

**GREATER VANCOUVER SEWERAGE AND DRAINAGE DISTRICT (GVS&DD)
BOARD OF DIRECTORS****REGULAR BOARD MEETING****Friday, July 30, 2021****9:00 A.M.****28th Floor Boardroom, 4730 Kingsway, Burnaby, British Columbia**[Membership and Votes](#)**A G E N D A¹****A. ADOPTION OF THE AGENDA****1. July 30, 2021 Regular Meeting Agenda**

That the GVS&DD Board adopt the agenda for its regular meeting scheduled for July 30, 2021 as circulated.

B. ADOPTION OF THE MINUTES**1. June 25, 2021 Regular Meeting Minutes**

That the GVS&DD Board adopt the minutes for its regular meeting held June 25, 2021 as circulated.

*pg. 5***C. DELEGATIONS****D. INVITED PRESENTATIONS****E. CONSENT AGENDA**

Note: Directors may adopt in one motion all recommendations appearing on the Consent Agenda or, prior to the vote, request an item be removed from the Consent Agenda for debate or discussion, voting in opposition to a recommendation, or declaring a conflict of interest with an item.

¹ Note: Recommendation is shown under each item, where applicable. All Directors vote unless otherwise noted.

1. FINANCE AND INTERGOVERNMENT COMMITTEE REPORTS

1.1 Award of a Contract Resulting from Request for Proposal No. 20-103: Construction Services for Golden Ears Forcemain and River Crossing *pg. 10*

That the GVS&DD Board:

- a) approve a contract in the amount of up to \$83,628,768 (exclusive of taxes) to Pomerleau Inc., resulting from Request for Proposal 20-103: Construction Services for Golden Ears Forcemain and River Crossing, subject to final review by the Commissioner;
- b) direct staff to prepare a budget amendment to increase the Northwest Langley Wastewater Treatment Plant Expansion Program by \$39 million;
- c) direct staff to provide detailed options of potential budget reductions to offset, along with related risks, through the completion of the 2022 budget process; and
- d) authorize the Commissioner and the Corporate Officer to execute the required documentation once the Commissioner is satisfied that the award should proceed.

1.2 Iona Island Wastewater Treatment Plant Projects – Project Definition Update *pg. 15*

That the GVS&DD Board receive for information the report dated June 23, 2021, titled “Iona Island Wastewater Treatment Plant Projects – Project Definition Update”.

2. LIQUID WASTE COMMITTEE REPORTS

2.1 Iona Island Wastewater Treatment Plant Projects – Project Definition Update *pg. 25*

That the GVS&DD Board receive for information the report dated June 23, 2021, titled “Iona Island Wastewater Treatment Plant Projects – Project Definition Update”.

2.2 Engagement Plan for Liquid Waste Development Cost Charge Program Update *pg. 35*

That the GVS&DD Board direct staff to proceed with engagement on the proposed update to the liquid waste development cost charge program as described in the report dated June 25, 2021, titled “Engagement Plan for Liquid Waste Development Cost Charge Program Update”.

2.3 Award of Contract Resulting from Request for Proposal No. 21-019: Annacis Island Wastewater Treatment Plant Trickling Filters No. 2 & 4 – Trickling Filter Media, Rotary Distributor, and Foul Air Ducting Replacement *pg. 40*

That the GVS&DD Board:

- a) approve the award of a contract for an amount of up to \$37,477,304 (exclusive of taxes) to Pomerleau Inc., resulting from Request for Proposal No. 21-019: Annacis Island Wastewater Treatment Plant Trickling Filters No. 2 & 4 – Trickling Filter Media, Rotary Distributor, and Foul Air Ducting Replacement 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.

2.4 Award of Contract Resulting from Request for Proposal No. 20-002: Annacis Island Wastewater Treatment Plant Stage 5 Expansion – Phase 2, A506 Contract – Gravity Thickener Expansion *pg. 43*

That the GVS&DD Board:

- a) approve the award of a contract for an amount of up to \$36,335,060 (exclusive of taxes), to Maple Reinders Constructors Ltd. resulting from Request for Proposal No. 20-002: Annacis Island Wastewater Treatment Plant Stage 5 Expansion – Phase 2, A506 Contract – Gravity Thickener Expansion, 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.

3. ZERO WASTE COMMITTEE REPORTS

3.1 Solid Waste and Recycling Industry Advisory Committee Draft Terms of Reference *pg. 46*

That the GVS&DD Board receive for information the report dated July 9, 2021, titled “Solid Waste and Recycling Industry Advisory Committee Draft Terms of Reference”.

3.2 Sea to Sky Soils Organics Management Contract *pg. 58*

That the GVS&DD Board receive for information the report dated July 9, 2021, titled “Sea to Sky Soils Organics Management Contract”.

4. CLIMATE ACTION COMMITTEE REPORTS

4.1 Proposed Updates to the Sustainability Innovation Fund Policies *pg. 61*

That the GVS&DD Board approve the proposed updates to the Liquid Waste Sustainability Innovation Fund as presented in the report dated June 25, 2021, titled “Proposed Updates to the Sustainability Innovation Fund Policies”.

F. ITEMS REMOVED FROM THE CONSENT AGENDA

G. REPORTS NOT INCLUDED IN CONSENT AGENDA

H. MOTIONS FOR WHICH NOTICE HAS BEEN GIVEN

I. OTHER BUSINESS

1. GVS&DD Board Committee Information Items and Delegation Summaries *pg. 71*

J. BUSINESS ARISING FROM DELEGATIONS

K. RESOLUTION TO CLOSE MEETING

Note: The Board 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 GVS&DD Board close its regular meeting scheduled for July 30, 2021 pursuant to the *Community Charter* provisions, Section 90 (1) (e) and (g) as follows:

- “90 (1) A part of a board 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 board or committee considers that disclosure could reasonably be expected to harm the interests of the regional district; and
 - (g) litigation or potential litigation affecting the regional district.”

L. RISE AND REPORT (Items Released from Closed Meeting)

M. ADJOURNMENT/CONCLUSION

That the GVS&DD Board adjourn/conclude its regular meeting of July 30, 2021.

**GREATER VANCOUVER SEWERAGE AND DRAINAGE DISTRICT
BOARD OF DIRECTORS**

Minutes of the Regular Meeting of the Greater Vancouver Sewerage and Drainage District (GVS&DD) Board of Directors held at 9:33 a.m. on Friday, June 25, 2021 in the 28th Floor Boardroom, 4730 Kingsway, Burnaby, British Columbia.

MEMBERS PRESENT:

Burnaby, Chair, Director Sav Dhaliwal
North Vancouver City, Vice Chair Director
Linda Buchanan*

Anmore, Director John McEwen*
Burnaby, Director Pietro Calendino*
Burnaby, Director Mike Hurley*
Coquitlam, Director Craig Hodge*
Coquitlam, Director Richard Stewart*
Delta, Director George Harvie*
Delta, Director Dylan Kruger*
Electoral Area A, Director Jen McCutcheon*
Langley City, Director Gayle Martin*
Langley Township, Director Jack Froese*
Langley Township, Director Kim Richter*
Maple Ridge, Alternate Director Judy Dueck* for
Mike Morden
New Westminster, Director Jonathan Côté*
North Vancouver District, Director Lisa Muri*
Pitt Meadows, Director Bill Dingwall*
Port Moody, Director Rob Vagramov*

Richmond, Director Malcolm Brodie*
Richmond, Director Harold Steves*
Surrey, Director Linda Annis*
Surrey, Director Doug Elford*
Surrey, Director Laurie Guerra*
Surrey, Director Doug McCallum*
Surrey, Director Mandeep Nagra*
Surrey, Director Allison Patton*
Vancouver, Director Christine Boyle*
Vancouver, Director Adriane Carr*
Vancouver, Director Melissa De Genova*
Vancouver, Director Lisa Dominato*
Vancouver, Director Colleen Hardwick*
Vancouver, Alternate Director Pete Fry* for
Kennedy Stewart
Vancouver, Director Michael Wiebe*
West Vancouver, Director Mary-Ann Booth*
White Rock, Director Darryl Walker*
Commissioner Jerry W. Dobrovolny
(Non-voting member)

MEMBERS ABSENT:

Port Coquitlam, Director Brad West

STAFF PRESENT:

Amelia White, Legislative Services Coordinator, Board and Information Services
Chris Plagnol, Corporate Officer

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

A. ADOPTION OF THE AGENDA

1. June 25, 2021 Regular Meeting Agenda

It was MOVED and SECONDED

That the GVS&DD Board adopt the agenda for its regular meeting scheduled for June 25, 2021 as circulated.

CARRIED

B. ADOPTION OF THE MINUTES

1. May 28, 2021 Regular Meeting Minutes

It was MOVED and SECONDED

That the GVS&DD Board adopt the minutes for its regular meeting held May 28, 2021 as circulated.

CARRIED

C. DELEGATIONS

No items presented.

D. INVITED PRESENTATIONS

No items presented.

E. CONSENT AGENDA

It was MOVED and SECONDED

That the GVS&DD Board adopt the recommendations presented in the following items as presented in the June 25, 2021 GVS&DD Board Consent Agenda:

- 1.1 Board Appointments and Rescindments of Bylaw Enforcement Officers
- 1.2 Integrated Liquid Waste and Resource Management Plan: Biennial Reporting for 2019-2020
- 1.3 Award of Contract Resulting from Request for Proposal (RFP) No. 20-350: Construction Services for the Crescent Beach Force Main Stage 3 – Phase 1

CARRIED

The items and recommendations referred to above are as follows:

1.1 Board Appointments and Rescindments of Bylaw Enforcement Officers

Report dated May 27, 2021, from Ray Robb, Division Manager, Environmental Regulation and Enforcement, Parks and Environment, seeking the GVS&DD Board's approval to appoint and rescind appointments of Metro Vancouver and the City of Vancouver employees as Board-designated municipal sewage control officers.

It was MOVED and SECONDED

That the GVS&DD Board:

- a) pursuant to *Greater Vancouver Sewerage and Drainage District Sewer Use Bylaw No. 299, 2007* and Section 29 of the *Environmental Management Act*:
 - i. rescind the appointment of former City of Vancouver employee Linda Kwan as a municipal sewage control officer; and
 - ii. appoint Metro Vancouver employee Rei Van as a municipal sewage control officer; and
- b) pursuant to Section 28 of the *Offence Act* for the purpose of serving summons for alleged violations under *Greater Vancouver Sewerage and Drainage District Sewer Use Bylaw No. 299, 2007*:
 - i. rescind the appointment of former City of Vancouver employee Linda Kwan; and
 - ii. appoint Metro Vancouver employee Rei Van.

CARRIED

1.2 Integrated Liquid Waste and Resource Management Plan: Biennial Reporting for 2019-2020

Report dated June 10, 2021 from the Liquid Waste Committee, together with the report dated May 28, 2021, from Brent Burton, Division Manager, Policy, Planning and Analysis, Liquid Waste Services, requesting that the GVS&DD Board authorize staff to forward the attached Biennial Report to the BC Ministry of Environment and Climate Change Strategy, and arranging for the Liquid Waste Committee to receive public comments at its scheduled meeting of September 9, 2021.

It was MOVED and SECONDED

That the GVS&DD Board direct staff to:

- a) submit the "Biennial Report: 2019-2020" attached to the report titled "*Integrated Liquid Waste and Resource Management Plan: Biennial Reporting for 2019-2020*", dated May 28, 2021, as revised, in Volume 1 of the Biennial Report, under *Combined Sewer Separation*, by removing paragraph 2, 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: 2019-2020" attached to the report titled "*Integrated Liquid Waste and Resource Management Plan: Biennial Reporting for 2019-2020*" dated May 28, 2021, at the September 9, 2021 Liquid Waste Committee meeting.

CARRIED

1.3 Award of Contract Resulting from Request for Proposal (RFP) No. 20-350: Construction Services for the Crescent Beach Force Main Stage 3 – Phase 1

Report dated May 28, 2021, from Roy Moulder, Director, Purchasing and Risk Management, Financial Services and Jugoslav Bajkin, Division Manager, Collection Systems, Engineering, Design and Construction, Liquid Waste Services, advising

the GVS&DD Board of the results of the Request for Proposal No. 20-350: Construction Services for the Crescent Beach Force Main Stage 3 – Phase 1, and recommending the award of contract in the amount of up to \$16,564,714.06 (exclusive of taxes) to JJM Construction Ltd.

It was MOVED and SECONDED

That the GVS&DD Board:

- a) approve the award of a contract for an amount of up to \$16,564,714.06 (exclusive of taxes) to JJM Construction Ltd. resulting from Request for Proposal (RFP) No. 20-350: Construction Services for the Crescent Beach Force Main Stage 3 – Phase 1, 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

F. ITEMS REMOVED FROM THE CONSENT AGENDA

No items presented.

G. REPORTS NOT INCLUDED IN CONSENT AGENDA

No items presented.

H. MOTIONS FOR WHICH NOTICE HAS BEEN GIVEN

No items presented.

I. OTHER BUSINESS

1. GVS&DD Board Committee Information Items and Delegation Summaries

It was MOVED and SECONDED

That the GVS&DD Board receive for information the GVS&DD Board Committee Information Items and Delegation Summaries, dated June 25, 2021.

CARRIED

J. BUSINESS ARISING FROM DELEGATIONS

No items presented.

K. RESOLUTION TO CLOSE MEETING

No items presented.

L. RISE AND REPORT (Items Released from Closed Meeting)

No items presented.

M. ADJOURNMENT/CONCLUSION

It was MOVED and SECONDED

That the GVS&DD Board conclude its regular meeting of June 25, 2021.

CARRIED

(Time: 9:35 a.m.)

CERTIFIED CORRECT

Chris Plagnol, Corporate Officer

Sav Dhaliwal, Chair

To: Finance and Intergovernment Committee

From: Marie-Liesse Marc, Director Major Projects, Project Delivery
Roy Moulder, Director, Purchasing and Risk Management, Financial Services

Date: July 7, 2021 Meeting Dates: July 14, 2021

Subject: **Award of a Contract Resulting from Request for Proposal No. 20-103: Construction Services for Golden Ears Forcemain and River Crossing**

RECOMMENDATION

That the GVS&DD Board:

- a) approve a contract in the amount of up to \$83,628,768 (exclusive of taxes) to Pomerleau Inc., resulting from Request for Proposal 20-103: Construction Services for Golden Ears Forcemain and River Crossing, subject to final review by the Commissioner;
- b) direct staff to prepare a budget amendment to increase the Northwest Langley Wastewater Treatment Plant Expansion Program by \$39 million;
- c) direct staff to provide detailed options of potential budget reductions to offset, along with related risks, through the completion of the 2022 budget process; and
- d) authorize the Commissioner and the Corporate Officer to execute the required documentation once the Commissioner is satisfied that the award should proceed.

EXECUTIVE SUMMARY

This report is to advise the GVS&DD Board of the results of Request for Proposal (RFP) No. 20-103: Construction Services for the Golden Ears Forcemain and River Crossing (the Project), and to recommend award of the contract to Pomerleau Inc. (Pomerleau), in an amount of up to \$83,628,768 (exclusive of taxes) with adjustment to the budget to accommodate the award. This project is one of the phased design bid build projects forming the Northwest Langley Wastewater Treatment Plant Expansion Program.

Request for Proposal No. 20-103 was issued in January 2021 for Construction Services for the Project. Three compliant proposals were received on April 21st, 2021 from Michels Canada Co., Pomerleau Inc., and Peter Kiewit Sons ULC. The proposal submitted by Pomerleau was the highest ranked submission on technical merits, and the financial submission with the lowest price.

Although all three proposals were significantly above the engineer's estimate of \$57 million, based on the on the critical function of the infrastructure being built, it is recommended that the GVS&DD Board authorize the Commissioner and Corporate Officer to award the contract to Pomerleau, in the amount of up to \$83,628,768 (exclusive of taxes).

Options to reduce costs were explored with the preferred proponent, leading to the award of a \$2,926,281 early works contract to Pomerleau. The majority of this early works award is for the acquisition of steel pipe coil to mitigate escalating steel pricing. The Project team will continue to

explore value engineering opportunities on the Project post award, as well as in the following phases of the Program design.

PURPOSE

This report is to advise the GVS&DD Board of the results of Request for Proposal No. 20-103: Construction Services for the Golden Ears Forcemain and River Crossing, and to recommend award of the contract in the amount of up to \$83,628,768 (exclusive of taxes).

BACKGROUND

Pursuant to the *GVS&DD Officers and Delegation Bylaw No. 284, 2014* (Bylaw) and the *Procurement and Real Property Contracting Authority Policy* (Policy), procurement contracts which exceed a value of \$5 million require the approval of the GVS&DD Board of Directors.

