *Greater Vancouver Sewerage and Drainage District Sewer Use Bylaw No. 299, 2007*. No policy or material revisions were made, and thus no engagement with stakeholders is required.

PURPOSE

To seek GVS&DD Board adoption of the SUB Amendment Bylaw.

BACKGROUND

The *Greater Vancouver Sewerage and Drainage District Sewer Use Bylaw No. 299, 2007* (SUB) (Reference 1) and associated sector-specific bylaws regulate the discharge of waste into sewers and drains connected to a sewage facility operated by the GVS&DD. The *Greater Vancouver Sewerage and Drainage District Hospital Pollution Prevention Bylaw No. 319, 2018* (Hospital P2 Bylaw) (Reference 2) was adopted in 2018 and requires hospitals to develop pollution prevention plans to reduce the discharge of pollutants into the wastewater system.

Metro Vancouver routinely reviews and updates bylaws to ensure accuracy, clarity and enforceability of the policy. It was determined that bylaw amendments are required to improve accuracy, clarity and enforceability of both the SUB and the Hospital P2 Bylaw. These proposed revisions resolve straightforward operational and enforceability issues that are aligned with current enforcement practices and the original intent of the bylaws. The scope of the revisions do not constitute policy or material changes and thus do not require engagement with stakeholders. This report and the report titled, “Greater Vancouver Sewerage and Drainage District Hospital Pollution

Prevention Amendment Bylaw No. 367, 2023" dated July 11, 2023, are complementary and are intended to be adopted together.

PROPOSED SUB AMENDMENTS

There are 24 amendments proposed, with multiple instances of the same changes in different sections of the bylaw. The types of proposed changes to the SUB are:

- Terminology improvements to ensure alignment with industry standards and improve consistency. Revisions to definitions and terminology improve accuracy, reduce ambiguity and resolve interpretation and enforceability issues.
- Updates to references that are redundant and outdated. Revisions reduce duplication and improve clarity and enforceability.
- Operational and enforceability improvements to add clarity to the responsibility and authority granted to the Sewage Control Manager and revise clauses to ensure current operational and enforcement practices are substantiated.
- Administrative improvements to improve financial administration of the bylaw, including substantiating and clarifying current operational practices, synchronizing payment schedules, and charging interest on overdue payments for administration fees to ensure that interest charges are consistently applied for all fees within the SUB. These revisions improve clarity and administration of the Sewer Use Bylaw regulatory program.

ALTERNATIVES

1. That the GVS&DD Board:
   a) give first, second, and third reading to *Greater Vancouver Sewerage and Drainage District Sewer Use Amendment Bylaw No. 366, 2023*; and
   b) pass and finally adopt *Greater Vancouver Sewerage and Drainage District Sewer Use Amendment Bylaw No. 366, 2023*.
2. That the GVS&DD Board receive for information the report dated July 11, 2023, titled "Greater Vancouver Sewerage and Drainage District Sewer Use Amendment Bylaw No. 366, 2023" and provide alternate direction to staff.

FINANCIAL IMPLICATIONS

The proposed amendments include the addition of interest charges on overdue payments for administration fees to ensure that interest charges are consistently applied for all fees within the SUB. The additional revenue is expected to be minimal.

CONCLUSION

Metro Vancouver routinely reviews and updates bylaws to ensure accuracy, clarity and enforceability. The proposed amendments to the SUB address: a) terminology improvements; b) updates to redundant and outdated references; c) operational and enforceability improvements; and d) administrative improvements. Revisions include changes to definitions, wording and terminology improvements to existing clauses and new provisions that improve interpretation, enforceability and administration of the SUB. The scope of the revisions do not constitute policy or material changes and thus do not require engagement with stakeholders.

This report and the report dated July 11, 2023, titled "Greater Vancouver Sewerage and Drainage District Hospital Pollution Prevention Amendment Bylaw 367, 2023" are complementary and are intended to be adopted together.

Attachment

Greater Vancouver Sewerage and Drainage District Sewer Use Amendment Bylaw No. 366, 2023
(59780180)

References

1. GVS&DD Sewer Use Bylaw No. 299, 2007
2. GVS&DD Hospital Pollution Prevention Bylaw No. 319, 2018

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GREATER VANCOUVER SEWERAGE AND DRAINAGE DISTRICT
BYLAW NO. 366, 2023
A bylaw to amend "Greater Vancouver Sewerage and Drainage District Sewer Use Bylaw No. 299, 2007"

WHEREAS:

A. The Greater Vancouver Sewerage and Drainage District Board (the "Board") adopted the Greater Vancouver Sewerage and Drainage District Sewer Use Bylaw No. 299, 2007 on May 25, 2007; and

B. The Board wishes to amend Greater Vancouver Sewerage and Drainage District Sewer Use Bylaw No. 299, 2007.

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 Sewer Use Amendment Bylaw No. 366, 2023".

Amendment of Bylaw

2. "Greater Vancouver Sewerage and Drainage District Sewer Use Bylaw No. 299, 2007", as amended, is amended as follows:

   a. In Section 2.1, in the definition "Combined Sewer", the word "Storm Water" is deleted and replaced with the word "Stormwater";

   b. In Section 2.1, in the definition "Ground Water", the word "Ground Water" is deleted and replaced with the word "Groundwater";

   c. In Section 2.1, the definition "Hospital" is added as follows:

      "**Hospital**" means a hospital as defined in the *Hospital Pollution Prevention Bylaw No. 319, 2018*, as amended;

   d. In Section 2.1, in the definition "Industrial Treatment Fee", the word "groundwater" is deleted and replaced with the word "Groundwater";

   e. In Section 2.1, in the definition "Non-Domestic Waste", the word "Storm Water" is deleted and replaced with the word "Stormwater";

   f. In Section 2.1, in the definition "Sanitary Sewer", the word "Storm Water" is deleted and replaced with the word "Stormwater";

   g. In Section 2.1, the definition "Sewer", is deleted and replaced with the following:

"**Sewer**" means all pipes, conduits, drains, and other equipment and facilities, owned or otherwise under the control or jurisdiction of the District, for collecting, pumping, and transporting Wastewater to a Sewage Facility and includes but is not limited to all such pipes, conduits, drains and other equipment and facilities which connect with those of the District;

h. In Section 2.1, in the definition "Storm Sewer", the word "Storm Water" is deleted and replaced with the word "Stormwater";

i. In Section 2.1, in the definition "Storm Water", the word "Storm Water" is deleted and replaced with the word "Stormwater";

j. In Section 3.3 the word "Storm Water" is deleted and replaced with the word "Stormwater";

k. In Section 3.4 the word "forthwith" is deleted and replaced with the word "immediately";

l. In Section 5 the word "BYLAWS," is added after the word "ORDERS,";

m. In Section 5.1(c) the word "Storm Water" is deleted and replaced with the word "Stormwater";

n. In Section 5.6 the word "shall" is deleted and replaced with the word "must";

o. In Section 5.7 the word "revoke" is deleted and replaced with the word "cancel";

p. In Section 5 the following sections are added:

5.7.1 The Sewage Control Manager, in addition to their powers under section 5.7, may:

a) upon request from the holder of a Waste Discharge Permit, suspend a Waste Discharge Permit for up to but not longer than the length of time requested; and

b) cancel a Waste Discharge Permit if the holder of the Waste Discharge Permit:

i) is a corporation that is liquidated, dissolved or otherwise wound up or is an extra provincial company within the meaning of the *Business Corporations Act* SBC 2002, c. 57, that has had its registration cancelled under Part 11 or 12 of that Act;

ii) is a partnership that is dissolved; or

iii) requests that the Waste Discharge Permit be cancelled;

c) reinstate a Waste Discharge Permit that has been suspended, but not cancelled, provided that the holder of a Waste Discharge Permit submits

an application for reinstatement accompanied by payment of all fees owing at the time that the Waste Discharge Permit was suspended.

5.7.2 For greater certainty, a Waste Discharge Permit that is suspended or cancelled is not a valid and subsisting permit.

q. In Section 5.8 the word “shall” is deleted and replaced with the word “must”;

r. In Section 5.8 the word “forthwith” is deleted and replaced with the word “immediately”;

s. In Section 5.9 the word “shall” is deleted and replaced with the word “must”;

t. In Section 5.10 the word “consent” is deleted and replaced it with the word “approval”;

u. Section 6.1 is deleted and replaced with the following:

6.1 Whether or not a person holds and is in compliance with this Bylaw, the Grease Interceptor Bylaw, the Fermentation Operations Bylaw, the Hospital Pollution Prevention Bylaw, the Trucked Liquid Waste Bylaw, a Waste Discharge Permit, Order, or Code of Practice, a Sewage Control Manager may, for any of the purposes set out in section 1, issue a Discharge Abatement Order in accordance with section 6.2.

v. Section 6.2 is deleted and replaced with the following:

6.2 A Discharge Abatement Order may:

a) require a person to alter the quantity, composition, duration and timing of the discharge or cease discharge of Non-Domestic Waste or Non-Domestic Trucked Liquid Waste to a Sewer or Sewage Facility; and

b) include any terms or conditions that could be included in a Waste Discharge Permit.

w. Section 7 is deleted in its entirety;

x. In Section 8.1 the phrase “sample and analyze the discharge” is deleted and replaced with the phrase “measure, sample, and analyze the discharge”;

y. In Section 8.2 the word “sampling” is deleted and replaced with the phrase “measuring and sampling”;

z. In Section 9.1 the word “may” is deleted and replaced with the word “must”;

aa. Section 10.2 is deleted and replaced with the following:

10.2 Any person who contravenes any provision of this Bylaw, the Grease Interceptor Bylaw, the Fermentation Operations Bylaw, the Sani-dump Bylaw, the Trucked Liquid Waste Bylaw, the Hospital Pollution Prevention Bylaw, a Waste Discharge Permit, Trucked Liquid Waste Authorization, Order, or Code of Practice shall be liable to the District for and shall indemnify the District from all costs, expenses, damages and injuries resulting from the contravention. This section does not limit any other remedies or actions the District may have under this Bylaw or otherwise at law.

bb. Section 13.1 is deleted and replaced with the following:

13.1 Any person who contravenes this Bylaw, a Waste Discharge Permit, Order, or a Code of Practice commits an offence and is liable to a fine not exceeding $10,000.

cc. In Schedule "A", Section 6 is deleted and replaced with the following:

6. <u>BIOMEDICAL WASTE</u>

Any Waste that, at the point of discharge into a Sewer or Sewage Facility, contains Biomedical Waste as defined in the Hazardous Waste Regulation as amended from time to time pursuant to the *Environmental Management Act* with the exception of Biomedical Waste from a Hospital in accordance with an approved Hospital Pollution Prevention Plan.

dd. In Schedule "A", Section 8 is deleted and replaced with the following:

8. <u>HAZARDOUS WASTE</u>

Any waste defined as Hazardous Waste in the *Environmental Management Act* with the following exceptions:

a) Hazardous Waste in compliance with the effluent standards contained in Schedule 1.2, Column 3 of the Hazardous Waste Regulation; and
b) Biomedical Waste from a Hospital in accordance with an approved Hospital Pollution Prevention Plan.

ee. In Schedule "B", in Section 3, the word "Sewerage Facility" is deleted and replaced with the word "Sewage Facility":

ff. In Schedule "C", Section 2.13 is deleted and replaced with the following:

2.1.3 The Permit Application Fee must be paid at the time the application for a Waste Discharge Permit is submitted, or within 30 days of an invoice being issued if an invoice is issued. The Waste Discharge Permit application will not

be processed before the Permit Application Fee is paid in full, and if an invoice is issued, may be considered withdrawn if the Permit Application Fee is not paid within 30 days of the invoice being issued.

gg. In Schedule "C", Section 2.3.2 is deleted;

hh. In Schedule "C", in Section 2.3.3, the phrase "Effective January 1, 2011, the Permit Administration Fee" is deleted and replaced with the phrase "The Permit Administration Fee";

ii. In Schedule "C", Section 2.3.5 is deleted and replaced with the following:

2.3.5 Until December 31, 2023, the Permit Administration Fee is payable on the issuance of a Waste Discharge Permit and by each anniversary thereafter. The Permit Administration Fee may be prorated for billing periods of less than one year.