This report is being brought forward to the Finance and Intergovernment Committee to consider a recommendation to the GVS&DD Board to authorize award of a contract for the construction of the Golden Ears Forcemain and River Crossing.

PROJECT DESCRIPTION

The Fraser Servicing study identified significant cost savings by re-directing all the sewage generated in Pitt Meadows and Maple Ridge across the Fraser River to an upgraded wastewater treatment plant in the Township of Langley (the Northwest Langley Wastewater Treatment Plant Expansion Program). These flows currently are pumped 25 km to Annacis Island Wastewater Treatment Plant for treatment. The Project is one of the 5 projects forming the Northwest Langley Wastewater Treatment Plant Expansion Program.

The scope of work for the Project includes installation of 1,600 meters of twin steel pipe river crossings using horizontal directional drilling methods, 525 meters of steel and high density polyethylene (HDPE) pipe using open cut construction, and 125 meters of trenchless construction for road crossings. Construction of a blowdown chamber and air valve chambers are also required. The new conveyance system will be known as the Golden Ears Forcemain and River Crossing.

As a result of Request for Qualifications (RFQ) No. 20-102 that was publically advertised on the Metro Vancouver's and BC Bid websites, three (3) experienced firms were invited to respond to RFP No. 20-103 for Construction Services for the Project. Three proposals were received on April 21, 2021 from Michels Canada Co., Peter Kiewit Sons ULC and Pomerleau Inc. The proposed prices are noted below.

Proponent	Total Proposal Price (Exclusive of Taxes)
Pomerleau Inc.	\$ 84,963,891
Michels Canada Co.	\$ 94,562,154
Peter Kiewit Sons ULC	\$ 117,614,500

The Construction Services proposals were evaluated on their commercial and technical merits. The proposal submitted by Pomerleau was the highest ranked submission on technical merits, as well as the financial submission with the lowest price.

As is allowed for under the RFP competition terms, negotiations were conducted with the highest ranked proponent, Pomerleau, in efforts to bring the proposed fee more in line with the Project budget as well as address some changes in available road access to the Project site and early work agreement benefits:

- Options to amend risk transfer, relax schedule and/or delay the installation of one of the two steel pipe river crossing to 2045 were explored, but none of these options were deemed acceptable due to long term operational risk and overall cost impact, or feasible in the time allowed before bid validity would be lost. The Project team will continue to explore whether some of those changes could be implemented post award.
- An Early Work Agreement was awarded to Pomerleau on July 2, 2021 to partly mitigate steel price escalation risk and certain permit related schedule risks. The contract was awarded for an amount of \$2,926,281 (excluding taxes) and includes the purchase of one steel pipe coil, the preparation of steel pipe submittals, environmental protection plans, traffic management plans as well as archaeological test pits, tree removal, and contaminated soils investigation. The Early Work Agreement price has been subtracted from the total proposal price put forward for approval.
- An amount of up \$1,591,158 was added to the contract price to account for steel indexation between June 20, 2021 and contract award date as well as changes in road access available to the Project site.

PROJECT BUDGET

All three proposals significantly exceeded the engineer's estimate for the work, with financial submissions being between \$28 million and \$60 million above the engineer's estimate. Construction inflation due to the ramp up of work in the market, commodity costs has been challenging to estimate in the current economic conditions. The Engineer's estimate, completed in January 2021, did not anticipate the levels of cost escalations being reflected in the bids and the level of activity for competing projects. For instance, steel prices (based on steel index) have increased by over 130% since the engineers' estimate was completed.

To move forward with this contract as proposed and to continue progress on the Northwest Langley Wastewater Treatment Plant Expansion Program, the Program budget will need to be increased as follows:

Construction (per contract award)	\$ 29.3 million
Contingency, Risk Reserves and Owners Cost (per Cost Estimating Framework)	\$ 9.7 million
Total	<u>\$ 39.0 million</u>

ALTERNATIVES

1. That the GVS&DD Board:
 - a) approve a contract in the amount of up to \$83,628,768 (exclusive of taxes) to Pomerleau Inc., resulting from Request for Proposal (RFP) 20-103: Construction Services for Golden Ears Forcemain and River Crossing, subject to final review by the Commissioner;
 - b) direct staff to:
 - i. prepare a budget amendment to increase the Northwest Langley Wastewater Treatment Plant Expansion Program by \$39 million; and
 - ii. provide detailed options of potential budget reductions to offset, along with related risks, through the completion of the 2022 budget process; and
 - c) 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 not approve the award of Construction Services to Pomerleau Inc. resulting from RFP No. 20-103: Construction Services for the Golden Ears Forcemain and River Crossing and direct staff to report back to the GVS&DD Board with options for an alternate course of action.

FINANCIAL IMPLICATIONS

If the GVS&DD Board approves Alternative 1, a contract in the amount of up to up to \$83,628,768 (exclusive of taxes) will be awarded to Pomerleau Inc. and staff will adjust the Northwest Langley Wastewater Treatment Plant Expansion Program budget with an additional \$39 million. While the Northwest Langley Wastewater Treatment Plant Expansion Program is a growth project and will be primarily funded by Development Cost Charges, there will be upward pressure on future levies and therefore the Household Impact due to the DCC assist factor.

The majority of the investment for this Program will be made in 2023 and 2024. As part of the 2022-2026 LWS Capital Plan, staff will be recommending a risk allowance increase. An early risk assessment indicates an increase of \$250 million is required to better account for unforeseen cost escalations, and technical risks related to the wastewater treatment plant upgrade project. The additional \$39 million budget needed to fund the Golden Ears Forcemain and River Crossing Project would come in addition to that risk allowance, bringing the overall Program budget to \$1,625 million. The Program team is also in the process of conducting a value engineering exercise to inform cost saving opportunities and the final value of the recommended risk allowance increase for the Program.

The GVS&DD Board has the choice not to proceed with Alternative 1, but staff will need further direction in relation to the Project.

Alternative 2 will result in delays and proposal cost escalation for the Program. In the current competitive procurement environment and commodity escalation price, a nine-month delay to the Project is estimated to increase Program costs by approximately \$10 million. Furthermore, delaying the Project until a later date will inevitably impact contractor responses given the backlog of competing infrastructure work within the region and expected as part of the economic recovery following the pandemic.

CONCLUSION

Request for Proposal No. 20-103 was issued for Construction Services of the Golden Ears Forcemain and River Crossing. Pomerleau was identified as the highest ranked and lowest cost proposal. Based on the evaluation of the proposals and on the critical function of the infrastructure being built, it is recommended that the GVS&DD Board increase the Northwest Langley Wastewater Treatment Plant Expansion Program Budget by \$39 million to cover the financial commitments made through existing and future contracts, and authorize the Commissioner and Corporate Officer to award the contract to Pomerleau Inc., in the amount of up to \$83,628,768 (exclusive of taxes).

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To: Finance and Intergovernment Committee

From: Bryan Shoji, Director, Policy, Planning and Analysis, Liquid Waste Service
Brett Young, Director, Major Projects, Project Delivery

Date: June 23, 2021 Meeting Date: July 14, 2021

Subject: **Iona Island Wastewater Treatment Plant Projects – Project Definition Update**

RECOMMENDATION

That the GVS&DD Board receive for information the report dated June 23, 2021, titled “Iona Island Wastewater Treatment Plant Projects – Project Definition Update”.

EXECUTIVE SUMMARY

At its July 31, 2020 meeting, the GVS&DD Board endorsed the Design Concept for the Iona Island Wastewater Treatment Plant Project – one of Canada’s most dynamic and transformative urban sustainability projects. Since then, a number of challenges have been identified related to constructability and schedule constraints, all contributing to higher estimated costs. In advancing the Design Concept, the preliminary project schedule indicates secondary wastewater treatment is anticipated to be operational by 2034, four years after the regulatory deadline of December 31, 2030. Applying Metro Vancouver’s new cost estimating framework, total project costs for the Design Concept are estimated at a present value of \$6.7 billion. When escalation and a risk reserve are included, the estimated total cost is \$10.4 billion.

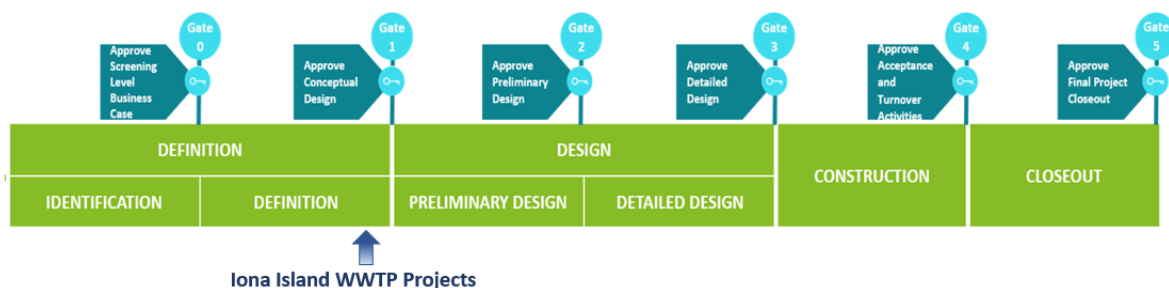
Next steps will focus on addressing the challenges, and will include a revised structured decision-making process for alternate design concepts that will consider technology, layout, implementation and other aspects of the projects identified through an independent value engineering exercise. Metro Vancouver will also re-engage member jurisdictions, key stakeholders, the public and First Nations on any revised aspects of the projects. Staff plan to report back with a recommended Revised Design Concept in November 2021. Following Board endorsement of the recommended Revised Design Concept, staff will target finalizing the Project Definition Report and Indicative Design in early 2022, including a recommended schedule, budget and delivery strategy.

PURPOSE

To provide the Board with an update on the Iona Island Wastewater Treatment Plant Projects, including recently identified challenges, and how staff are addressing these challenges through:

- completion of value engineering;
- further consideration of technology, layout and implementation options to address the challenges; and
- conducting public and First Nations engagement on aspects of the projects being considered for potential revision.

The Iona Island Wastewater Treatment Plant Projects are still in the project definition phase with the above steps to be addressed before the final Project Definition Report is presented to the Board for approval as part of Gate 1 in Metro Vancouver’s Stage Gate Approval Process.



BACKGROUND

Since its opening in 1963, the Iona Island Wastewater Treatment Plant (IIWWTP) has provided primary wastewater treatment to residents and businesses in the Vancouver Sewerage Area (currently parts of the Cities of Vancouver, Richmond, Burnaby, the University of British Columbia and the University Endowment Lands). For a brief video history of the IIWWTP, click [here](#).

In May 2011, Metro Vancouver’s *Integrated Liquid Waste and Resource Management Plan* was approved by the BC Minister of Environment. The plan requires that the IIWWTP upgrade be completed within 20 years of plan adoption. The Federal *Wastewater Systems Effluent Regulation* that became law in 2012 requires the plant be upgraded to meet regulatory requirements no later than December 31, 2030.

At its July 31, 2020 meeting, the GVS&DD Board endorsed a Design Concept for upgrading the existing wastewater treatment facility as presented in the report dated June 23, 2020, titled “Iona Island Wastewater Treatment Plant Project Design Concept”.

The July 2020 Board-endorsed Design Concept includes tertiary level treatment for the new plant, resource recovery opportunities, integration with Iona Beach Regional Park and surrounding communities, and a range of ecological projects designed to improve water quality, restore fish habitat, protect bird habitat and enhance terrestrial ecosystems. The recommended Design Concept was identified after a comprehensive evaluation of three short-listed concepts, which included consideration of input from public and First Nations engagement.

The intent following July 2020 Board endorsement was for staff to advance the Design Concept and report back with a final Indicative Design and Project Definition Report, including budget, schedule and a procurement strategy, for Board approval.

Since then, a number of challenges were identified as the project definition work progressed.

TRANSITION TO DELIVERY AND EMERGING CHALLENGES

Following Board endorsement, staff advanced the Design Concept and developed a Class 3 cost estimate (Association for the Advancement of Cost Engineering International - AACEI) as the basis for the project budget. As part of this process and in anticipation of the transition of the project to the new Project Delivery department, staff also conducted further reviews of project scheduling, off-site

requirements, constructability issues, and undertook an initial risk assessment for this major project. This work identified several significant challenges that had not been fully identified or addressed during the early planning stages, related to:

- solids management;
- constructability; and,
- schedule constraints; all contributing to:
- higher estimated costs.

Challenge - Solids Management

To help reduce costs and the footprint, the Design Concept included re-use of the existing solids digesters at IWWTP for an interim period, with future new digesters to be located on the site of the current primary sedimentation tanks. An advantage to this approach was to allow for the potential addition of new solids treatment technologies such as hydrothermal liquefaction, currently being piloted by Metro Vancouver.

The existing digesters at IWWTP only have sufficient capacity to handle the sludge – undigested solids – from the primary treatment process. Upgrading the liquid stream process to secondary and tertiary treatment will produce approximately twice the volume of sludge. Without additional digestion capacity at IWWTP, this additional sludge needs to be transported to other Metro Vancouver wastewater treatment plants (e.g. Annacis Island WWTP) which themselves would require digestion capacity expansions. It is estimated that transportation of the sludge would average 35 trucks per day for six years, increasing operations costs and risks.

A regional solids management study, initiated in fall 2020, recommends that additional digestion capacity be constructed at IWWTP to coincide with the upgraded secondary and tertiary liquid waste treatment facilities. To accomplish this, and avoid six years of trucking undigested sludge, the current Design Concept footprint would need to be expanded to provide a location for the new digesters.

Challenge - Constructability

The upgrade of the IWWTP involves very complex projects presenting multiple constructability challenges, including:

- Accessibility – a single-lane road to a remote location for heavy construction logistics that must be coordinated with cyclists and Iona Beach Regional Park users presents a significant safety and traffic management challenge;
- Limited working space – the constrained site reduces opportunities for construction staging which could also impact site safety;
- Construction during plant operations – culminating in multiple tie-ins to the existing, aged facilities;
- Minimizing impacts – to nearby residents and Musqueam Indian Band, whose primary lands are directly across the North Arm of the Fraser River, while protecting the unique and sensitive ecosystems on Iona Island/xʷəyeyət.

The resulting tight layout for the Design Concept not only poses challenges during construction but also makes it more difficult to separate the work out into smaller discrete packages and contracts that would allow for increased bid competition, and additional local participation. Space and access

constraints also impact the duration of construction activities as a result of practical limits on the labour and materials that can be safely and effectively handled at any one time.

Challenge – Schedule Constraints

As noted above, solids management and constructability challenges will have an impact on the overall project schedule. There are also several constraints on the existing site that must be addressed before the main plant construction work can start, including:

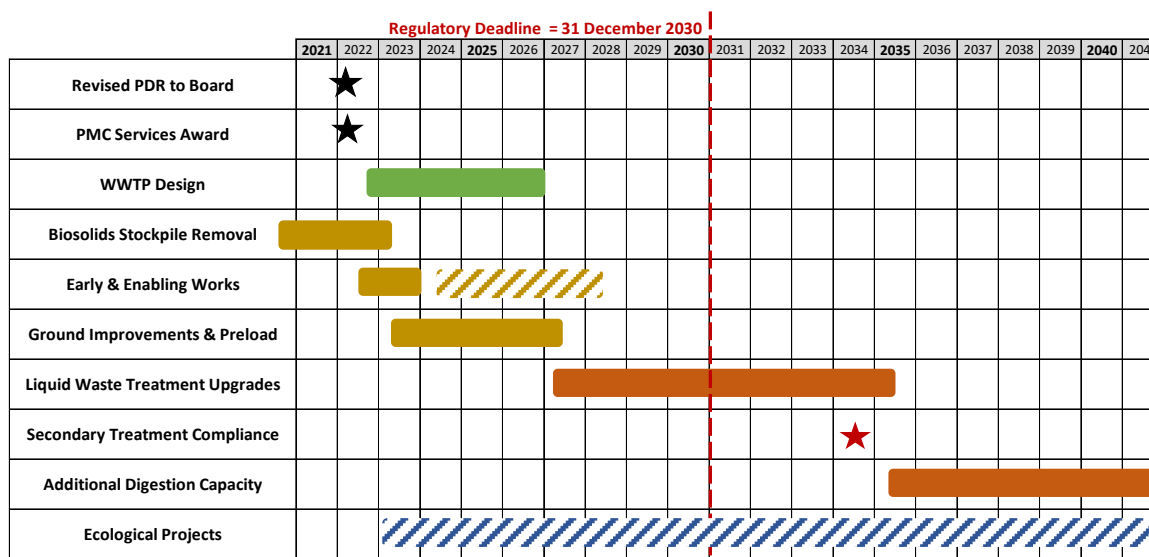
- dewatering of the four sludge lagoons west of the plant, which will take approximately four years;
- continued removal of the biosolids stockpiles east of the plant, scheduled for completion in early 2023;
- several years of ground improvements including the import, placing and removal of pre-load materials that can only be started once the existing biosolids stockpiles are removed; and,
- multiple complex permitting, approvals, and land tenure issues.