After January 1, 2024, each Waste Discharge Permit holder must pay to the District the Permit Administration Fee on the issuance of a Waste Discharge Permit and annually by June 30 thereafter. The Permit Administration Fee may be prorated for billing periods of less than one year.

jj. In Schedule "C", in Section 2.3.6, the word "without effect" is deleted and replaced with the word "suspended";

kk. In Schedule "C", Section 2.3.7 is deleted and replaced with the following:

2.3.7 Permit Administration Fees not paid by the due date will be subject to a monthly interest charge of 1.25% per month (15% per annum).

ll. In Schedule "C", Sections 2.3.8 and 2.3.9 are deleted;

mm. In Schedule "C", in Section 2.4, the word "Periods" is deleted and replaced with the word "Terms";

nn. In Schedule "C", Section 2.4.1 and Table D, are deleted and replaced with the following:

2.4.1 Where a Waste Discharge Permit is issued for a term of less than 365 days, the Permit Administration Fee (at the rate applicable on the date the Permit Administration Fee is payable) will be reduced in accordance with Table D:

Table D – Permit Administration Fee reduction for Waste Discharge Permits with terms of less than 365 days

Waste Discharge Permit Term	Permit Administration Fee Reduction

Less than 7 days	90%
7 days - 30 days	80%
31 days - 90 days	60%
91 days - 180 days	40%
181 days - 270 days	20%
271 days - 365 days	No reduction

oo. In Schedule "C", the following section is added:

2.5.2 If a Waste Discharge Permit is cancelled at the request of the holder of the permit, the District will prorate the Permit Administration Fee and refund the amount of any overpayment. Refunds for less than $100 will not be issued.

pp. In Schedule "E", Section 4.1 is deleted and replaced with the following:

4.1 All Dental Operations that discharge Wastewater containing Dental Amalgam to Sewer must install a Certified Amalgam Separator according to manufacturer's or supplier's instructions and specifications. No Dental Operation shall discharge Non-Domestic Waste containing Dental Amalgam to Sewer unless the Non-Domestic Waste has been treated using the Certified Amalgam Separator prior to discharge to Sewer.

qq. In Schedule "E", in Section 4.3, the word "shall" is deleted and replaced with the word "must";

rr. In Schedule "E", in Section 4.4, the word "shall" is deleted and replaced with the word "must";

ss. In Schedule "E", in Section 4.5, the word "shall" is deleted and replaced with the word "must";

tt. In Schedule "E", in Section 5.1, the word "shall" is deleted and replaced with the word "must";

uu. In Schedule "E", in Section 5.2, the word "shall" is deleted and replaced with the word "must";

vv. In Schedule "F", in Section 2.3 the phrase "non-domestic wastewater" is deleted and replaced with the phrase "Non-Domestic Waste";

ww. In Schedule "F", in Section 2.4, the phrase "non-domestic wastewater" is deleted and replaced with the phrase "Non-Domestic Waste";

xx. In Schedule "F", in Section 2.5, the phrase "non-domestic wastewater" is deleted and replaced with the phrase "Non-Domestic Waste";

yy. In Schedule "F", Section 2.6 is deleted and replaced with the following:

2.6 If the holder of a Waste Discharge Permit fails to keep records and provide information required to be submitted by a Waste Discharge Permit to calculate the usage charge, then the Sewage Control Manager may, in their discretion, prescribe the volumes of Non-Domestic Waste, BOD, and TSS concentrations to calculate the total usage charge.

zz. In Schedule "F", the following section is added:

2.11. If the holder of a Waste Discharge Permit fails to keep records and provide information required to be submitted by a Waste Discharge Permit to calculate the capacity charge, then the Sewage Control Manager may, in their discretion, prescribe the volumes of Non-Domestic Waste, BOD, and TSS concentrations to calculate the total capacity charge.

aaa. In Schedule "F", Sections 3 and 3.1 are deleted;

bbb. In Schedule "G", in Section 4.1, the phrase "On the date of adoption of this Code of Practice, the owner" is deleted and replaced with the phrase "The owner";

ccc. In Schedule "G", in Section 6.5, the phrase "shall forthwith" is deleted and replaced with the phrase "must immediately";

ddd. In Schedule "H", in Section 4.1, the phrase "On or before January 1, 2009, an operator" is deleted and replaced with the phrase "An operator";

eee. In Schedule "H", in Section 4.7 the word "shall" is deleted and replaced with the word "must";

fff. In Schedule "H", in Section 5.1, the word "shall" is deleted and replaced with the word "must";

ggg. In Schedule "H", in Section 5.2 the word "shall" is deleted and replaced it the word "must";

hhh. In Schedule "H", in Section 5.4, the phrase "shall forthwith" is deleted and replaced with the phrase "must immediately".

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

Passed and finally adopted this _____ day of _____, _____.

George V. Harvie, Chair

Dorothy Shermer, Corporate Officer

To: Liquid Waste Committee

From: Dana Zheng, Program Manager, Policy, Planning and Analysis, Liquid Waste Services

Date: July 11, 2023 Meeting Date: July 19, 2023

Subject: **Greater Vancouver Sewerage and Drainage District Hospital Pollution Prevention Amendment Bylaw No. 367, 2023**

RECOMMENDATION

That the GVS&DD Board:

a) give first, second, and third reading to *Greater Vancouver Sewerage and Drainage District Hospital Pollution Prevention Amendment Bylaw No. 367, 2023*; and

b) pass and finally adopt *Greater Vancouver Sewerage and Drainage District Hospital Pollution Prevention Amendment Bylaw No. 367, 2023*.

EXECUTIVE SUMMARY

The *Greater Vancouver Sewerage and Drainage District Hospital Pollution Prevention Amendment Bylaw No. 367, 2023* (Hospital P2 Amendment Bylaw) is presented for Board adoption. There are five proposed amendments, with multiple instances of the same changes in different sections of the bylaw. Changes include terminology and consistency improvements to address operational and enforceability issues, and improve accuracy and clarity of the *Greater Vancouver Sewerage and Drainage District Hospital Pollution Prevention Bylaw No. 319, 2018*. No policy or material revisions were made, and thus no engagement with stakeholders is required.