The scale and complexity of the treatment plant facilities also impact both the timing and duration of construction activities. The large number of permits and approvals required from various agencies also poses a significant challenge and risk of delays. These challenges were not fully taken into consideration in the Design Concept presented to the Board in July 2020.

Preliminary Project Delivery Schedule

A preliminary delivery schedule has been developed that considers the challenges identified above and a summary is shown in the figure below. Key points to note include:

- secondary wastewater treatment is anticipated to be operational by 2034, assuming all approvals are received in a timely manner – this is four years after the regulatory deadline of December 31, 2030;
- construction of the WWTP upgrades can only start after several years of ground improvements, which can only begin after the existing biosolids stockpiles are removed;
- the current Design Concept layout only allows for additional digestion capacity at IWWTP after the new liquid stream treatment is operational; the additional digesters will take roughly six years to build with construction completion forecast by 2041 which will result in higher operational and environmental costs including the need for trucking sludge to another treatment facility during this period; and,
- the ecological restoration projects will be undertaken before, during, and after construction of the treatment plant upgrades, depending on their location, permitting requirements and coordination with other construction activities.



Preliminary Delivery Schedule (IIWWTP Projects)

Challenge – Cost Estimates and Impact

An updated AAECI Class 3 cost estimate was prepared following further advancement of the Design Concept and consideration of the schedule and other challenges noted above. Given the difficult geotechnical conditions for a project of this scale within the Fraser River Delta, extensive and costly ground improvements are required for the treatment plant upgrades, as encountered by other Metro Vancouver wastewater treatment plants with similarly challenging ground conditions.

The ground improvement requirements, other challenges noted above, and refinements to the Design Concept all impacted the updated cost estimates. In addition, different approaches to the treatment of risk, escalation and project contingency resulted in Class 3 cost estimates that are significantly higher than anticipated at the outset of project definition in 2018 and higher than the Class 4 cost estimates prepared in the project definition process.

Class 3 Cost Estimates

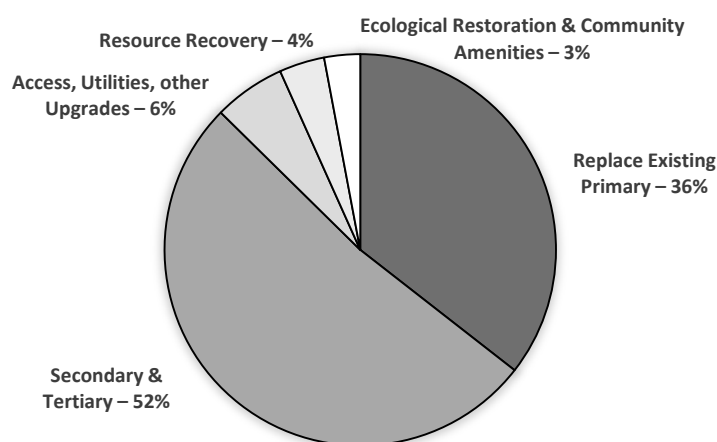
The preliminary cost estimates for the July 2020 Design Concept using Metro Vancouver’s new cost estimating framework show:

- cost estimate present value (2021 dollars) is \$6.7 billion;
- including escalation and risk reserve, the total estimate is \$10.4 billion; with,
- an estimating range from a low of \$8.7 billion to a high of \$11.4 billion.

This is the first major capital project to use Metro Vancouver’s newly adopted *Best Practice Project Estimating Framework* cost estimating framework at such an early stage. The framework includes a more rigorous approach to addressing challenges inherent in estimating future costs on large, complex and lengthy projects, including using forecast cash flows to estimate escalation, as well as the inclusion of a project risk reserve and appropriate contingency amounts. The purpose of the framework is to provide a more complete and realistic estimate of the project with a greater probability of actual costs at completion being within the original budget estimates. The framework also provides for consistent application across projects and with different consultants supporting these projects.

A breakdown of the cost estimate by components of the overall upgrade projects is shown in the figure below. Key points to note are:

- the costs to replace the existing preliminary and primary treatment facilities, which are largely past their useful service life and do not meet seismic standards, are over one-third of the total costs;
- upgrading to secondary (~50%) and tertiary (~2%) wastewater treatment is just over half of the total costs;
- while not broken out separately in Figure 2, the cost of ground improvements needed to meet geotechnical and seismic design standards is estimated to be roughly 20% of total costs; and,
- the resource recovery and the ecological restoration and community integration costs are each less than 5% of the total costs.



Cost estimate by key component

The table below, shows the total costs by phase with key activities noted for each phase.

PHASE 1 2021 – 2025	PHASE 2 2026 – 2034	PHASE 3 2035 – 2042
\$750 M	\$6.7 B	\$3.0 B
<ul style="list-style-type: none"> • Early works • Ground improvements • Access roads and utilities • Ecological projects 	<ul style="list-style-type: none"> • Continue early works • Replace preliminary and primary liquid treatment facilities • Upgrade liquid stream to secondary/tertiary treatment • Re-use of existing solids treatment facilities • Ecological projects 	<ul style="list-style-type: none"> • Two new digesters for extra sludge from treatment process upgrades • Ecological projects

Total costs by phase, with key activities, for July 2020 Design Concept

Preliminary Household Impacts

Determining ratepayer impacts for such a complex project is challenging given the number of assumptions that must be made to allow for financial risks and uncertainty over its multi-year life. Using the existing rate-setting methodology as set out in the *Greater Vancouver Sewerage and*

Drainage District Act as well as current Board policy, the average impact on a household in the Vancouver Sewerage Area, based on the costs and cash flows set out above, is estimated to be in the order of an average additional \$400 to \$500 annually calculated on a present value basis.

Further analysis on the financial impact will continue to be undertaken on an incremental basis as the project definition work continues to be refined.

ADDRESSING THE CHALLENGES

The next steps in project definition will be focused on addressing the challenges identified so that the best possible projects can be presented to the Board for consideration in early 2022. These activities include a revised structured decision-making process on alternate concepts that will also consider technology, layout, implementation and other aspects of the projects identified through an independent value engineering exercise.

Value Engineering

An independent panel of global experts is undertaking a value engineering exercise in June and July 2021 to challenge the Design Concept and identify potential cost-saving and value-added opportunities. This process is being led by specialists who have not been involved in the process to date with expertise in:

- wastewater treatment process design;
- operations and maintenance of large scale municipal plants;
- geotechnical engineering, ground improvements and seismic design;
- landscape architecture and ecological restoration projects; and,
- constructability and delivery of large infrastructure projects.

The expert panel has a broad mandate to review not only the challenges identified by the project team, but to also identify other potential concerns with the current Design Concept, and recommend opportunities to improve the value of the project in terms of improved operations and reduced cost of construction and ownership.

Development of a Revised Design Concept

The value engineering findings will be incorporated into the evaluation of options to address the challenges and a revised structured decision-making process will be undertaken to recommend a Revised Design Concept for consideration by the Board.

The goals and objectives remain the same as those established at the outset of project definition in 2018 and the decision criteria stemming from these objectives will be used in the revised structured decision-making process, but with increased emphasis on:

- optimizing rate impacts;
- regional solids management; and,
- local participation and economic development.

Priority Delivery Activities

Because the latest project schedule indicates a completion date beyond the regulatory deadline, it is critical that any further delays be mitigated to the extent possible. Therefore, the delivery team is proceeding with priority activities to prepare the site and advance the preliminary design, where these activities will not be influenced by a Revised Design Concept.

These activities include:

- continued lagoon dewatering and removal of the biosolids stockpiles;
- geotechnical and environmental investigations;
- technical studies for ecological restoration projects;
- design of a temporary wharf for materials transportation to accelerate the schedule and mitigate traffic impacts;
- planning and preliminary design for access road upgrades in partnership with YVR;
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- developing an agreement with Musqueam Indian Band for ongoing collaboration and engagement through the subsequent phases of the projects.

Public and First Nations Engagement

Extensive project definition engagement was conducted between June 2018 and February 2021 with member jurisdictions, key stakeholders, regulatory agencies, members of the public, and First Nations.

Further engagement is required because the work described in this report includes the evaluation of options that could result in revisions to the Design Concept that was presented during previous engagement and endorsed by the Board in July 2020.

From August to October of this year, Metro Vancouver will conduct stakeholder, public and First Nations engagement, providing an update on the projects and seeking feedback on aspects of the projects being considered for revision. This timeline does not impact the schedule for finalizing the Project Definition Report and Indicative Design. The following activities will occur, by audience:

Audience	Engagement Activity
VSA member jurisdictions <ul style="list-style-type: none"> • City of Richmond • City of Vancouver • City of Burnaby • UEL • UBC 	<ul style="list-style-type: none"> • Provide project update to: <ul style="list-style-type: none"> – Municipal councils, as requested – Monthly Vancouver Sewerage Area staff meetings – REAC, RFAC, and RAAC
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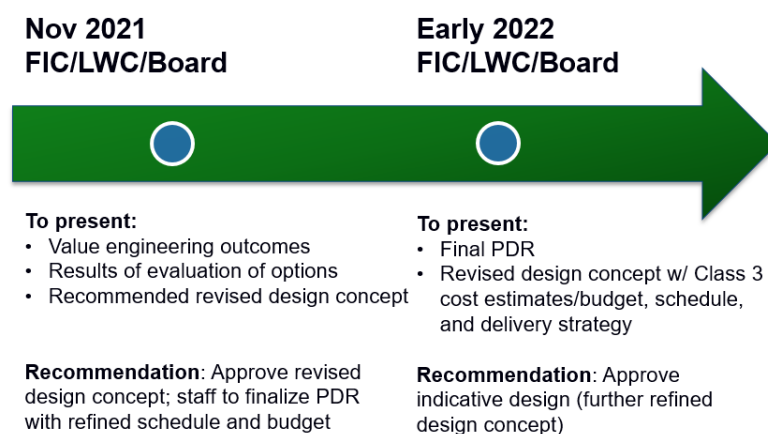
Audience	Engagement Activity
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Regulatory agencies	<ul style="list-style-type: none"> • Provide project updates and confirm permitting/approval processes

Staff plan to report the results from this engagement period to the Board in November with the staff-recommended Revised Design Concept. All feedback received during project definition will be reported to the Board, with the Project Definition Report and Indicative Design in early 2022.

Additional engagement activities will take place to support ongoing priority delivery tasks and related permitting requirements.

Finalizing the Project Definition Report

As indicated in the figure below, the intent is to complete the work described in this report so that a recommended and potentially Revised Design Concept, can be presented to the Board in November for consideration. If endorsed, staff would then finalize the Project Definition Report and Indicative Design, including a recommended schedule, budget and delivery strategy. Staff is targeting early 2022 for presentation of the report to the Board, but this may not be achievable if significant revisions to the Design Concept are recommended.



Timeline for Finalizing the Project Definition Report (PDR)

ALTERNATIVES

This is an information report. No alternatives are presented.

FINANCIAL IMPLICATIONS

The additional work required to address the challenges identified and finalize the Project Definition Report will cost an additional \$3.95 million in consulting fees. With this increase, the total cost of the project definition phase, including initial planning studies done in 2008 and 2009, will be approximately \$20.5 million and is incorporated into the overall project budget.

While this is a material increase to the budget for this phase of the project, the total cost of the project definition is well below 0.5% of the preliminary cost estimates and is funded within the 2021 budget.

Addressing these challenges as early as possible is the most cost-effective approach to mitigating negative impacts on the overall budget and schedule and is critical to identifying the best possible projects to present to the Board for consideration.

CONCLUSION

At its July 31, 2020 meeting, the GVS&DD Board endorsed the Design Concept for the Iona Island Wastewater Treatment Plant Projects. Since then, a number of challenges have been identified related to solids management, constructability and schedule constraints, all contributing to higher estimated costs. In advancing the Design Concept, the preliminary project schedule indicates secondary wastewater treatment is anticipated to be operational by 2034, four years after the federal and provincial regulatory deadline of December 31, 2030. Applying Metro Vancouver's new cost estimating framework, total project costs for the Design Concept are estimated at a present value of \$6.7 billion, and with escalation and a risk reserve, the estimated total cost is \$10.4 billion. Next steps in the project definition will be focused on addressing the challenges identified so that the best possible projects can be presented to the Board for consideration in early 2022. These activities include a revised structured decision-making process on alternate concepts that will also consider technology, layout, implementation and other aspects of the projects identified through an independent value engineering exercise. Metro Vancouver will also engage member jurisdictions, key stakeholders, the public and First Nations on aspects of the Project being considered for revision. Staff plans to report the findings of value engineering, other considerations, and public and First Nations engagement to the Board along with a Revised Design Concept in November 2021. Following Board endorsement of the recommended design concept, staff will target finalizing the Project Definition Report and Indicative Design in early 2022 for presentation to the Board, including a recommended schedule, budget and delivery strategy.

References

1. [July 2020 Board-endorsed Design Concept](#)

45889766

To: Liquid Waste Committee

From: Bryan Shoji, Director, Policy, Planning and Analysis, Liquid Waste Service
Brett Young, Director, Major Projects, Project Delivery

Date: June 23, 2021 Meeting Date: July 14, 2021

Subject: **Iona Island Wastewater Treatment Plant Projects – Project Definition Update**

RECOMMENDATION

That the GVS&DD Board receive for information the report dated June 23, 2021, titled “Iona Island Wastewater Treatment Plant Projects – Project Definition Update”.

EXECUTIVE SUMMARY

At its July 31, 2020 meeting, the GVS&DD Board endorsed the Design Concept for the Iona Island Wastewater Treatment Plant Project – one of Canada’s most dynamic and transformative urban sustainability projects. Since then, a number of challenges have been identified related to constructability and schedule constraints, all contributing to higher estimated costs. In advancing the Design Concept, the preliminary project schedule indicates secondary wastewater treatment is anticipated to be operational by 2034, four years after the regulatory deadline of December 31, 2030. Applying Metro Vancouver’s new cost estimating framework, total project costs for the Design Concept are estimated at a present value of \$6.7 billion. When escalation and a risk reserve are included, the estimated total cost is \$10.4 billion.

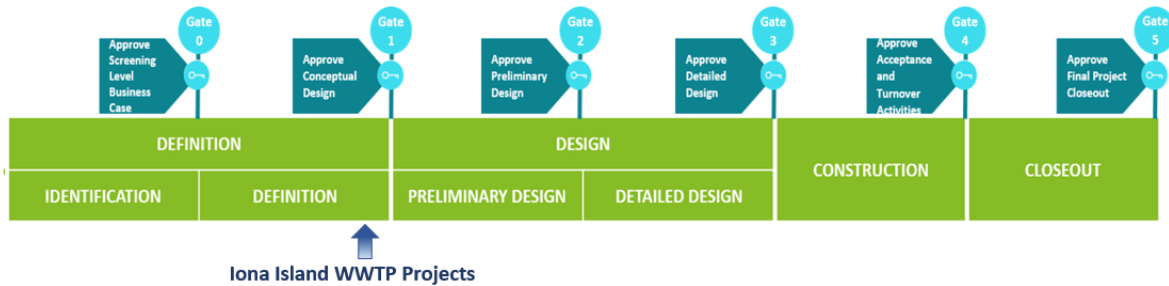
Next steps will focus on addressing the challenges, and will include a revised structured decision-making process for alternate design concepts that will consider technology, layout, implementation and other aspects of the projects identified through an independent value engineering exercise. Metro Vancouver will also re-engage member jurisdictions, key stakeholders, the public and First Nations on any revised aspects of the projects. Staff plan to report back with a recommended Revised Design Concept in November 2021. Following Board endorsement of the recommended Revised Design Concept, staff will target finalizing the Project Definition Report and Indicative Design in early 2022, including a recommended schedule, budget and delivery strategy.

PURPOSE

To provide the Board with an update on the Iona Island Wastewater Treatment Plant Projects, including recently identified challenges, and how staff are addressing these challenges through:

- completion of value engineering;
- further consideration of technology, layout and implementation options to address the challenges; and
- conducting public and First Nations engagement on aspects of the projects being considered for potential revision.

The Iona Island Wastewater Treatment Plant Projects are still in the project definition phase with the above steps to be addressed before the final Project Definition Report is presented to the Board for approval as part of Gate 1 in Metro Vancouver’s Stage Gate Approval Process.



BACKGROUND

Since its opening in 1963, the Iona Island Wastewater Treatment Plant (IIWWTP) has provided primary wastewater treatment to residents and businesses in the Vancouver Sewerage Area (currently parts of the Cities of Vancouver, Richmond, Burnaby, the University of British Columbia and the University Endowment Lands). For a brief video history of the IIWWTP, click [here](#).