PURPOSE

To seek GVS&DD Board adoption of the Hospital P2 Amendment Bylaw.

BACKGROUND

The *Greater Vancouver Sewerage and Drainage District Sewer Use Bylaw No. 299, 2007* (SUB) (Reference 1) and associated sector-specific bylaws regulate the discharge of waste into sewers and drains connected to a sewage facility operated by the GVS&DD. The *Greater Vancouver Sewerage and Drainage District Hospital Pollution Prevention Bylaw No. 319, 2018* (Hospital P2 Bylaw) (Reference 2) was adopted in 2018 and requires hospitals to develop pollution prevention plans to reduce the discharge of pollutants into the wastewater system.

Metro Vancouver routinely reviews and updates bylaws to ensure accuracy, clarity and enforceability of the policy. It was determined that bylaw amendments are required to improve accuracy, clarity and enforceability of both the SUB and the Hospital P2 bylaw. These proposed revisions resolve straightforward operational and enforceability issues that are aligned with current enforcement practices and the original intent of the bylaws. The scope of the revisions do not constitute policy or material changes and thus do not require engagement with stakeholders. This report and the report titled, “Greater Vancouver Sewerage and Drainage District Sewer Use

Amendment Bylaw No. 366, 2023" dated July 11, 2023, are complementary and are intended to be adopted together.

PROPOSED HOSPITAL P2 BYLAW AMENDMENTS

There are five amendments proposed, with multiple instances of the same changes in different sections of the bylaw. The types of proposed changes to the Hospital P2 Bylaw are:

- Terminology improvements and reference updates to improve consistency. Revisions improve accuracy, reduce ambiguity and resolve interpretation and enforceability issues.
- Updates to references that are redundant and outdated. Revisions reduce duplication and improve clarity and enforceability.
- Operational and enforceability improvements add clarity to the responsibility and authority granted to the Sewage Control Manager and revise clauses to ensure current operational and enforcement practices are substantiated.

ALTERNATIVES

1. That the GVS&DD Board:
   a) give first, second, and third reading to *Greater Vancouver Sewerage and Drainage District Hospital Pollution Prevention Amendment Bylaw No. 367, 2023*; and
   b) pass and finally adopt *Greater Vancouver Sewerage and Drainage District Hospital Pollution Prevention Amendment Bylaw No. 367, 2023*.
2. That the GVS&DD Board receive for information the report dated July 11, 2023 titled "Greater Vancouver Sewerage and Drainage District Hospital Pollution Prevention Amendment Bylaw *No. 367, 2023*" and provide alternate direction to staff.

FINANCIAL IMPLICATIONS

There are no financial implications associated with this report.

CONCLUSION

Metro Vancouver routinely reviews and updates bylaws to ensure accuracy, clarity and enforceability. The proposed amendments to the Hospital P2 Bylaw address: a) terminology improvements; b) updates to redundant and outdated references; and c) operational and enforceability improvements. The scope of the revisions do not constitute policy or material changes and thus do not require engagement with stakeholders.

This report and the report dated July 11, 2023, titled, "Greater Vancouver Sewerage and Drainage District Sewer Use Bylaw Amendment Bylaw 366, 2023" are complementary and are intended to be adopted together.

Attachment

Greater Vancouver Sewerage and Drainage District Hospital Pollution Prevention Amendment Bylaw No. 367, 2023 (59776540)

References

1. GVS&DD Sewer Use Bylaw No. 299, 2007
2. GVS&DD Hospital Pollution Prevention Bylaw No. 319, 2018

59136249

GREATER VANCOUVER SEWERAGE AND DRAINAGE DISTRICT
BYLAW NO. 367, 2023
A bylaw to amend "Hospital Pollution Prevention Bylaw No. 319, 2018"

WHEREAS:

A. The Greater Vancouver Sewerage and Drainage District Board (the "Board") adopted the Hospital Pollution Prevention Bylaw No. 319, 2018 on October 26, 2018.

B. The Board wishes to amend Hospital Pollution Prevention Bylaw No. 319, 2018.

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 Hospital Pollution Prevention Amendment Bylaw No. 367, 2023".

Amendment of Bylaw

2. "Hospital Pollution Prevention Bylaw No. 319, 2018", is amended as follows:

   a. Section 6(a) is deleted and replaced with the following:

      (a) *biomedical waste*, unless such discharge is from a *hospital* in accordance with a *hospital pollution prevention plan* approved by the *Sewage Control Manager*;

   b. Section 6(b) is deleted and replaced with the following:

      (b) *hazardous waste*, unless such discharge is from a *hospital* in accordance with a *hospital pollution prevention plan* approved by the *Sewage Control Manager*; and

   c. In Section 7(d) the word "*storm water*" is deleted and replaced with the word "*stormwater*";

   d. In Section 7(f) the word "*ground water*" is deleted and replaced with the word "*groundwater*";

   e. Section 8 is deleted and replaced with the following:

      8. Every *hospital* must submit a *hospital pollution prevention plan* to the *Sewage Control Manager* by the date specified by the *Sewage Control Manager*, and every five years thereafter. The *hospital pollution prevention plan* must be in such form, and must include such information, drawings, and specifications as set out in section 12, and as a *Sewage Control Manager* may prescribe from time to time.

f. Section 11 is deleted and replaced with the following:

11. Every *hospital* must submit a report to the *Sewage Control Manager* detailing the actions taken in the previous year to complete the *pollution prevention measures* specified in the *hospital*'s approved *hospital pollution prevention plan*.

g. In Section 23(b) the phrase "*Greater Vancouver Sewerage and Drainage District Food Sector Grease Interceptor Bylaw No. 268, 2012*" is deleted and replaced with the phrase "*Grease Interceptor Bylaw*".

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

Passed and finally adopted this _____ day of _____, _____.

George V. Harvie, Chair

Dorothy Shermer, Corporate Officer

To: Liquid Waste Committee

From: Cheryl Nelms, General Manager, Project Delivery
Nick Kassam, General Manager, Procurement & Real Estate Services
Dean Rear, CFO & General Manager, Financial Services

Date: July 11, 2023 Meeting Date: July 19, 2023

Subject: **Phase 2 Design Build Consulting Services for the Lions Gate Secondary Wastewater Treatment Plant - Change Order to AECOM Contract PC14-0408**

RECOMMENDATION

That GVS&DD Board:

a) approve Phase 2 Design Consulting Services for the Lions Gate Secondary Wastewater Treatment Plant of AECOM Contract PC-0408 through a change order in the amount of $113,000,000, for a total contract value of $153,000,000 (exclusive of taxes), subject to final review by the Commissioner; and
b) authorize the Commissioner and the Corporate Officer to execute the required documentation once the Commissioner is satisfied that the change order should proceed.

EXECUTIVE SUMMARY

This report is recommending that GVS&DD proceed with a change order to the AECOM contract to complete Phase 2 work as the Engineer of Record for the North Shore Wastewater Treatment Plant project (formerly known as the Lions Gate Secondary Wastewater Treatment Plant). As a result of extensive deficiencies in the prior contractor's design and construction works, Phase 2 will require extensive effort for AECOM.

Phase 2 activities for AECOM include completion of the detailed design, provision of support to GVS&DD for the procurement of owner-supplied equipment, providing design and comprehensive construction support over an extended construction duration, leading the wastewater commissioning process, condensing the design duration and implementing design optimization opportunities for the project.

On March 25, 2022, due to their extensive involvement in the project as the Owner's Engineer from initiation of the project, AECOM was authorized by the GVS&DD Board to proceed as Engineer of Record with Phase 1 work. At that time, contract approval for Phase 2 work was anticipated to be required at a later date.

PURPOSE

Pursuant to the *GVS&DD Officers and Delegation Bylaw No. 284, 2014* (Bylaw) and *Board Policy No. FN-006*, procurement contracts which exceed a value of $5 million require the approval of the Board of Directors.

BACKGROUND

Prior to termination, Acciona Wastewater Solutions LP (Project Co.) was responsible for the design, construction, commissioning, and process performance for the plant. AECOM was the owner's engineer, reviewing all design submissions by Project Co on behalf of Metro Vancouver. AECOM was successful proponent of public competition RFP No. 14-205 - Design Build Consulting Services for the Lions Gate Secondary Wastewater Treatment Plant. This project has since been renamed the North Shore Wastewater Treatment Plant Project.

Following termination of the Project Agreement with Project Co., Metro Vancouver wanted to expedite the delivery of the project while retaining the ability for competitive pricing of construction for the final delivery of the project. To do this, Metro Vancouver adjusted the project delivery model to retain a general contractor and a design consultant separately. AECOM was uniquely positioned to assume the role of design consultant for the completion of the design of the project given their participation in the project from initiation, which included the development of the indicative design and technical specifications through to fulfilling their current role as owner's engineer.

Metro Vancouver opted to deliver the remainder of the project in two phases:

- Phase 1: design delivery includes design due diligence review and advancement, while construction delivery includes pre-construction services and early works; within Phase 1, the design consultant (AECOM) and the construction manager (PCL) have been working collaboratively with Metro Vancouver to advance the design and to develop a detailed execution plan, schedule, and cost estimate to complete the project.

- Phase 2: design delivery includes design completion, provision of support to GVS&DD for the procurement of owner-supplied equipment, and comprehensive construction field services; construction delivery includes main construction and early commissioning.

The GVS&DD Board authorized a contract amendment to AECOM of $15,000,000 to proceed with Phase 1 as the design consultant at the March 25, 2022 Board meeting, with focus on a due diligence review of the Project Co. design and support to PCL for development of a cost and schedule to complete the Project. Based on the understanding of the project and its expected level of completion, AECOM's estimated value for both phases at that time was $60,000,000.

At the time of the termination of Project Co., it was anticipated by staff, based on Project Co.'s submittals, that the design effort was likely less than the approximately 80% complete Project Co. had reported. AECOM's investigations and comprehensive design reviews during Phase 1 found that the overall level of completeness reported by Project Co. was significantly misrepresented and that there were a greater number of non-compliances with the Project Agreement than previously documented. Extensive constructability reviews between AECOM, PCL, and Metro Vancouver have been required because design was not as advanced as reported by Project Co. As a result, AECOM's efforts in Phase 1 were significantly greater than initially anticipated.

In addition to the design deficiencies identified by AECOM, PCL and Metro Vancouver, there have also been deficiencies identified in the concrete placed by Project Co., and in some cases, more extensive concrete deficiencies than originally anticipated. This has resulted in significant design support effort and field reviews by AECOM during Phase 1. Due to the increased level of effort required, a change order of $25,000,000 to AECOM's contract was authorized by the GVS&DD Board at the January 27, 2023 meeting to complete Phase 1 work.

PHASE 2 PROPOSAL

AECOM has provided a proposal in the amount of $113,000,000 to support and complete design in Phase 2, for a total contract value of $153,000,000.

AECOM's Phase 2 services includes design completion, procurement support, field reviews, enhanced construction field services, and commissioning. Due to the increased level of effort and significant deficiencies discovered in Phase 1, the fees reflect the increased efforts required for both cost and schedule development. In addition, fees reflect the increased efforts to complete the following:

- The addition of enhanced field support services to monitor construction activities and provide project management support to Metro Vancouver. This is above and beyond the field reviews required for the Engineer of Record.

- Due to the significant deficiencies in both design and construction, the schedule has been extended, requiring AECOM to adjust their level of effort during construction for field services to match the overall anticipated construction schedule.

- Because the design was not complete at termination of the Project Agreement with Project Co., and due to the significant design deficiencies to be overcome, AECOM has created an accelerated design schedule that optimizes Issued for Construction drawings that align with the construction critical path. This accelerated design schedule has resulted in additional design effort not anticipated at termination.