In May 2011, Metro Vancouver’s *Integrated Liquid Waste and Resource Management Plan* was approved by the BC Minister of Environment. The plan requires that the IIWWTP upgrade be completed within 20 years of plan adoption. The Federal *Wastewater Systems Effluent Regulation* that became law in 2012 requires the plant be upgraded to meet regulatory requirements no later than December 31, 2030.

At its July 31, 2020 meeting, the GVS&DD Board endorsed a Design Concept for upgrading the existing wastewater treatment facility as presented in the report dated June 23, 2020, titled “Iona Island Wastewater Treatment Plant Project Design Concept”.

The July 2020 Board-endorsed Design Concept includes tertiary level treatment for the new plant, resource recovery opportunities, integration with Iona Beach Regional Park and surrounding communities, and a range of ecological projects designed to improve water quality, restore fish habitat, protect bird habitat and enhance terrestrial ecosystems. The recommended Design Concept was identified after a comprehensive evaluation of three short-listed concepts, which included consideration of input from public and First Nations engagement.

The intent following July 2020 Board endorsement was for staff to advance the Design Concept and report back with a final Indicative Design and Project Definition Report, including budget, schedule and a procurement strategy, for Board approval.

Since then, a number of challenges were identified as the project definition work progressed.

TRANSITION TO DELIVERY AND EMERGING CHALLENGES

Following Board endorsement, staff advanced the Design Concept and developed a Class 3 cost estimate (Association for the Advancement of Cost Engineering International - AAECI) as the basis for the project budget. As part of this process and in anticipation of the transition of the project to the new Project Delivery department, staff also conducted further reviews of project scheduling, off-site

requirements, constructability issues, and undertook an initial risk assessment for this major project. This work identified several significant challenges that had not been fully identified or addressed during the early planning stages, related to:

- solids management;
- constructability; and,
- schedule constraints; all contributing to:
- higher estimated costs.

Challenge - Solids Management

To help reduce costs and the footprint, the Design Concept included re-use of the existing solids digesters at IWWTP for an interim period, with future new digesters to be located on the site of the current primary sedimentation tanks. An advantage to this approach was to allow for the potential addition of new solids treatment technologies such as hydrothermal liquefaction, currently being piloted by Metro Vancouver.

The existing digesters at IWWTP only have sufficient capacity to handle the sludge – undigested solids – from the primary treatment process. Upgrading the liquid stream process to secondary and tertiary treatment will produce approximately twice the volume of sludge. Without additional digestion capacity at IWWTP, this additional sludge needs to be transported to other Metro Vancouver wastewater treatment plants (e.g. Annacis Island WWTP) which themselves would require digestion capacity expansions. It is estimated that transportation of the sludge would average 35 trucks per day for six years, increasing operations costs and risks.

A regional solids management study, initiated in fall 2020, recommends that additional digestion capacity be constructed at IWWTP to coincide with the upgraded secondary and tertiary liquid waste treatment facilities. To accomplish this, and avoid six years of trucking undigested sludge, the current Design Concept footprint would need to be expanded to provide a location for the new digesters.

Challenge - Constructability

The upgrade of the IWWTP involves very complex projects presenting multiple constructability challenges, including:

- Accessibility – a single-lane road to a remote location for heavy construction logistics that must be coordinated with cyclists and Iona Beach Regional Park users presents a significant safety and traffic management challenge;
- Limited working space – the constrained site reduces opportunities for construction staging which could also impact site safety;
- Construction during plant operations – culminating in multiple tie-ins to the existing, aged facilities;
- Minimizing impacts – to nearby residents and Musqueam Indian Band, whose primary lands are directly across the North Arm of the Fraser River, while protecting the unique and sensitive ecosystems on Iona Island/xʷəyeyət.

The resulting tight layout for the Design Concept not only poses challenges during construction but also makes it more difficult to separate the work out into smaller discrete packages and contracts that would allow for increased bid competition, and additional local participation. Space and access

constraints also impact the duration of construction activities as a result of practical limits on the labour and materials that can be safely and effectively handled at any one time.

Challenge – Schedule Constraints

As noted above, solids management and constructability challenges will have an impact on the overall project schedule. There are also several constraints on the existing site that must be addressed before the main plant construction work can start, including:

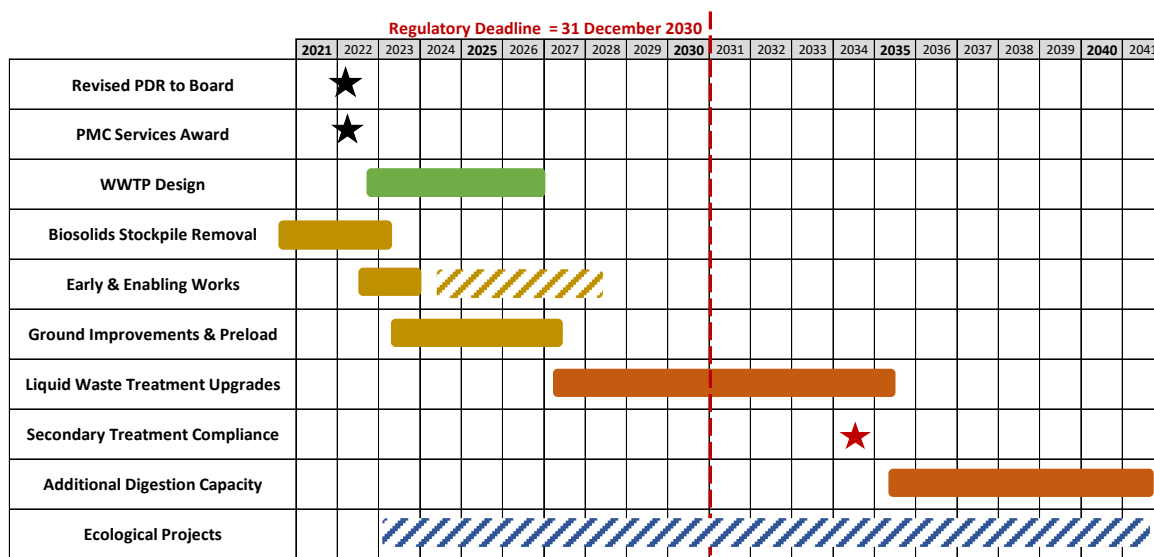
- dewatering of the four sludge lagoons west of the plant, which will take approximately four years;
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- several years of ground improvements including the import, placing and removal of pre-load materials that can only be started once the existing biosolids stockpiles are removed; and,
- multiple complex permitting, approvals, and land tenure issues.

The scale and complexity of the treatment plant facilities also impact both the timing and duration of construction activities. The large number of permits and approvals required from various agencies also poses a significant challenge and risk of delays. These challenges were not fully taken into consideration in the Design Concept presented to the Board in July 2020.

Preliminary Project Delivery Schedule

A preliminary delivery schedule has been developed that considers the challenges identified above and a summary is shown in the figure below. Key points to note include:

- secondary wastewater treatment is anticipated to be operational by 2034, assuming all approvals are received in a timely manner – this is four years after the regulatory deadline of December 31, 2030;
- construction of the WWTP upgrades can only start after several years of ground improvements, which can only begin after the existing biosolids stockpiles are removed;
- the current Design Concept layout only allows for additional digestion capacity at IWWTP after the new liquid stream treatment is operational; the additional digesters will take roughly six years to build with construction completion forecast by 2041 which will result in higher operational and environmental costs including the need for trucking sludge to another treatment facility during this period; and,
- the ecological restoration projects will be undertaken before, during, and after construction of the treatment plant upgrades, depending on their location, permitting requirements and coordination with other construction activities.



Preliminary Delivery Schedule (IIWWTP Projects)

Challenge – Cost Estimates and Impact

An updated AAECI Class 3 cost estimate was prepared following further advancement of the Design Concept and consideration of the schedule and other challenges noted above. Given the difficult geotechnical conditions for a project of this scale within the Fraser River Delta, extensive and costly ground improvements are required for the treatment plant upgrades, as encountered by other Metro Vancouver wastewater treatment plants with similarly challenging ground conditions.

The ground improvement requirements, other challenges noted above, and refinements to the Design Concept all impacted the updated cost estimates. In addition, different approaches to the treatment of risk, escalation and project contingency resulted in Class 3 cost estimates that are significantly higher than anticipated at the outset of project definition in 2018 and higher than the Class 4 cost estimates prepared in the project definition process.

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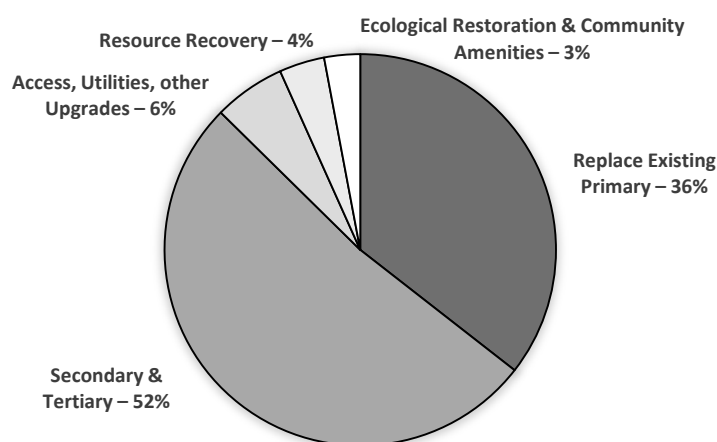
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A breakdown of the cost estimate by components of the overall upgrade projects is shown in the figure below. Key points to note are:

- the costs to replace the existing preliminary and primary treatment facilities, which are largely past their useful service life and do not meet seismic standards, are over one-third of the total costs;
- upgrading to secondary (~50%) and tertiary (~2%) wastewater treatment is just over half of the total costs;
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Cost estimate by key component

The table below, shows the total costs by phase with key activities noted for each phase.

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Total costs by phase, with key activities, for July 2020 Design Concept

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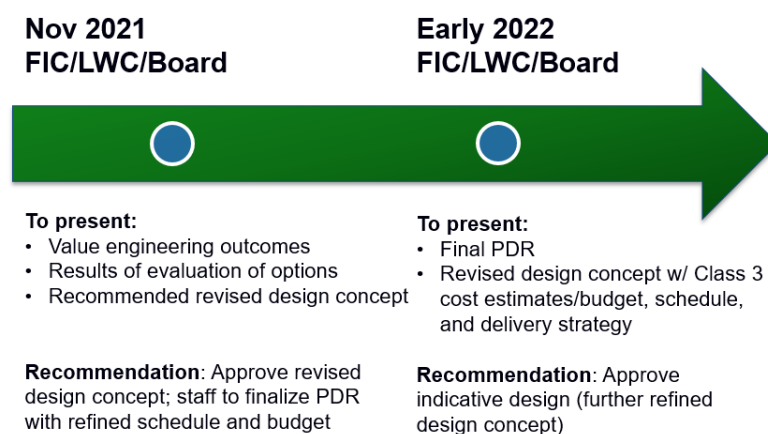
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Timeline for Finalizing the Project Definition Report (PDR)

ALTERNATIVES

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Addressing these challenges as early as possible is the most cost-effective approach to mitigating negative impacts on the overall budget and schedule and is critical to identifying the best possible projects to present to the Board for consideration.

CONCLUSION

At its July 31, 2020 meeting, the GVS&DD Board endorsed the Design Concept for the Iona Island Wastewater Treatment Plant Projects. Since then, a number of challenges have been identified related to solids management, constructability and schedule constraints, all contributing to higher estimated costs. In advancing the Design Concept, the preliminary project schedule indicates secondary wastewater treatment is anticipated to be operational by 2034, four years after the federal and provincial regulatory deadline of December 31, 2030. Applying Metro Vancouver's new cost estimating framework, total project costs for the Design Concept are estimated at a present value of \$6.7 billion, and with escalation and a risk reserve, the estimated total cost is \$10.4 billion. Next steps in the project definition will be focused on addressing the challenges identified so that the best possible projects can be presented to the Board for consideration in early 2022. These activities include a revised structured decision-making process on alternate concepts that will also consider technology, layout, implementation and other aspects of the projects identified through an independent value engineering exercise. Metro Vancouver will also engage member jurisdictions, key stakeholders, the public and First Nations on aspects of the Project being considered for revision. Staff plans to report the findings of value engineering, other considerations, and public and First Nations engagement to the Board along with a Revised Design Concept in November 2021. Following Board endorsement of the recommended design concept, staff will target finalizing the Project Definition Report and Indicative Design in early 2022 for presentation to the Board, including a recommended schedule, budget and delivery strategy.

References

1. [July 2020 Board-endorsed Design Concept](#)

45889766

To: Liquid Waste Committee

From: Joe Sass, Director, Financial Planning & Operations / Deputy CFO

Date: June 25, 2021 Meeting Date: July 15, 2021

Subject: **Engagement Plan for Liquid Waste Development Cost Charge Program Update**

RECOMMENDATION

That the GVS&DD Board direct staff to proceed with engagement on the proposed update to the liquid waste development cost charge program as described in the report dated June 25, 2021, titled “Engagement Plan for Liquid Waste Development Cost Charge Program Update”.

EXECUTIVE SUMMARY

As part of a plan to update the liquid waste development cost charge (DCC) program every three to five years, a program review was initiated in 2020. An internal cross-departmental DCC Steering Committee has been leading this review concurrently with planning the implementation of a new water DCC program.

Work to date has involved initial engagement, including meetings with relevant advisory committees, industry capacity analysis, and rate modelling, now resulting in a set of draft DCC *rates in principle*. Following Board review of the rates in principle and engagement plan in this report, there will be further engagement with relevant levels of government, First Nations, stakeholders, and the public, before finalizing the update for Board approval.

PURPOSE

To receive feedback and authorization for further engagement from the Liquid Waste Committee on the proposed update to the liquid waste DCC program, consisting of rate adjustments, and the proposed engagement plan which will solicit input on the DCC program update from relevant levels of government, First Nations, stakeholders, and the public.

BACKGROUND

The liquid waste DCC program of the GVS&DD was implemented in 1997 via a DCC Bylaw. The purpose of the program is to ensure that new development in the region helps fund the cost of the liquid waste infrastructure expansion required to service that development. Rates are calculated based on regional growth projections, projected costs of growth projects, projected interest rates, and assist factors, among other variables.

After the initial DCC rates were set in 1997, a review of the DCC program was carried out starting in 2014 and resulting in a 2017 amendment to the DCC Bylaw (Reference 1), updating the rates for each sewerage area. The 2017 review also noted a recommendation to ensure that DCC rate updates occur every three to five years, to ensure that increases can be more predictable and easier to absorb, and to ensure that revenue continues to support the increasing need for system expansion and increasing cost of infrastructure.

The current liquid waste DCC program update process was initiated to ensure the timely implementation of a rate update to the liquid waste DCC program and to align with the timing of the implementation of a brand new water DCC program, so that engagement with relevant parties could be undertaken concurrently.

DCC POLICY FRAMEWORK

The liquid waste DCC policy framework is structured around the following factors:

- **Land use categories.** The DCC Bylaw charges DCCs based on four separate land use categories: single-family dwelling, townhouse, apartment, and non-residential.
- **Sewerage areas.** The DCC program is separated into four sewerage areas: Vancouver, Lulu Island West, North Shore, and Fraser. Each sewerage area has its own unique fee structure based on its development requirements.
- **Units for charging DCCs.** Residential developments are charged per unit/dwelling, while a DCC for a non-residential development is charged per square foot.
- **DCC waivers.** The DCC Bylaw includes a waiver for the development of affordable housing; the definitions and criteria for this waiver were updated in the 2017 review process.
- **Assist factors.** The assist factor is the portion of the growth project that is funded from the sewer user fees (levy) rather than DCCs. Increasing the assist factor shifts more of the cost of system expansion (growth) from DCCs to the sewer levy.

As there had not been a full program review in 20 years, the liquid waste DCC program review of 2017 included a review of all of these factors of the policy framework. The current update process has focused on preparing an adjustment to DCC rates.

LIQUID WASTE DCC PROGRAM UPDATE PROCESS OF 2020/21

The current DCC program update process has been driven by a DCC Steering Committee of representatives of the Metro Vancouver finance, liquid waste, and water departments. This Steering Committee is overseeing both the liquid waste DCC program update as well as the water DCC program implementation. The Steering Committee's work has included:

- **Engagement.** Developing and implementing approaches to information sharing and engagement with members, the Province, First Nations, relevant industry stakeholders, and the public, as described in detail in a subsequent section.
- **Industry capacity analysis.** The procurement of a report on the development industry's capacity to absorb DCC rate increases in the four sewerage areas.
- **Rate modelling.** The modelling of DCC rates necessary to support growth projects, with consideration of variables including planning horizon, application of interest costs, assist factor, and methodology.
- **Preparing rates in principle.** Development of proposed rates in principle, following consideration of engagement to date, industry capacity analysis, and rate modelling; these rates are being brought forward for Board approval to use in further engagements with relevant parties.