- Project Co. had a number of equipment and materials contracts that were in various stages of finalization at the time of termination. Metro Vancouver and AECOM have been working together to understand the stipulations of the current contracts and are working to transfer the contracts from Project Co. to Metro Vancouver. AECOM is integral in the process, providing technical and procurement support. This process has been ongoing since termination and is anticipated to continue for several months through the design phase.

- Implementation of ongoing value engineering opportunities and design optimizations.

The project team reviewed the AECOM rates against other Metro Vancouver engineering assignments and found them to be comparable. A member of the NSWWTP Expert Advisory Panel and retired executive of a global engineering wastewater design firm reviewed and agreed with the team's recommendation to proceed with the amendment. Based on this review, as well as the size,

scale and inherent complexities of the project, the total design consulting services fee of $153,000,000 is representative of what we would expect to obtain from a competitive process.

ALTERNATIVES

1) That the GVS&DD Board:
   a) approve Phase 2 Design Consulting Services for the Lions Gate Secondary Wastewater Treatment Plant of AECOM Contract PC-0408 through a change order in the amount of $113,000,000, for a total contract value of $153,000,000 (exclusive of taxes), subject to final review by the Commissioner; and
   b) authorize the Commissioner and the Corporate Officer to execute the required documentation once the Commissioner is satisfied that the change order should proceed.

2) That the GVS&DD Board receive for information the report dated July 11, 2023, titled, "Phase 2 Design Build Consulting Services for the Lions Gate Secondary Wastewater Treatment Plant - Change Order to AECOM Contract PC14-0408" and direct staff to report back with options for an alternate course of action.

FINANCIAL IMPLICATIONS

The current approved budget for the North Shore Wastewater Treatment Plant Program is $1.058B. At this time, the approved project budget can accommodate the requested change order to the AECOM contract and the cash flows for the project will be comparable to that currently projected in the Financial Plan. However, staff are working to adjust the financial forecast in advance of the October Board Budget adoption.

If the GVS&DD Board approves Alternative 1, the contract with AECOM will be amended by Change Order in the amount of up to $113,000,000 (exclusive of taxes) to provide the Phase 2 design delivery.

CONCLUSION

It is recommended that the GVS&DD Board approve Phase 2 Design-Build Consulting Services for the Lions Gate Secondary Wastewater Treatment Plant of AECOM Contract PC-0408 through a change order in the amount of $113,000,000, for a total contract value of $153,000,000 (exclusive of taxes).

59060103

To: Liquid Waste Committee

From: Cheryl Nelms, General Manager, Project Delivery
Nick Kassam, General Manager, Procurement & Real Estate Services
Dean Rear, CFO and General Manager, Financial Services

Date: July 11, 2023 Meeting Date: July 19, 2023

Subject: **Award of RFP No. 23-121 Technical Services for the North Shore Wastewater Treatment Plant Project**

RECOMMENDATION

That the GVS&DD Board:

a) approve award of RFP No. 23-121 for Technical Services for the North Shore Wastewater Treatment Plant Project, in the amount of $25,000,000 (exclusive of taxes) to Stantec Consulting Ltd., subject to final review by the Commissioner; and
b) authorize the Commissioner and the Corporate Officer to execute the required documentation once the Commissioner is satisfied that the award should proceed.

EXECUTIVE SUMMARY

Stantec Consulting Ltd. ranked highest overall, provided the lowest cost, had the highest technical score and demonstrated best value overall for Metro Vancouver.

To support Metro Vancouver's due diligence and oversight of the work to complete the North Shore Wastewater Treatment Plant Project, the GVS&DD issued RFP No. 23-121 on April 14, 2023 to secure an Owner's Engineer. RFP No. 23-121 was advertised publicly and the procurement was executed in accordance with the terms and condition of Metro Vancouver's Procurement Policy. The RFP No. 23-121 evaluation team have considered the proposals received, and on that basis recommend that the GVS&DD Board award the RFP No. 23-121 to Stantec Consulting Ltd.

Following termination of the contract with Acciona Wastewater Solutions LP (Project Co.) to design, construct, and commission the plant, a new delivery model was created. Metro Vancouver amended the contract of the previous owner's engineer, AECOM, to allow them to become the engineer of record. It is recommended that Stantec Consulting Ltd. be the new Owner's Engineer, providing advice and representing Metro Vancouver's interests on the project.

PURPOSE

Pursuant to the GVS&DD Officers and Delegation *Bylaw No. 284, 2014* (Bylaw) and the *Board Policy No. FN-006*, procurement contracts which exceed a value of $5 million require the approval of the GVS&DD Board.

BACKGROUND

In January 2022, Metro Vancouver terminated its contract with Acciona Wastewater Solutions LP (Project Co.) to design, construct, and commission the North Shore Wastewater Treatment Plant.

Following the termination of the Project Agreement with Project Co., Metro Vancouver wanted to expedite the delivery of the project while retaining the ability for competitive pricing of construction for the final delivery of the project. To do this, Metro Vancouver adjusted the project delivery model to retain a general contractor and a design consultant separately. Under the new delivery model, Metro Vancouver amended the contract of the previous owner's engineer to allow them to become the Engineer of Record, creating the need to retain a new owner's engineer who will represent Metro Vancouver's interests on the project. To support this requirement and with design development and early works construction underway, Metro Vancouver proposes to award a contract for an owner's engineer to provide design compliance reviews and project management support to Metro Vancouver throughout the remainder of Phase 1 work and during the design, construction, and commissioning of the project in Phase 2. Having this resource available will provide support in the oversight of both design and construction during a complex and challenging phase in the project, as well as provide expertise to the project team and Metro Vancouver, as and when required.

PROCUREMENT SUMMARY

The evaluation of proposals was conducted in two stages. Stage 1 contemplated technical requirements, weighted at 70% of total score (i.e. proponent qualifications, proposed methodology and work plan). Stage 2 contemplated financial requirements (fees), weighted at 30% of total score. The RFP stipulated that proposals receiving a score of less than 40% out of the 70% possible for technical requirements may be eliminated from further consideration. Metro Vancouver received five proposals. Following Stage 1 evaluation two of the five proposals were eliminated from further consideration due to not meeting minimum technical requirements. Technical requirements were evaluated by the Project Delivery Department and financial requirements were evaluated by the Procurement Department. The following three proposals were fully reviewed.