PROPOSED ADJUSTMENTS TO LIQUID WASTE DCC RATES

The existing DCC rates, in effect since 2017, are as follows:

Sewerage Area	Single-Family	Townhouse	Apartment	Non-Residential
Fraser	\$5,428 / unit	\$4,695 / unit	\$3,531 / unit	\$2.67 / ft ² of floor area
Lulu Island West	\$2,214 / unit	\$1,915 / unit	\$1,388 / unit	\$1.05 / ft ² of floor area
North Shore	\$2,300 / unit	\$2,076 / unit	\$1,416 / unit	\$1.20 / ft ² of floor area
Vancouver	\$1,811 / unit	\$1,618 / unit	\$1,072 / unit	\$0.93 / ft ² of floor area

A set of proposed DCC rates in principle has been developed and is being brought for Board approval for use in further engagement with relevant parties. The DCC rates in principle have been calculated to include:

- Interest on project costs
- A 17.5% assist factor, which is up from the current 1% assist factor; this is recommended to ensure that DCC rates are within the capacity of industry's ability to pay
- A 30-year planning horizon

The proposed DCC rates in principle are:

Sewerage Area	Single-Family	Townhouse	Apartment	Non-Residential
Fraser	\$6,254 / unit	\$5,390 / unit	\$4,269 / unit	\$3.30 / ft ² of floor area
Lulu Island West	\$3,313 / unit	\$2,756 / unit	\$2,042 / unit	\$1.54 / ft ² of floor area
North Shore	\$3,300 / unit	\$2,786 / unit	\$2,030 / unit	\$1.67 / ft ² of floor area
Vancouver	\$3,335 / unit	\$2,983 / unit	\$1,988 / unit	\$1.63 / ft ² of floor area

ENGAGEMENT PROCESS

Engagement to date has been undertaken jointly on this project to update the liquid waste DCC program, as well as on the implementation of a new water DCC program.

The consultation process to date has involved:

- Q4 2020: Letters to members, the University Endowment Lands, and First Nations, outlining the DCC projects and inviting initial comments. Preliminary discussions with the Province.
- Q4 2020: Initial contact with industry groups, with feedback showing that discussions would be more appropriate once draft DCC rates were developed.
- Q1 2021: Development of a dedicated webpage (Reference 2) and FAQ document (Reference 3) on metrovancover.org to provide information on both DCC projects. Initiation of a DCC email address and a DCC mailing list on metrovancover.org to allow for convenient channels of communication.
- Q2 2021: Presentations to the Regional Engineers Advisory Committee (REAC), Regional Administrative Advisory Committee (RAAC), and Regional Finance Advisory Committee (RFAC), with discussions indicating substantial support from members for both water and liquid waste programs. Direct follow up with each of the region's First Nations.

Feedback on the rates thus far has been supportive. REAC expressed a desire for higher rates (via reduced assist factor), while RAAC articulated more caution, recognizing the impact of rate increases both to the market, as well as to their own municipal DCCs. RFAC focused primarily on how to move toward a model where growth is contributing to more of the costs, as well as how Metro Vancouver,

TransLink, and members can collaborate in the future on DCCs. Perhaps not surprisingly, Metro Vancouver received renewed calls for annual incremental increases, much like the *Community Charter* regulation (*Development Cost Charge Amendment Bylaw Approval Exemption Regulation*) that exempts a DCC Bylaw from the approval requirements in the *Local Government Act* once each year for up to four years as long as increases do not exceed the Vancouver Consumer Price Index.

With this report, the proposed rates in principle will be reviewed with the Metro Vancouver Liquid Waste Committee, Finance and Intergovernment Committee, and with the GVS&DD Board prior to broader engagement with relevant levels of government, First Nations, industry stakeholders, and the public over the next three months. The next steps in the engagement process will include:

- Continued discussions with the Province on the liquid waste DCC program update and in getting the necessary legislation passed to implement the water DCC program
- Continued discussions with First Nations
- Ongoing updates to the dedicated DCC webpage and FAQ document
- Q3 2021: A series of online forums by sewerage area, and one in-person forum central to the region, with specific invitations sent out to Metro Vancouver members, members of the development community (including the Urban Development Institute, the Greater Vancouver Home Builders' Association, regional boards of trade and chambers of commerce), and promoted to industry through industry associations and to the public through the metrovancover.org website and relevant Metro Vancouver mailing lists
- Q3 2021: Reports to the Metro Vancouver Liquid Waste Committee, Finance and Intergovernment Committee, and the GVS&DD Board, to provide findings of the engagement process and recommendations for moving forward with an update to the liquid waste DCC program

ALTERNATIVES

1. That the GVS&DD Board direct staff to proceed with engagement on the proposed update to the liquid waste development cost charge program as described in the report dated June 25, 2021, titled "Engagement Plan for Liquid Waste Development Cost Charge Program Update".
2. That the GVS&DD Board provide alternate direction to staff regarding the draft development cost charge rates in principle and/or the engagement plan as described in the report dated June 25, 2021, titled "Engagement Plan for Liquid Waste Development Cost Charge Program Update".

FINANCIAL IMPLICATIONS

If the Liquid Waste Committee approves Alternative 1, the report will be forwarded to the GVS&DD Board for approval. The cost of the engagement process will be funded through the existing liquid waste function budget.

If the Liquid Waste Committee approves Alternative 2, the Committee may wish to recommend changes to the proposed DCC rates in principle or engagement plan. Further analysis may be required to determine the resulting financial impacts.

OTHER IMPLICATIONS

While DCCs are an important tool for local governments to use in funding infrastructure driven by growth, it is important to consider the cumulative impact that they have on developers' abilities to pay for sites, which can in turn have effects on the real estate market including reduced supply and price increases. The proposed draft DCC rates in principle have been prepared with consideration given to industry's capacity for increased costs. However, the increases may affect the potential for other local governments in the region to raise their own DCC rates without significantly impacting the financial viability of development in the region.

CONCLUSION

Following a review of the liquid waste DCC program four years ago that saw a more comprehensive update to components of the policy framework, an internal cross-departmental DCC Steering Committee is currently recommending that this iteration of the liquid waste DCC program update comprise solely of rate adjustments. The draft DCC rates in principle contained in this report have been developed based on initial engagement, industry capacity analysis, and rate modelling.

The engagement plan in this report to discuss the rates in principle with relevant levels of government, First Nations, stakeholders, and the public, will be central to finalizing the proposed update to the DCC program before going for Board approval.

To ensure that DCC rate increases occur in a timely fashion, such that they are more predictable and easier to absorb, and such that they continue to support the increasing need for system expansion and increasing cost of infrastructure, staff recommend Alternative 1.

References

1. [DCC Bylaw](#)
2. [Development Cost Charges Webpage](#)
3. [FAQ Document](#)

45702764

To: Liquid Waste Committee

From: Roy Moulder, Director, Purchasing and Risk Management, Financial Services
Kenneth Hui, Division Manager, Engineering, Design and Construction, Liquid Waste Services

Date: June 23, 2021 Meeting Date: Jul 15, 2021

Subject: **Award of Contract Resulting from Request for Proposal No. 21-019: Annacis Island Wastewater Treatment Plant Trickling Filters No. 2 & 4 – Trickling Filter Media, Rotary Distributor, and Foul Air Ducting Replacement**

RECOMMENDATION

That the GVS&DD Board:

- a) approve the award of a contract for an amount of up to \$37,477,304 (exclusive of taxes) to Pomerleau Inc., resulting from Request for Proposal No. 21-019: Annacis Island Wastewater Treatment Plant Trickling Filters No. 2 & 4 – Trickling Filter Media, Rotary Distributor, and Foul Air Ducting Replacement 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

A Request for Proposal (RFP) No. 21-019 was issued to five (5) pre-qualified contractors for construction of the Annacis Island Wastewater Treatment (AIWWTP) Trickling Filter (TF) No. 2 & 4 – Trickling Filter Media, Rotary Distributor and Foul Air (FOA) Ducting Replacement and closed on April 15, 2021. Pomerleau Inc. was ranked highest overall and offered the lowest proposed fee. It is recommended that the GVS&DD Board authorize the Commissioner and the Corporate Officer to award and execute a contract with Pomerleau Inc. in an amount of up to \$37,477,304 (exclusive of taxes).

The AIWWTP Trickling Filter main components – plastic media, rotary distributors and FOA ducting are experiencing varying degrees of degradation and reaching the end of their service life. Their replacement is critical to the operation of the AIWWTP secondary treatment system and the Operational Certificate compliance of the treatment plant.

PURPOSE

This report is to advise the GVS&DD Board of the results of Request for Proposal No. 21-019: AIWWTP Trickling Filters No. 2 – 4 – Trickling Filter Media, Rotary Distributor, and FOA Ducting Replacement and to recommend award of the contract in an amount of up to \$37,477,304 (exclusive of taxes) to Pomerleau Inc.

BACKGROUND

Pursuant to the *GVS&DD Officers and Delegation Bylaw No. 284, 2014* (Bylaw) and the *Procurement and Real Property Contracting Authority Policy* (Policy), procurement contracts which exceed a value of \$5 million require the approval of the GVS&DD Board of Directors.

This report is being brought forward to the Liquid Waste Committee to consider a recommendation to the GVS&DD Board to authorize the award of a contract to install replacement plastic media, rotary distributor and FOA ducting in two of the four existing trickling filters at the AIWWTP.

PROJECT DESCRIPTION

The four TF at the AIWWTP were constructed as part of the Stage 4 upgrades and have been in service since 1999. The major components of the TF (plastic media, rotary distributors, and FOA ducting) are now reaching the end of their service life. The rotary distributors and FOA ducting have experienced significant deterioration due to the harsh, corrosive and confined environment, resulting in equipment failures requiring emergency maintenance in recent years. The plastic media in the four TF are also experiencing various levels of degradation that will eventually impact the operability and function of the trickling filters.

As a result of Request for Qualifications (RFQ) No. 18-375 that was publicly advertised on Metro Vancouver's and BC Bid websites, five experienced firms were shortlisted and invited to respond to RFP No. 19-011 for construction services of the first two TF in 2019, as well as RFP 21-019 (this RFP) for construction services for the remaining two TF in 2021. RFP 21-019 closed on April 15, 2021 with four firms submitting proposals as follows:

Table 1: Proponent Submission Pricing

Proponent	Total Proposed Fee (exclusive of taxes)
Pomerleau Inc.	\$36,426,866
Maple Reinders Constructors Ltd.	\$43,455,400
Kenaidan Contracting Ltd.	\$45,505,200
Flatiron Constructors Canada Ltd.	\$45,991,101

The proposed major scope of work consists of the following, to be completed in TF 2 in 2022 and in TF 4 in 2023:

- Removal and reinstallation of the geodesic domes to provide construction access to the TF
- Refurbishment of the geodesic domes after removal
- Demolition, removal and disposal of the existing rotary distributor, plastic media and FOA ducting
- Refurbishment of the existing concrete liner, interior concrete walls, center column
- Supply and installation of new plastic media, rotary distributor and FOA ducting.

The technical component of RFP No. 21-019 was evaluated by staff from Liquid Waste Services and the design consultants. The financial component was evaluated by staff from Liquid Waste Services and confirmed by staff from the Purchasing and Risk Management Division. Pomerleau Inc. was identified as the highest overall ranked proponent.

Following identification of the highest ranked proposal, negotiations ensued as allowed for in the RFP. As a result of the negotiations, four additional items were added. These additions have increased the total proposed fee by \$1,050,438. Bringing the negotiated awarded amount to \$37,477,304 (exclusive of taxes).

ALTERNATIVES

1. That the GVS&DD Board:
 - a) approve the award of a contract for an amount of up to \$37,477,304 (exclusive of taxes) to Pomerleau Inc., resulting from Request for Proposal No. 21-019: Annacis Island Wastewater Treatment Plant Trickling Filters No. 2 & 4 – Trickling Filter Media, Rotary Distributor, and Foul Air Ducting Replacement 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 terminate Request for Proposal No. 21-019: Annacis Island Wastewater Treatment Plant Trickling Filters No. 2 & 4 – Trickling Filter Media, Rotary Distributor, and Foul Air Ducting Replacement, and direct staff to report back to the GVS&DD Board with options for an alternate course of action.

FINANCIAL IMPLICATIONS

If the GVS&DD Board approves Alternative 1, a contract will be awarded to Pomerleau Inc., in the amount of up to \$37,477,304 (exclusive of taxes). Pomerleau Inc., is the highest overall ranked proponent based on the evaluation criteria established in the RFP with the lowest cost proposal. There are sufficient funds in the project budget for this award.

If the GVS&DD Board chooses not to proceed with Alternative 1, staff will need further direction in relation to the project as the delay associated with Alternative 2 is anticipated to pose a substantial risk to the operation of the AIWWTP secondary treatment system and Operational Certificate compliance of the treatment plant.

CONCLUSION

Request for Proposal No. 21-019 was issued for the construction of the AIWWTP Trickling Filters No. 2 & 4 – Trickling Filter Media, Rotary Distributor and Foul Air Ducting Replacement. Pomerleau Ltd., has been identified as the overall highest ranked proponent based on the evaluation criteria established in the RFP with the lowest cost proposal.

It is recommended that the GVS&DD Board authorize the Commissioner and the Corporate Officer to award and execute a contract with Pomerleau Inc., in the amount of up to \$37,477,304 (excluding taxes).

45981080

To: Liquid Waste Committee

From: Roy Moulder, Director, Purchasing and Risk Management, Financial Services
Kenneth Hui, Division Manager, Engineering Design & Construction, Liquid Waste Services

Date: June 22, 2021 Meeting Date: July 15, 2021

Subject: **Award of Contract Resulting from Request for Proposal No. 20-002: Annacis Island Wastewater Treatment Plant Stage 5 Expansion – Phase 2, A506 Contract – Gravity Thickener Expansion**

RECOMMENDATION

That the GVS&DD Board:

- a) approve the award of a contract for an amount of up to \$36,335,060 (exclusive of taxes), to Maple Reinders Constructors Ltd. resulting from Request for Proposal No. 20-002: Annacis Island Wastewater Treatment Plant Stage 5 Expansion – Phase 2, A506 Contract – Gravity Thickener Expansion, 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

A Request for Proposal (RFP) was issued for the construction of the Annacis Island Wastewater Treatment Plant (AIWWTP) Stage 5, Phase 2, A506 Contract to four (4) prequalified entities and closed on March 25, 2021. Maple Reinders Constructors Ltd. was ranked with the highest overall score following evaluation of the proposals. It is recommended that the GVS&DD Board authorize the Commissioner and the Corporate Officer to award and execute a contract with Maple Reinders Constructors Ltd. in an amount of up to \$36,335,060 (exclusive of taxes).

The purpose of the Stage 5 Expansion at AIWWTP is to increase the overall treatment capacity to serve a population of up to 1.5 million people (from a previous capacity of 1.2 million). Contract A506 is an integral component project within the Stage 5 Expansion, and will increase the capacity of two areas within the Plant, namely the Gravity Thickeners and the Solids Contact Tanks.

PURPOSE

This report is to advise the GVS&DD Board of the results of RFP No. 20-002: Annacis Island Wastewater Treatment Plant Stage 5, Phase 2, A506 Contract – Gravity Thickener Expansion and to recommend award of the contract in an amount of up to \$36,335,060 (exclusive of taxes) to Maple Reinders Constructors Ltd.

BACKGROUND

Pursuant to the *GVS&DD Officers and Delegation Bylaw No. 284, 2014* (Bylaw) and the *Procurement and Real Property Contracting Authority Policy* (Policy), procurement contracts which exceed a value of \$5 million require the approval of the Board of Directors.

This report is being brought forward to the Liquid Waste Committee to consider a recommendation to the GVS&DD Board to authorize the award of a contract for the construction of the Annacis Island Wastewater Treatment Plant Stage 5 – Phase 2, A506 contract – Gravity Thickeners.

PROJECT DESCRIPTION

The AIWWTP Stage 5 Expansion will increase overall Plant treatment capacity to serve a population of up to 1.5 million people. As part of the Phase 2 portion of the Program, Contract A506 – Gravity Thickener Expansion involves construction of two new gravity thickeners, modification to the existing solids contact tanks, and the associated supporting infrastructure.

As a result of a Request for Qualifications (RFQ) No. 20-001 that was publicly advertised on Metro Vancouver's and BC Bid websites, four experienced contractors were invited to respond to RFP No. 20-002 for the construction of Contract A506.

The RFP closed on March 25, 2021 and four contractors responded as shown in Table 1 below.