Proponent	**Price (excluding taxes)**
Stantec Consulting Ltd.	$21,113,404
CDM Smith Canada ULC	$23,014,224
WSP Canada Inc.	$25,660,426

After a comprehensive and detailed evaluation of the proposals, the evaluation team concluded that the proposal submitted by Stantec Consulting Ltd. ranked highest overall, provided the lowest cost, had the highest technical score, and demonstrated best value overall for Metro Vancouver for the following reasons:

1. Proponent Qualifications: Stantec demonstrated a very good understanding of RFP 23-121 requirements, the projects referenced in their proposal are similar in scope, size and complexity as the NSWWTP and Stantec proposed a strong and experienced team.
2. Proposed Methodology and Work Plan: the project methodology, work plan and tasks put forward by Stantec Consulting Ltd. demonstrate a good understanding of the project and details were provided that demonstrate that the submission aligns with the scope of work set out in RFP 23-121.

3. Financial Requirements: The fee submission put forward by Stantec Consulting Ltd. was the lowest cost and Stantec did not take any exceptions to Metro Vancouver's consulting contract terms and conditions.

A negotiation meeting with Stantec Consulting was held on June 19, 2023 and the terms of the contract were agreed to and finalized, subject to receiving approval from the GVS&DD Board. The contract value agreed to is $25,000,000 (exclusive of taxes), which includes an additional $3,886,596 over the original proposal price resulting from an agreed increase in the hours for project management support and technical reviews and a contingency as a management reserve.

ALTERNATIVES

1) That the GVS&DD Board:
   a) approve award of RFP No. 23-121 for Technical Services for the North Shore Wastewater Treatment Plant Project, in the amount of $25,000,000 (exclusive of taxes) to Stantec Consulting Ltd., subject to final review by the Commissioner; and
   b) authorize the Commissioner and the Corporate Officer to execute the required documentation once the Commissioner is satisfied that the award should proceed.

2) That the GVS&DD Board receive for information the report dated July 11, 2023, titled "Award of RFP No. 23-121 Technical Services for the North Shore Wastewater Treatment Plant Project" and direct staff to report back with options for an alternate course of action.

FINANCIAL IMPLICATIONS

The current approved budget for the North Shore Wastewater Treatment Plant Program is $1.058B. At this time, the approved project budget can accommodate the requested change order to the AECOM contract and the cash flows for the project will be comparable to that currently projected in the Financial Plan. However, staff are working to adjust the financial forecast in advance of the October Board Budget adoption.

CONCLUSION

It is recommended that GVS&DD Board authorize the Commissioner and the Corporate Officer to approve the award of RFP No. 23-121 for Technical Services for the North Shore Wastewater Treatment Plant Project, in the amount of $25,000,000 (exclusive of taxes) to Stantec Consulting Ltd.

60335963

To: Liquid Waste Committee

From: Peter Navratil, General Manager, Liquid Waste Services

Date: July 14, 2023 Meeting Date: July 19, 2023

Subject: **Manager's Report**

RECOMMENDATION
That the Liquid Waste Committee receive for information the report dated July 14, 2023 titled "Manager's Report".

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1. CICE Funding for Biomethane and Green Hydrogen Pilot

The BC Centre for Innovation in Clean Energy (CICE) awarded $800,000 in funding for Metro Vancouver's "Boosting Biomethane and Producing Green Hydrogen from Liquid Waste" project (References 1 and 2).

Metro Vancouver is piloting a technology that enhances microbial activity in anaerobic digestion of wastewater to create more renewable natural gas (RNG). Building on previous SIF-funded research by UBC, the patented Syntrophic Enrichment of Enhanced Digestion (SEED) Reactor uses electro-conductive materials that create optimum growing conditions for methane-producing microbes to increase biomethane production. Injecting green hydrogen generated from wastewater byproducts into the SEED Reactor activates other microbes that convert carbon dioxide into biomethane. The RNG produced from a single digester with this technology would reduce greenhouse gas emissions by thousands of tonnes per year. The pilot project will take place at the Lulu Island Wastewater Treatment Plant in Richmond, BC.

2. Iona Island Wastewater Treatment Plant Projects – Barge Berth Facility

Deering Island residents have voiced their concerns to members of the Liquid Waste Committee (Attachment 1) about a possible barge berth facility across the North Arm of the Fraser River from the west end of Deering Island.

The conceptual design for the Iona Island Wastewater Treatment Plant (IIWWTP) projects, approved by the GVS&DD Board in March 2022, includes a proposed barge berth facility to be located near the site of the new treatment plant. The barge berth will provide an efficient means for transporting construction materials to the IIWWTP project site for approximately 10 years.

The barge berth is in the preliminary design phase, which will include further study of potential facility locations and an assessment of the noise, dust, light, and related health impacts at each of the locations considered. In September 2023, Metro Vancouver will engage Deering Island

residents on this study, including assessments of noise, dust, light, and related health impacts for each location.

Constructing a temporary barge berth will help reduce overall construction duration of the treatment plant upgrades and improve safety for cyclists, pedestrians, and vehicles travelling to Iona Island and Iona Beach Regional Park, which are only accessible via a single two-lane road. The barge berth will replace approximately 270 dump truck trips per day, reducing both traffic throughout the Lower Mainland and greenhouse gas emissions, consistent with regional objectives.

The barge berth is expected to be commissioned in late 2026 when it will operate up to six days a week with working hours in compliance with the City of Richmond noise bylaws. After 2030, the barge berth usage will diminish to 2-3 days per week.

3. Liquid Waste Committee 2023 Work Plan

The updated 2023 Work Plan (Attachment 2) shows the status of the Committee's key priorities for the year.