Table 1: Summary of Proposals Received:

Proponent	Total Proposed Fee (excludes taxes)
Pomerleau, Inc.	\$30,661,920
North America Construction Ltd.	\$34,600,487
Maple Reinders Constructors Ltd.	\$34,709,260
PCL Constructors Westcoast Inc.	\$35,176,025

The submissions were evaluated based on a maximum of 50 points for the technical components and 50 points for the commercial considerations. The technical component of the proposals was evaluated by staff and consultants from Liquid Waste Services – Engineering, Design and Construction Division, while the commercial considerations were evaluated by staff from the Purchasing and Risk Management Division, Financial Services Department. When both technical and commercial evaluations were combined for each proponent, the proposal submission by Maple Reinders was ranked highest overall. Evaluation of the proposals was based on the selection criteria identified in the RFP. Maple Reinders proposal was considered to provide the best value and lowest risk to the Corporation, and:

- demonstrated a thorough understanding of the work scope,
- proposed a project staffing plan that includes qualified staff strategically assigned to specific roles,
- responded to the risks that were identified in the RFP with effective mitigations,
- included a detailed and thorough schedule in their submission, and
- proposed innovative approaches to complete the in-channel work without requiring Plant Operations to significantly alter their process.

Following the proposal evaluation and issuance of a recommendation to negotiate with the highest ranked proponent, two meetings were held with Maple Reinders to review aspects of their proposal.

Based on the information that was provided during the negotiations, satisfactory responses have been provided to all technical queries and acceptable pricing was received on all negotiated items.

Several items resulting from the negotiations are proposed to be included in the contract at this time. These include additional work resulting in changes from and coordination with other ongoing contracts, additional provisional items to mitigate risk and will only be exercised if needed, and provision of additional chemical (alum) for plant operations to mitigate treatment risks. These items have a negotiated price of \$1,625,800 (exclusive of taxes), resulting in a total recommended contract price of \$36,335,060.

ALTERNATIVES

1. That the GVS&DD Board:
 - a) approve the award of a contract for an amount of up to \$36,335,060 (exclusive of taxes), to Maple Reinders Constructors Ltd. resulting from Request for Proposal No. 20-002: Annacis Island Wastewater Treatment Plant Stage 5 Expansion – Phase 2, A506 Contract – Gravity Thickener Expansion, 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 terminate RFP No. 20-002: Annacis Island Wastewater Treatment Plant Stage 5 Expansion – Phase 2, A506 Contract – Gravity Thickener Expansion, and direct staff to report back to the GVS&DD Board with options for an alternate course of action.

FINANCIAL IMPLICATIONS

If the GVS&DD Board approves Alternative 1, a contract will be awarded to Maple Reinders Constructors Ltd., in the amount of up to \$36,335,060 (exclusive of taxes). There are sufficient funds in the budget for this phase to complete construction of the project.

The GVS&DD Board has the choice not to proceed with Alternative 1, but staff will need further direction in relation to the project. Alternative 2 will result in delays to the project schedule that will impact the ability to deliver the project in a timely fashion. This important project at AIWWTP, consisting of an expansion to Gravity Thickeners and modifications to existing Solids Contact Tanks, is necessary to meet the increasing loading rate for the primary sludge and secondary effluent treatment, respectively, due to the continual increasing population in the Fraser Sewerage Area.

CONCLUSION

Request for Proposal No. 20-002 was issued for construction of the Annacis Island Wastewater Treatment Plant Stage 5, Phase 2, A506 Contract – Gravity Thickener Expansion. Maple Reinders Constructors Ltd. has been identified as the highest ranked proponent based on the evaluation criteria established in the RFP.

It is recommended that the GVS&DD Board authorize the Commissioner and the Corporate Officer to award and execute a contract with Maple Reinders Constructors Ltd., in the amount of up to \$36,335,060 (excluding taxes).

To: Zero Waste Committee

From: Paul Henderson, General Manager, Solid Waste Services

Date: July 9, 2021 Meeting Date: July 16, 2021

Subject: **Solid Waste and Recycling Industry Advisory Committee Draft Terms of Reference**

RECOMMENDATION

That the GVS&DD Board receive for information the report dated July 9, 2021, titled "Solid Waste and Recycling Industry Advisory Committee Draft Terms of Reference".

EXECUTIVE SUMMARY

The Ministry of Environment and Climate Change Strategy has initiated a process with the Waste Management Association of BC and Metro Vancouver to address challenges and find opportunity areas to improve solid waste management in the region. An initial outcome of this effort is the formation of a Waste and Recycling Industry Advisory Committee (IAC), to act as a forum for industry contribution and advice on planning, operations and policy related to solid waste and recycling in Metro Vancouver. A draft terms of reference has been developed and will be circulated to recycling and waste industry stakeholders to seek any additional feedback. If the terms of reference are revised substantially following feedback, an updated version will be provided to the Zero Waste Committee.

PURPOSE

The purpose of this report is to update the GVS&DD Board (the Board) on the formation of the Solid Waste and Recycling Industry Advisory Committee and draft terms of reference.

BACKGROUND

In 2020, the Ministry of Environment and Climate Change Strategy initiated a dialogue with the Waste Management Association of British Columbia (WMABC) and Metro Vancouver on the current and future state of solid waste management in Metro Vancouver. A March 6, 2020 Zero Waste Committee manager's report item introduced this collaboration. A series of interviews were conducted with key waste management stakeholders identified by WMABC and Metro Vancouver. Comments were received on a current-state assessment and options development for future-state solutions, relating to four outcomes:

- a. improve trust and effective working relationships across the waste management community;
- b. improve environmental outcomes;
- c. advance a fair, effective business climate for the waste and recycling services sector; and
- d. provide effective and efficient service delivery within the region.

The interviews revealed industry perspectives on desired outcomes for regional waste and recycling, and informed the scope and purpose of the IAC and draft terms of reference. The IAC is expected to convene in fall 2021.

TERMS OF REFERENCE

The draft Waste and Recycling IAC Terms of Reference outlines the IAC purpose and objectives, membership and chair, advisory structure and work plan, as well as meeting arrangements and procedures. The draft terms of reference are summarized below and attached to this report.

Purpose and Objectives

The purpose of the IAC is to provide a forum for industry to contribute to, discuss and provide advice on management planning, operations and policy issues related to solid waste and recycling services in Metro Vancouver. The IAC will act as a formal structure through which industry representatives receive information, provide advice, and channel feedback. The IAC provides Metro Vancouver an opportunity to engage the private waste services sector in constructive dialogue on key areas of interest, including the solid waste management plan update; however, the IAC is not intended to be the sole mechanism for industry engagement in the solid waste management process. The function of the IAC will continue beyond the approval of a new solid waste management plan.

Membership and Chair

The IAC membership will include an unlimited number of representatives of private waste and recycling collection and processing companies and their industry associations affected by existing and proposed operational and policy items related to solid waste and recycling plans, policies and services within Metro Vancouver. Membership will be voluntary, carries a one-year term, and will be self-selecting through an annual open call. Members of the IAC will not receive remuneration for their time; however, out-of-pocket expenses may be reimbursed by Metro Vancouver. It is expected that all IAC members act in good faith to present the experience and concerns that are reflective of their broader community. A code of conduct will guide the spirit and intent of how members should deliver on the IAC's purpose and objectives in a respectful, collaborative and transparent manner. Metro Vancouver staff will not be members of the IAC but will attend meetings to provide information and respond to questions.

There will be two IAC Co-Chairs. One will be selected annually by a vote of the IAC members and the other will be a Zero Waste Committee representative appointed by the Board Chair in consultation with the Zero Waste Committee Chair.

Advisory Structure, Decision Making and Work Plan

The IAC is an advisory body providing advice and recommendations to Metro Vancouver staff and, through the IAC Co-Chairs, to the Solid Waste Management Plan Independent Consultation and Engagement Panel Independent Consultation and Engagement Panel and the Zero Waste Committee. The IAC will strive for consensus on recommendations and advice, and a dispute resolutions process will be employed as necessary. The IAC is not intended to be a voting body, with the exception of the Co-Chair election, work plan confirmation, and any appeal during member dismissal.

The work plan will be developed by Metro Vancouver staff based on the requests of IAC members and confirmed by the IAC. The work plan may be amended from time to time to accommodate emerging priority or time-sensitive issues.

Meetings

Meetings for the IAC will occur monthly on a pre-set schedule within a calendar year determined by the Co-Chairs in consultation with IAC members, with the exception of July, August and December, with the opportunity to add or cancel meetings as required. The meetings will be structured to encourage free and open discussion of relevant issues within the parameters of the planned agendas. Meetings will be open to any individual who wishes to observe the discussions either in person or through video or teleconference, and the IAC may hear from invited guests. Agendas, minutes and presentations will be made publically available on Metro Vancouver's website. Individual IAC members will not speak to media on behalf of the IAC, unless it has been approved by the Co-Chairs in advance.

Circulation of Draft Terms of Reference

A draft term of reference has been developed collaboratively with WMABC representatives. To ensure others in the waste and recycling industry that are not a part of WMABC have an opportunity to provide input to the terms of reference, the draft will be circulated to waste and recycling industry stakeholders for feedback. If the terms of reference are amended substantially following that feedback, the updated terms of reference will be brought back to the Zero Waste Committee for information. It is expected that the terms of reference will evolve over time once the IAC is in place.

ALTERNATIVES

This is an information report. No alternatives are presented.

FINANCIAL IMPLICATIONS

Metro Vancouver will provide funding for general meeting and secretariat expenses, which can be carried out within existing operating budgets.

CONCLUSION

An IAC comprised of waste and recycling collection and processing representatives will be convened to provide a forum for industry contribution, discussion and advice on management planning, operations and policy issues related to solid waste and recycling services in Metro Vancouver. The draft terms of reference attached to this report for information outline the IAC purpose and objectives, membership and chair, advisory structure and work plan, as well as meeting arrangements and procedures. The IAC is expected to be formed in fall 2021.

Attachment

Waste and Recycling Industry Advisory Committee Terms of Reference

References

[Zero Waste Committee Agenda Package - March 13, 2020 \(metrovancouver.org\)](https://www.metrovancouver.org/files/public/zero-waste/zero-waste-committee-agenda-package-march-13-2020)

45890694

Solid Waste & Recycling Industry Advisory Committee

Terms of Reference **DRAFT**

1. PURPOSE

The purpose of the Solid Waste & Recycling Industry Advisory Committee (IAC) is to provide a forum for industry contribution, discussion and advice on management planning, operations and policy issues related to solid waste and recycling services in Metro Vancouver.

The purpose of these terms of reference is to describe role of the committee.

2. OBJECTIVES

The IAC will:

- Provide industry representatives with a formal structure through which they can receive information and provide management planning, operational and policy advice related to solid waste and recycling within Metro Vancouver;
- Provide Metro Vancouver with a venue to engage the private waste services sector on solid waste and recycling plans, policies and services within the region; and
- Provide affected industry stakeholders with the opportunity to be heard and to channel ongoing feedback to Metro Vancouver, including engagement on Metro Vancouver's solid waste management plan update process as well as other waste management issues of regional importance.¹

3. MEMBERSHIP

The IAC membership is comprised of representatives of private waste and recycling collection and processing companies and their industry associations affected by existing and proposed operational and policy items related to solid waste and recycling plans, policies and services within Metro Vancouver. A representative from the Zero Waste Committee will attend all IAC meetings and will be one of the Co-Chairs for the IAC.

Membership is voluntary, self-selecting and carries a term of 1 year. The initial open call for membership will be advertised on Metro Vancouver's website and through Metro Vancouver's solid waste industry mailing list a minimum of 45 days prior to the inaugural IAC meeting. An annual open call for new members will be advertised a minimum of 30 days prior to each anniversary of the inaugural committee meeting. Existing members that wish to continue participation on the IAC will be asked to re-submit their statement of interest annually.

All waste and recycling collection and processing industry representatives who express interest in participating in the IAC will be required to review the IAC Self-Selection Assessment Framework and

¹ The IAC is not intended to be the sole venue or mechanism for industry consultation and engagement on the solid waste management plan update. Although the IAC will provide feedback and advice related to the plan update process, the scope of the committee includes other regional solid waste management considerations and will continue beyond the approval of the solid waste management plan.² See Appendix 1: IAC Self-Selection Assessment Framework and Appendix 2: Declaration Template

provide a written declaration² confirming agreement with, and the expressed intention to, work within this Terms of Reference. All individuals that complete this process will become members of the IAC.

4. EXPECTATIONS OF MEMBERS

- Members must be prepared to invest time and energy towards learning and understanding existing and proposed solid waste and recycling policies, practices, and bylaws, as well as the regional waste management system and issues associated with their administration and implementation.
- Members must be prepared to work constructively and collaboratively at committee meetings to address areas of mutual concern, recognizing the multi-faceted issues and interests of all impacted stakeholders. While it is recognized that private companies are not accountable to other members of their same industry, it is expected that all IAC members act in good faith to present the experience and concerns that are reflective of their broader community.
- Members must be prepared to commit the time required to attend monthly committee meetings, pre-read the agenda and all supporting material provided for each meeting, participate fully and constructively in committee discussions, and complete required actions and tasks on time.³ Members must provide advance written notice to the co-chairs if they are unable to attend a meeting. Members are not permitted to send alternate representatives if they are unable to attend a meeting.

5. CHAIRS

There will be two IAC Co-Chairs. The Zero Waste Committee representative will be a Co-Chair and a second Co-Chair will be selected annually for a term of one year by a 50%+1 majority vote of voting members present. Voting members are defined as IAC members who have held membership for at least one month prior to the day of the vote. The initial nominations for the co-chair will be held at the inaugural IAC meeting, with a vote to be held at the following IAC meeting. Subsequent co-chair selections will take place on the one-year anniversary of the member Co-Chair's appointment.

6. ADVISORY STRUCTURE & DECISION MAKING

The IAC is an advisory body, providing advice and recommendations to Metro Vancouver staff and, through the IAC Co-Chairs, to the Independent Consultation and Engagement Panel and the Zero Waste Committee. While sincere efforts will be made to achieve consensus on recommendations and advice, consensus is not a precondition to advancing committee recommendations. Where consensus exists it will be noted, and where it does not exist, minority opinions will be considered to have merit and will be noted as part of any advice being provided.

The IAC is not generally a voting body. Voting will only occur in the following four circumstances, and in these circumstances, there will be one vote allocated per company/entity represented:⁴

1. annual election of the co-chair;
2. updates to the terms of reference
3. confirmation of the annual workplan; and
4. during the appeal of member's dismissal, as described in section 10 of this Terms of Reference.

² See Appendix 1: IAC Self-Selection Assessment Framework and Appendix 2: Declaration Template

³ It is anticipated that this may represent a time commitment of 6 hours+ per month.

⁴ If there are multiple members representing a single company, they will be asked to convene among themselves to determine their collective vote.

In each of these scenarios, voting will be a 50 +1% majority decision-making model of votes cast.

7. WORK PLAN

A work plan for the IAC will be developed by Metro Vancouver staff based on an annual call for workplan topics submitted by IAC members reflecting priority issues they would like to see considered during the year. The work plan, once confirmed by the IAC, will guide development of meeting agendas for the year. The work plan may be amended during the year, at the agreement of both co-chairs, to allow for flexibility to address emerging issues or unanticipated, time-sensitive topics. Implementation of the annual workplan is at the prerogative of IAC members and does not direct activities of Metro Vancouver staff or resources, beyond the provision of committee secretariat support functions.

8. MEETINGS

- Meetings will be held monthly, except in July, August, and December, where no meetings will be held. The meeting dates and times will be determined by the Co-Chairs in consultation with IAC members, with a confirmed pre-set schedule for all meetings within the calendar year. The IAC may determine to hold additional meetings or cancel meetings as appropriate.
- Metro Vancouver will provide a venue, a third party note taker and refreshments for meetings, or as determined otherwise by the IAC. Where possible, virtual participation through video or teleconference will be provided as an option. Through 2021, all meetings may be held virtually depending on health protocols communicated by the Provincial Health Officer.
- The Co-Chairs will work with Metro Vancouver staff to draft meeting agendas and coordinate any necessary meeting materials, which will be circulated to meeting participants a minimum of 72 hours in advance of the meeting.
- The meetings will be structured to encourage free and open discussion of relevant issues within the constraints of the planned agendas.
- Meeting minutes and action trackers will be kept for each meeting, through secretariat support provided by Metro Vancouver staff.⁵ Minutes shall not reflect the names of individual speakers or their stance on issues; rather, they shall reflect the issues discussed, significant points of view on the issues and the resolutions or actions to be taken.
- A meeting quorum will be 50%+1 of active members.
- The IAC may establish other meeting procedures, which will be considered as an appendix to these terms of reference.
- Meetings will be open to any individual who wish to observe the discussions either in person or through video or teleconference, although only IAC members will be provided standing to participate in the discussion. Non-member stakeholders may request an opportunity to present to the IAC, through 2 weeks' advance written submission for consideration by the co-chairs.

⁵ Metro Vancouver staff are not members of the IAC, but will attend meetings of the IAC to provide information on various issues, respond to questions etc.

- The IAC may invite groups and subject-matter experts to present to the IAC and provide advice and feedback on specific IAC agenda items, at the discretion of the co-chairs.
- All IAC agendas will be published and publicly available in advance of meetings, with IAC presentations and meetings minutes posted for information on Metro Vancouver's website.

9. CODE OF CONDUCT

This code is intended to serve as a framework to guide the spirit and intent of how IAC members are expected to deliver on the IAC's purpose, objectives, and intent in an ethical and respectful manner.

1. **Respect and Collaboration:** Discussions and debates shall take place in an atmosphere of mutual respect and solutions-oriented collaboration, recognizing the value of different perspectives and seeking to understand the interests and needs of all affected parties.
2. **Transparency:** It is expected that all members speak honestly and transparently, engaging in good-faith dialogue and sharing information openly to encourage fact-based dialogue.
3. **Treatment of other Members:** Members of the committee have a duty to treat other members with respect during IAC meetings. Specifically, members have a duty to avoid:
 - a. Disrupting meetings by making continual interruptions or whispered asides;
 - b. Making offensive or abusive remarks directed at other members;
 - c. Impugning the motives of other IAC members or supporting staff;
 - d. Ignoring the legitimate direction of the co-chairs.

Members who object to the behaviour of another member as identified in this code of conduct are asked to identify their concerns immediately to the IAC co-chairs.

10. MEMBERSHIP DISMISSAL

IAC members must recognize the importance of their commitment through active participation, regular attendance and adherence to the IAC Terms of Reference. The following are potential reasons for membership dismissal.

- Failure to attend two or more consecutive monthly meetings, or,
- Lack of adherence to the IAC Terms of Reference, specifically including section 9: Code of Conduct, and Section 13: Media Protocol.

At the agreement of both co-chairs, members who have committed one or more of the potential reasons for losing membership may be dismissed from the committee by way of written notification. The dismissed member is ineligible for re-instatement at the subsequent annual call for membership.

If the member wishes to appeal the dismissal, they can request a vote from the IAC membership, to be undertaken using secret ballot. Voting will be a 50 +1% majority decision-making model. The impacted member is not eligible to vote in this process.

11. MEMBERSHIP RESIGNATION

Members wishing to resign from IAC committee membership should provide written notice of their intent to resign, including the effective date of their resignation, addressed to the IAC Co-Chairs.

12. BUDGET AND RESOURCES

Funding for general meetings, secretariat and support expenses is provided by Metro Vancouver. Any additional funding for special projects or studies is subject to Metro Vancouver approval.

13. MEDIA PROTOCOL

Individual IAC members will not speak on behalf of the IAC, unless it has been approved by the Co-Chairs in advance.

14. REVIEW OF THE IAC TERMS OF REFERENCE

The IAC will review this Terms of Reference at least every 18 months, for consideration on whether any amendments or modifications to the process are required. Proposed amendments will be provided to the Zero Waste Committee for approval.

APPENDIX 1: IAC Self-Selection Assessment Framework

IAC MEMBERSHIP REQUIREMENTS

The IAC membership is comprised of representatives of private waste and recycling collection and processing companies and their industry associations, affected by existing and proposed operational and policy items related to solid waste and recycling plans, policies and services within Metro Vancouver.

Membership is voluntary, self-selecting and carries a term of 1 year. All waste and recycling collection and processing industry representatives who express interest in participating in the IAC are required to review this IAC self-selection assessment framework and provide a written declaration (template attached) confirming agreement with, and the expressed intention to, work within the IAC Terms of Reference. All members that complete this process will become members of the IAC for a term of 1 year. IAC members that wish to continue participation on the IAC will be asked to re-submit their statement of interest annually.

INSTRUCTIONS

As part of the process in recruiting committee members for this important work, interested parties are asked to self-assess whether they hold the competencies, background and skills that will allow them to effectively and constructively participate as an IAC member. Please use the following assessment framework to personally assess your experience or level agreement level for each category. **There is no need to submit your completed assessment as part of your submission.**

IAC Self Selection Assessment Framework (Rank from 1-5 with 1 being "do not agree" and 5 being "strongly agree")						
SKILL	ASSESSMENT	1	2	3	4	5
Strategic, Long-Term Focus	I can view the process with a medium- to long-term lens, recognizing the complex policy environment of waste management in Metro Vancouver. I have a demonstrated ability to focus on longer term goals and strategic outcomes, as separate from day-to-day management and operational experience.					
Subject-Matter Expertise	I am familiar with the various aspects and policies of the waste management system in Metro Vancouver (as opposed to only having an interest in my specific line-of-business).					
Collaborative Approach	I have experience working in a collaborative and solutions-oriented manner, recognizing the multi-faceted issues and interests of all impacted stakeholders.					
Willingness to Learn	I am prepared to invest time and energy towards learning and understanding existing and proposed solid waste and recycling policies, practices, and bylaws, as well as the regional waste management system and issues associated with administration and implementation, even in situations where the topic does not directly affect my organization.					
Sector Representation	I can commit to focusing my participation on representing the broader interests and objectives of my sub-sector rather than my direct business interests.					
Curiosity and Critical Thinking	I have experience connecting ideas and concepts from different areas of knowledge, seek other points of view and am comfortable asking questions to clarify ideas and perceptions.					
Availability and Engagement	I can commit the time and effort necessary to: r attend monthly committee meetings, pre-read the material provided for each meeting, participate fully in committee meetings, complete required actions and tasks on time, and assume the consequences of my actions.					
Committee Experience	I have experience serving on private, non-profit, and/or public sector committees or boards, or am familiar with the general expectations and prepared to learn.					

APPENDIX 2: Declaration Template

Statement of Interest Declaration for IAC Membership

I, _____, representing

[Insert full name]

[business/organization]

would like to express my interest in participating as an active member on the Metro Vancouver Solid

Waste & Recycling Industry Advisory Committee (IAC) for a minimum term of 1 year.

I have read the IAC Terms of Reference and the IAC self-selection assessment framework and understand the membership criteria⁶, scope and expectations of membership. Through this signed

declaration, I confirm agreement with and declare an expressed intention to work within the IAC Terms

of Reference.

[Signature]

[Date]

[Printed Name]

⁶ IAC membership is comprised of private waste and recycling collection and processing companies and their industry associations, affected by existing and proposed operational and policy items related to solid waste and recycling plans, policies and services within Metro Vancouver.

Please print, complete, and scan this declaration form to xyz@email.com to submit your statement of interest for membership in the Solid Waste & Recycling Industry Advisory Committee. A Metro Vancouver staff member will send confirmation of receipt within 7 days.

To: Zero Waste Committee

From: Paul Henderson, General Manager, Solid Waste Services
Roy Moulder, Director, Purchasing and Risk Management, Financial Services

Date: July 9, 2021

Meeting Date: July 16, 2021

Subject: **Sea to Sky Soils Organics Management Contract**

RECOMMENDATION

That the GVS&DD Board receive for information the report dated July 9, 2021, titled “Sea to Sky Soils Organics Management Contract”.

EXECUTIVE SUMMARY

On April 30, 2021, the GVS&DD Board approved the award of a contract to Arrow Transportation Systems Inc. for the management of organics at the North Shore Recycling and Waste Centre. Metro Vancouver has subsequently entered into a contract with Sea to Sky Soils and Compacting Inc. (Sea to Sky Soils) to process approximately 6,000 tonnes per year of yard trimmings from the Langley and Maple Ridge Recycling and Waste Centres, and between 1,000 and 6,000 tonnes per year of single-family organic material from the North Shore Recycling and Waste Centre, to December 31, 2025. The contract will be cost neutral with an overall value over its 4.5-year duration of up to \$4,167,000 (exclusive of taxes). Entering into a contract with Sea to Sky Soils increases the resiliency of the regional organics management system by increasing the number of businesses providing organics management services to Metro Vancouver.

PURPOSE

The purpose of this report is to update the Zero Waste Committee and GVS&DD Board (the Board) on an organics management contract awarded to Sea to Sky Soils.

BACKGROUND

A combination of yard trimmings and single-family collected organics are managed at the North Shore Recycling and Waste Centre. The results of Request for Proposal No. 20-016: Organics Management at the North Shore Transfer Station were brought to the Zero Waste Committee at its April 16, 2021 meeting and the GVS&DD Board at its April 30, 2021 meeting. Staff recommended award of a 5-year contract to Arrow Transportation Systems Inc. (Arrow) for the operation of the drop-off area along with processing of the organic material. The Board approved award of the contract at a cost of up to \$17,428,425. The new contract results in a savings of approximately \$1.5 million per year compared to the previous arrangement where the service was delivered through four separate contracts. Arrow demonstrated substantial community support, providing letters of support from the Upper Similkameen Indian Band and the Town of Princeton, near where Arrow's processing facility is located.

The report generated discussion at the Zero Waste Committee and Board related to Metro Vancouver's procurement processes along with interest in enhancing opportunities for businesses with strong local support and First Nations support and participation. The Board passed the following resolution:

That the GVS&DD Board recommend a review of Metro Vancouver's procurement process to better incorporate Metro Vancouver's stated values and Strategic Plan visions (including transitioning towards a circular economy, strengthening relationships with First Nations, food security, supporting local economies, and reducing GHG emissions).

Finance staff will report back through the Finance and Intergovernment Committee.

This report advises the Zero Waste Committee and Board that a contract has been entered into with Sea to Sky Soils to manage other organic material within the Metro Vancouver system.

ORGANICS MANAGEMENT CONTRACTS

Green waste from the Langley and Maple Ridge Recycling and Waste Centres is currently being loaded and hauled to the Vancouver Landfill for composting under a contract with Arrow. Under the terms of that contract, Metro Vancouver has discretion to change the processing locations and negotiate new hauling rates with the contractor. Staff have exercised that option. Arrow will now haul material to Sea to Sky Soils.

Metro Vancouver negotiated and has issued a contract to Sea to Sky Soils for processing approximately 6,000 tonnes per year of green waste from the Langley and Maple Ridge Recycling and Waste Centres, and between 1,000 and 6,000 tonnes per year of single-family organics from the North Shore Recycling and Waste Centre, to December 31, 2025. The unit rates in the contract are based on rates provided by Sea to Sky Soils in their submission to Request for Proposal No. 20-016. Additional trucking costs to deliver the yard trimmings to Sea to Sky Soils are offset by reduced processing costs. The single-family organics include material dropped off at the North Shore Recycling and Waste Centre that, under the contract with Arrow, can be allocated to another processor to encourage innovation, plus material that will be sourced from other municipalities dropping off single-family organics at the North Shore Recycling and Waste Centre. The end of the contract term will align with the Langley and Maple Ridge organics management contract with Arrow on December 31, 2025.

Entering into a contract with Sea to Sky Soils provides community benefits in the Sea-to-Sky Corridor, and helps provide Metro Vancouver with a robust and resilient organics management system through contracting with an additional organics processor.

ALTERNATIVES

This is an information report. No alternatives are presented.

FINANCIAL IMPLICATIONS

The value for the Sea to Sky Soils contract over 4.5 years is anticipated to be up to \$4,167,000 (exclusive of taxes), depending on the actual tonnages processed. The contract is cost neutral due to offsetting processing costs, and because funding for residentially collected organics processed under the contract will be recovered from the municipalities using the service.

CONCLUSION

Metro Vancouver has entered into a contract to Sea to Sky Soils for processing approximately 6,000 tonnes per year of green waste from the Langley and Maple Ridge Recycling and Waste Centres, and a between 1,000 and 6,000 tonnes per year of residentially collected organics from the North Shore Recycling and Waste Centre. The total contract award to Sea to Sky Soils is estimated to be up to \$4,167,000 (exclusive of taxes) over 4.5 years. The contract will be cost neutral through reduced processing costs and recovery of costs from municipalities using the system. Entering into a contract with Sea to Sky Soils increases the resiliency of the regional organics management system through contracting with an additional organics processor.

46245233

To: Climate Action Committee

From: Megan Gerrys, Senior Advisor, Regional Economic Prosperity Service
Roger Quan, Director, Air Quality and Climate Change, Parks and Environment

Date: June 25, 2021 Meeting Date: July 16, 2021

Subject: **Proposed Updates to the Sustainability Innovation Fund Policies**

RECOMMENDATION

That the MVRD Board approve the proposed updates to the Regional District Sustainability Innovation Fund as presented in the report dated June 25, 2021, titled "Proposed Updates to the Sustainability Innovation Fund Policies".

That the GVS&DD Board approve the proposed updates to the Liquid Waste Sustainability Innovation Fund as presented in the report dated June 25, 2021, titled "Proposed Updates to the Sustainability Innovation Fund Policies".

That the GVWD Board approve the proposed updates to the Water Sustainability Innovation Fund as presented in the report dated June 25, 2021, titled "Proposed Updates to the Sustainability Innovation Fund Policies".

EXECUTIVE SUMMARY

The Sustainability Innovation Fund (SIF) program allows the Metro Vancouver organization to address critical climate challenges, meet strategic objectives and pilot innovative ideas. SIF projects touch on areas such as the circular economy, resource recovery, emissions reduction and environmental protection.

Following direction from the Climate Action Committee, staff are bringing forward proposed updates to the Sustainability Innovation Fund policies to strengthen and amplify the positive outcomes of the program. To address the stagnant annual contribution to the fund, Financial Services will develop and annually update a contribution schedule to ensure the fund is able to support future projects.

Starting in 2024, staff are proposing that Financial Services gradually phase in an increase in the contribution amount to each of the Sustainability Innovation Fund reserves. Annual contributions will not exceed 1% of the respective legal entity's operating budget and a maximum amount in the fund will be set at \$25 million, indexed to inflation.

PURPOSE

To seek Board approval for the proposed updates to the three Sustainability Innovation Fund (SIF) policies.

BACKGROUND

At its meeting held February 12, 2021, the Climate Action Committee directed to staff to review the Sustainability Innovation Fund policies. Key issues discussed included how current annual contributions to each of the three funds are based on the GST rebate amount from 2005, and the \$100,000 limitation on annual funding for projects under the Regional District SIF. Staff have conducted a review of the Sustainability Innovation Fund program and are recommending policy changes to address the stagnant annual contribution and funding cap for Regional District projects, as well as additional changes focused on enabling projects that can improve sustainability through innovation or continuous improvement, create positive economic benefits for the region, and further sustainability goals in response to the climate emergency. To ensure the fund can support innovative projects going forward, staff are recommending linking the annual funding amount to the annual operating budget and phasing in an increase over time starting in 2024.

VALUE OF INNOVATION

In order to be able to address the climate emergency and meet our corporate objectives, innovation is required. For a large organization such as Metro Vancouver, there is a need to invest in innovation and this will involve: research and development, the adoption of new products, improved processes and production practices, technologies and business strategies.

The SIF program is unique as it allows staff to bring forward their innovative ideas and partner with those outside the organization to put ideas into action. Successful partnerships may lead to significant benefits for the organization, and region, in terms of efficiency gains in utility processes, delaying or reducing the need for costly infrastructure upgrades or providing significant environmental benefits. These will help to keep services affordable for the region and improve the resilience of Metro Vancouver systems.

As an example, the Hydrothermal Processing Biofuel Demonstration project will evaluate the conversion of wastewater biomass to low carbon transportation fuels. If this SIF project is successful, it can lead to full-scale implementation of the technology at the Iona Island Wastewater Treatment Plant for an estimated net present value savings of more than \$60 million compared to the business as usual scenario. Further, a full-scale facility at Iona Island can reduce GHG emissions by 16,000 tonnes CO₂e/yr, which has attracted the attention of the advanced biofuel industry and petroleum producers seeking to decarbonize liquid transportation fuels. Expressed interest from organizations such as International Energy Agency – Bioenergy, the U.S. Department of Energy, the Commercial Aviation Alternatives Fuels Initiative, and the Water Research Foundation provided incentive for private-sector and provincial investments of \$5 million towards the Hydrothermal Processing Biofuel Demonstration project.

The SIF program is able to bridge the gap between research and commercialization, which is often the hardest type of funding to secure. Being able to invest in technological innovation in the region also yields great economic-development returns, driving entrepreneurship, an export-oriented economy and greater prosperity for the region. Additionally, these funds can often be leveraged as they allow researchers to acquire matching funding from other sources.

With this policy update there is an opportunity to increase partnerships centered on technological innovation that will create these economic benefits and meet corporate objectives. These types of projects may generate returns on SIF project investments through Intellectual Property royalties. A review of comparable governmental organizations that focus on innovation revealed that these organizations typically spend 0.5%-2% of their budget on innovation.