Attachments

1. Incoming Email from Deering Island Residents dated July 4, 2023 and Metro Vancouver Staff Response dated July 6, 2023
2. Liquid Waste Committee 2023 Work Plan

References

1. CICE Announces 2023 Open Call for Innovation Funding Recipients
2. Metro Vancouver - Boosting Biomethane and Producing Green Hydrogen from Liquid Waste

59869790

-----Original Message-----
From: [redacted]
Sent: Tuesday, July 4, 2023 9:45 AM
To: Klassen, Mike <Mike.Klassen@vancouver.ca>
Subject: [EXT] FW: IONA WASTE WATER TREATMENT PROPOSAL PLAN

City of Vancouver security warning: Do not click on links or open attachments unless you were expecting the email and know the content is safe.

Dear Mr. Klassen

Although we support the proposed expansion to the Iona waste water treatment plant and realize that it my be essential for long term waste management for the city of Vancouver, we are not in favour of the placement of the barge terminals at the north arm of the Fraser river directly opposite and in close proximity to Deering Island.
The two barges would be stationed only 200 yards from Deering Island park, residential homes and walking trails.
There would be unloading of construction material 13 hours per day, for 6 days per week for a duration of 10 years.

We are concerned with health, safety and environmental issues.

Air pollution, long term breathing in of particles can result in respiratory, cardiovascular and immune system dies ease.

We are concerned with excessive noise, there is already significant and worsening noise from YVR, consistent noise over decibel levels of 85 for an extended period of time will lead to deafness while continuous exposure at lower levels results in psychological and neurogenic disorder.

Constant exposure to light pollution will also effect our state of health.

This portion of the Fraser River is already narrow and a busy site. The addition of a permanent Barge Terminal will add to risk of even more strikes on the shoreline and potential mid river collisions.

We are also concerned with bird and fish habitat that are in our area.

We would appreciate you reconsidering and finding an alternative solution to the delivery of construction material to this project which we believe can be built away from Deering Island

Yours sincerely,
[redacted]

Sent from my iPad

From: Tom Sadleir
Sent: Thursday, July 6, 2023 7:45 AM
To: [redacted]
Cc: Klassen, Mike <Mike.Klassen@vancouver.ca>; Mochrie, Paul <Paul.Mochrie@vancouver.ca>
Subject: Iona Island Wastewater Treatment Plant Projects - Barge Berth Facility

Good morning [redacted]:

Thank you for your email regarding the Iona Island Wastewater Treatment Plant Projects and the proposed barge berth facility. Director Klassen has asked Metro Vancouver staff to respond.

As committed to Deering Island residents and Metro Vancouver's Board of Directors in March 2022, Metro Vancouver is further studying potential barge berth facility locations including an assessment of the noise, dust, light, and related health impacts at each of the locations considered.

In September 2023, Metro Vancouver will engage Deering Island residents on this study, at a time that works best for residents. An invitation to meet will be sent out in July.

Constructing a temporary barge berth will reduce the overall construction duration of the federally and provincially mandated treatment plant upgrade, and help reduce construction traffic on Ferguson Road, improving safety for cyclists, pedestrians, and vehicles travelling to Iona Island and Iona Beach Regional Park. The barge berth will replace approximately 270 dump trucks per day, reducing both traffic throughout the Lower Mainland and greenhouse gas emissions, consistent with regional objectives.

We look forward to meeting with you in September.

Regards,

Tom Sadleir
Communications and Engagement Manager
Iona Island Wastewater Treatment Plant Projects

External Relations
c. 604-363-2712

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SERVICES AND SOLUTIONS FOR A LIVABLE REGION

ATTACHMENT 2

Liquid Waste Committee 2023 Work Plan
Report Date: July 19, 2023

Priorities	
1st Quarter	**Status**
2023 Liquid Waste Capital Projects	Complete
2022 Wipe It, Green Bin It Campaign Results	Complete
2022 Microfibres Reduction Campaign Results	Complete
North Shore Wastewater Treatment Plant Project Update	Complete
Wet Weather Pricing - Proposed Amendments to GVS&DD Cost Apportionment Bylaw	Complete
2023 Liquid Waste Sustainability Innovation Fund Applications	Complete
Municipal Requests for Sewerage Area Boundary Amendments (as applicable)	Complete
Utility Policies (as applicable)	Complete
Contract Approvals as per *Procurement and Real Property Contracting Authority Policy*	Complete
2nd Quarter	
Annacis Island Wastewater Treatment Plant Project Update	Complete
Northwest Langley Wastewater Treatment Plant Project Update	Complete
North Shore Wastewater Treatment Plant Project Update	Complete
Liquid Waste Services Capital Expenditure Summary Update as at December 31, 2022	Complete
2023 Update on Liquid Waste Sustainability Innovation Fund Projects	Complete
Municipal Requests for Sewerage Area Boundary Amendments (as applicable)	Complete
Utility Policies (as applicable)	Complete
Contract Approvals as per *Procurement and Real Property Contracting Authority Policy*	Complete
3rd Quarter	
GVS&DD Food Sector Grease Interceptor Bylaw Amendment	In Progress
GVS&DD Sewer Use Bylaw and Fees Update	In Progress
Reclaimed Water Policy	In Progress
2023 Unflushables Campaign Results	In Progress
2022 GVS&DD Environmental Management and Quality Control Annual Report	In Progress
Liquid Waste Services Capital Expenditure Summary Update as at April 30, 2023	In Progress
Municipal Requests for Sewerage Area Boundary Amendments (as applicable)	In Progress
Utility Policies (as applicable)	In Progress
Contract Approvals as per *Procurement and Real Property Contracting Authority Policy*	In Progress
4th Quarter	
2024 Annual Budget & 5 Year Financial Plan - Liquid Waste	In Progress
Environmental Management System Update	In Progress
LWMP Review and Update, Report on Phase 2	In Progress
Lower Mainland Estuary Management Program	In Progress
Liquid Waste Services Capital Expenditure Summary Update as at August 31, 2023	In Progress
Drainage Areas Policy	In Progress
Sewage Catchment Area (Rawn) Amendment - Langley Servicing Plan	In Progress
Municipal Requests for Sewerage Area Boundary Amendments (as applicable)	In Progress
Utility Policies (as applicable)	In Progress
Contract Approvals as per *Procurement and Real Property Contracting Authority Policy*	In Progress