PROPOSED POLICY AMENDMENTS

The three amended SIF Policies attached to this report (Attachments 1-3) show proposed amendments that have been made in response to Committee direction and identified program issues. Attachments 4-6 show the red line versions of the policies. The amendments are designed to enable a wider variety of projects that will reduce emissions, protect the environment or advance regional resilience. The amended policy language explicitly encourages partnerships that will lead to innovative solutions to Metro Vancouver's challenges.

Policy Changes	Existing	Proposed
Funding amounts	Annual contributions: LW: \$1,127,000 RD: \$347,000 WS: \$723,000	Financial Services will develop and annually update a contribution schedule to ensure the fund is able to support future projects. Annually, an amount no greater than 1% of the legal entity's annual operating budget will be transferred to the fund. The fund balance will be set at a maximum amount of \$25 million indexed to inflation.
Project funding limits	Regional District limited to \$100k per year per project.	Remove Regional District funding limit.
Eligible proposals must include sustainability principles	Definition of sustainability from the defunct Sustainability Framework.	Sustainability refers to reducing emissions, protecting the environment and/or advancing regional resilience.
Eligible proposals must forward innovation or provide continuous improvement	Innovation not defined. Beyond 'business as usual' requirement creates challenges with respect to interpretation.	Proposals may cover the spectrum of projects involving true innovation to continuous improvement.
Partnerships	Projects must consider partnerships. Support given to projects that involve members.	Additional emphasis on partnerships, particularly ones that will lead to innovative solutions to Metro Vancouver's challenges, such as through applied and/or translational research within the region's academic institutions. Solutions may be generated through a crowd-sourcing ideation process.
Accountability	Reporting on project outcomes to Committee and in e-Library	Improved project reporting through project close out template (including KPI reporting)

Accountability

Staff are also intending to improve the accountability of SIF-funded projects by implementing measures to improve reporting on project outcomes, such as Key Performance Indicator (KPI) reporting. KPIs are currently identified by project proponents as part of the SIF application process, and new procedures will be put in place to facilitate consistent reporting during projects and at project completion. Closer attention will also be paid in the evaluation of potential projects with respect to qualitative and quantitative data on each of the projects.

Annual Contribution

The current policy language sets the annual contribution amount for each of the three funds based on the GST rebate amount set in 2005. This annual funding amount is problematic as it is a stagnant amount that does not take into account the value of money over time. In response to this issue, staff are proposing that the annual contribution to the fund be determined by Financial Services, up to a maximum of 1% of the legal entity's operating budget. This increase in funding will be phased in gradually over time with increases starting in 2024.

The broadening of definitions in the policy, as well as removal of the funding cap, will likely create pressure on the remaining balances. In response to this, staff are proposing an increased contribution. Without an increased contribution, the enhancements to the policy language may drive the fund to depletion. Conversely, in order to protect against any of the three fund balances getting too large, the proposed policy mandates that the maximum amount in the fund cannot exceed \$25 million, indexed to inflation. This amount was determined as being sufficient to support innovative projects going forward.

Table 1: Schedule of fund contributions based on current 5-Year Financial Plan (*subject to budgetary processes and review*)

	2022	2023	2024	2025	2026
WS Annual Contribution	\$723,000	\$723,000	\$ 1,861,500	\$ 2,484,600	\$3,500,000
% of operating budget	0.22%	0.21%	0.5%	0.6%	0.7%
LW Annual Contribution	\$1,127,000	\$1,127,000	\$2,351,500	\$3,259,200	\$5,250,000
% of operating budget	0.3%	0.27%	0.5%	0.6%	0.7%
RD Annual Contribution	\$347,000	\$347,000	\$554,500	\$684,000	\$840,000
% of operating budget	0.4%	0.4%	0.5%	0.6%	0.7%

Staff believe that coupling the funding amount to the operating budget is expected to create a stable proxy to base annual contributions on. Allowing Financial Services to set the annual contribution schedule, up to the maximum amount of 1% of the operating budget, phased in over time, gives the organization the flexibility to ensure the fund is able to support innovative projects going forward while safeguarding against the fund getting too large. Fund contributions will be subject to budgetary processes and review.

The proposed maximum of 1% of the operating budget is consistent with similar utility organizations that invest in innovation. In the scan of similar governmental organizations, innovation investments ranged from 0.5%-2% of the overall budget amount. These investments can add corporate value in

the form of economic, environmental and social benefits. Additionally, intangible benefits include valuable partnerships with other organizations, corporate integrity and public trust.

ALTERNATIVES

1. That the MVRD Board approve the proposed updates to the Regional District Sustainability Innovation Fund as presented in the report dated June 25, 2021, titled "Proposed Updates to the Sustainability Innovation Fund Policies".

That the GVS&DD Board approve the proposed updates to the Liquid Waste Sustainability Innovation Fund as presented in the report dated June 25, 2021, titled "Proposed Updates to the Sustainability Innovation Fund Policies".

That the GVWD Board approve the proposed updates to the Water Sustainability Innovation Fund as presented in the report dated June 25, 2021, titled "Proposed Updates to the Sustainability Innovation Fund Policies".

2. That the Climate Action Committee receive for information the report dated June 25, 2021, titled "Proposed Updates to the Sustainability Innovation Fund Policies" and provide alternate direction to staff.

FINANCIAL IMPLICATIONS

If the Board approves Alternative 1, Financial Services will gradually phase in an increase in the contribution amount to each of the SIF reserves starting in 2024. Table 1 shows the planned schedule for contribution increases. Annual contributions will not exceed 1% of the legal entity's operating budget and a maximum amount in the fund is set at \$25 million, indexed to inflation.

CONCLUSION

Following direction from the Climate Action Committee, staff are bringing forward proposed updates to the Sustainability Innovation Fund policies to strengthen and amplify the positive outcomes of the program. To address the stagnant annual contribution to the fund, Financial Services will develop and annually update a contribution schedule to ensure the fund is able to support future projects. Starting in 2024, staff are proposing that Financial Services gradually phase in an increase in the contribution amount to each of the Sustainability Innovation Fund reserves. Annual contributions will not exceed 1% of the respective legal entity's operating budget and a maximum amount in the fund will be set at \$25 million, indexed to inflation.

Attachments

1. Liquid Waste Sustainability Innovation Fund Policy
2. ~~Regional District Sustainability Innovation Fund Policy~~
3. ~~Water Services Sustainability Innovation Fund Policy~~
4. Liquid Waste Sustainability Innovation Fund Policy Red Line Version
5. ~~Regional District Sustainability Innovation Fund Policy Red Line Version~~
6. ~~Water Services Sustainability Innovation Fund Policy Red Line Version~~

LIQUID WASTE SUSTAINABILITY INNOVATION FUND

Effective Date: June 24, 2014 (revised month day, year)

Approved By: GVS&DD Board

Policy No. FN-003**PURPOSE**

The Policy is designed to ensure that the Liquid Waste Sustainability Innovation Fund (Fund) is used to support projects of the liquid waste utility that contribute to the region's sustainability and that the Fund is managed in an effective, transparent, and accountable manner.

POLICY

The Liquid Waste Sustainability Innovation has been in place since October 29, 2004, when the GVS&DD Board approved the creation of a Fund that would be "dedicated to funding projects based on the principles of sustainability." Projects must contribute to the region's sustainability by reducing emissions, protecting the environment and/or advancing regional resilience.

The fund is designed to support projects that demonstrate an innovative approach that is considered less proven or beyond the level of risk tolerated through the budget process. Projects may also adopt a continuous improvement approach that would not be feasible through the regular budget process due to funding or risk tolerance constraints.

Projects are encouraged to consider partnerships that will lead to innovative solutions to Metro Vancouver's challenges, particularly through applied and/or translational research within the region's academic institutions. These solutions may be generated through a crowd-sourcing ideation process.

Projects supported by the Fund must:

- be overseen by the GVSⅅ
- be consistent with the authority and responsibility of the GVSⅅ
- be consistent with the objectives of the *Integrated Liquid Waste and Resource Management Plan* and/or the *Board Strategic Plan*;
- consider partnerships including, but not limited to, member jurisdictions, academic institutions, non-governmental organizations, and community groups;
- result in a positive contribution, in the form of tangible results and/or measurable benefits, to the sustainability of the region;
- demonstrate innovation or a continuous improvement approach.

Fund Management

- Financial Services will develop and annually update a contribution schedule to ensure the fund is able to support future projects.

BOARD POLICY

- Annually, an amount no greater than 1% of GVS&DD's annual operating budget will be transferred to the fund.
- The fund will be set at a maximum amount of \$25 million indexed to inflation.
- Any revenues generated from projects derived from SIF investments will be taken into consideration with respect to annual contribution amounts.
- The total amount disbursed from the Fund in any year is at the discretion of the GVS&DD Board and will depend on the merit of the proposals submitted.
- Reporting on the balance of the Liquid Waste Sustainability Innovation Fund will be carried out through the Status of Reserves report.

Annual Evaluation and Decision-Making Process

- Project proposals will be evaluated by the Sustainability Innovation Fund Inter-Departmental Steering Committee according to the criteria outlined in the Application Package
- Staff will provide the designated Standing Committee with a report on recommendations on the proposals considered for funding and implications of these recommendations on the Fund's balance.
- The designated Standing Committee will provide its recommendations to the GVS&DD Board which will make the final decision on projects to be funded.

Reporting on the Fund's Contributions to Regional Sustainability

- On an annual basis, the designated Standing Committee will receive a report on the projects supported by the Fund including the deliverables, outcomes, and the measurable benefits of these projects to the region's sustainability.
- Project reports will be housed in an "e-Library" for easy access by member jurisdictions, regions and others who are interested in learning from the experiences, and who wish to assess the transferability of certain projects to other jurisdictions.

LIQUID WASTE SUSTAINABILITY INNOVATION FUND

Effective Date: June 24, 2014 (revised October 28, 2016)

Approved By: GVS&DD Board

Policy No. FN-003**PURPOSE**

The Policy is designed to ensure that the Liquid Waste Sustainability Innovation Fund (Fund) is used to support projects of the liquid waste utility that contribute to the region's sustainability and that the Fund is managed in an effective, transparent, and accountable manner.

DEFINITIONS**Sustainability**

~~Adapting the concept of sustainability as defined by Metro Vancouver's Sustainability Framework for the purposes of this Fund, a sustainability project would need to:~~

- ~~• Have regard for both local and global consequences and long term impacts~~
- ~~• Recognize and reflect the interconnectedness and interdependence of systems~~
- ~~• Be collaborative~~

~~In addition, sustainability projects will make a contribution to:~~

- ~~• Protecting and enhancing the natural environment~~
- ~~• Providing for ongoing prosperity~~
- ~~• Building community capacity and social cohesion.~~

POLICY

The Liquid Waste Sustainability Innovation has been in place since October 29, 2004, when the GVS&DD Board approved the creation of a Fund that would be "dedicated to funding projects based on the principles of sustainability." **Projects must contribute to the region's sustainability by reducing emissions, protecting the environment and/or advancing regional resilience.**

The fund is designed to support projects that demonstrate an innovative approach that is considered less proven or beyond the level of risk tolerated through the budget process. Projects may also adopt a continuous improvement approach that would not be feasible through the regular budget process due to funding or risk tolerance constraints.

Projects are encouraged to consider partnerships that will lead to innovative solutions to Metro Vancouver's challenges, particularly through applied and/or translational research within the region's academic institutions. These solutions may be generated through a crowd-sourcing ideation process.

BOARD POLICY

~~Annually, an amount equal to the GST rebate for the liquid waste utility in 2005 (\$1,127,000) is contributed to the Fund.~~

~~The Fund is not designed to support “business as usual” projects that a department would undertake as part of its normal operations, nor is it in place to support projects that would normally be funded through a department’s capital plan. The Fund can be used, however, to pursue “opportunity projects” in the capital planning process, innovative projects that are outside the liquid waste core functions that address cross-cutting organizational objectives, and public engagement and education programs designed to change behaviour.~~

Projects supported by the Fund must:

- be overseen by the GVSⅅ
- be consistent with the authority and responsibility of the GVSⅅ
- be consistent with the objectives of the *Integrated Liquid Waste and Resource Management Plan* and/or the *Board Strategic Plan*;
- consider partnerships including, but not limited to, member jurisdictions, academic institutions, non-governmental organizations, and community groups;
- result in a positive contribution, in the form of tangible results and/or measurable benefits, to the sustainability of the region;
- demonstrate innovation **or a continuous improvement approach** ~~and facilitate action.~~

Fund Management

- **Financial Services will develop and annually update a contribution schedule to ensure the fund is able to support future projects.**
- **Annually, an amount no greater than 1% of GVS&DD’s annual operating budget will be transferred to the fund.**
- **The fund will be set at a maximum amount of \$25 million indexed to inflation.**
- **Any revenues generated from projects derived from SIF investments will be taken into consideration with respect to annual contribution amounts.**
- ~~Annually, an amount equal to the GST rebate for the liquid waste utility in 2005 (\$1,127,000) is contributed to the Fund.~~
- The total amount disbursed from the Fund in any year is at the discretion of the GVS&DD Board and will depend on the merit of the proposals submitted.
- Reporting on the balance of the Liquid Waste Sustainability Innovation Fund will be carried out through the Status of Reserves report.

Annual Evaluation and Decision-Making Process

- ~~In accordance with the Sustainability Innovation Fund Process, departments will identify potential projects relevant to the objectives of the Fund during the internal budget planning process.~~

BOARD POLICY

- ~~• Projects proposed may come from staff led planning processes or from any Board Committee who can direct staff to evaluate a project or initiative and to prepare a proposal for consideration.~~
- ~~• To be considered, project proponents will need to complete the Sustainability Innovation Fund Application, which includes a description of the alignment with the goals of the *Integrated Liquid Waste and Resource Management Plan* and the *Board Strategic Plan* and a triple bottom line analysis. Proposals should specify the anticipated measurable contributions to the region's sustainability (e.g., reductions in greenhouse gas emissions, conversion to renewable energy sources, cleaner air or water, or improvements in ecosystem health) in addition to other benefits.~~
- **Project proposals** will be evaluated by the Sustainability Innovation Fund Inter-Departmental Steering Committee according to the criteria outlined in the Application Package
- Staff will provide the designated Standing Committee with a report on recommendations on the proposals considered for funding and implications of these recommendations on the Fund's balance.
- The designated Standing Committee will provide its recommendations to the GVS&DD Board which will make the final decision on projects to be funded.

Reporting on the Fund's Contributions to Regional Sustainability

- On an annual basis, the designated Standing Committee will receive a report on the projects supported by the Fund including the deliverables, outcomes, and the measurable benefits of these projects to the region's sustainability.
- Project reports will be housed in an "e-Library" for easy access by **member jurisdictions**, regions and others who are interested in learning from the experiences, and who wish to assess the transferability of certain projects to other jurisdictions.

COMMITTEE INFORMATION ITEMS AND DELEGATION SUMMARIES

Greater Vancouver Sewerage and Drainage District
Board Meeting Date – Friday, July 30, 2021

This information item, listing recent information received by committee, is provided for the GVS&DD Board's information. Please access a complete PDF package [here](#).

Liquid Waste Committee – July 15, 2021*Delegation Summaries:*

No delegations presented

Information Items:

- 5.2 Draft Liquid Waste Services 2022 – 2026 Capital Plan
- 5.3 Wet Weather Surcharge for Inflow and Infiltration Action
- 5.5 Liquid Waste Services Capital Program Expenditures Update as at April 30, 2021

Zero Waste Committee – July 16, 2021*Delegation Summaries:*

- 3.1 Tom Land, President & CEO and Christian Dietrich, General Manager, Ecowaste Industries Ltd.

Action Arising from the Delegation

The Zero Waste Committee requested staff report back to the Committee with information, including Metro Vancouver's jurisdiction, in response to the July 16, 2021 delegation from Tom Land, President & CEO and Christian Dietrich, General Manager, Ecowaste Industries Ltd. requesting Metro Vancouver express support for a change to the Agricultural Land Reserve (ALR) regulation exempting provincially-permitted landfills from the prohibition to accept construction and demolition waste on lands in the ALR.

Information Items:

- 5.1 Pre-Engagement Results – Solid Waste Management Plan Update
- 5.3 Solid Waste Services Capital Program Expenditure Update as of April 30, 2021
- 5.4 Draft Solid Waste Services 2022 – 2026 Capital Plan
- 5.6 Waste-to-Energy Facility 2020 Financial Update
- 5.7 2021 Regional Clothing Waste Reduction Campaign Results
- 5.8 Update on Metro Vancouver's Engagement with the Love Food Hate Waste Canada Campaign

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