

**GREATER VANCOUVER SEWERAGE AND DRAINAGE DISTRICT (GVS&DD)
BOARD OF DIRECTORS**

REGULAR BOARD MEETING

Friday, July 29, 2022

9:15 A.M.

**Meeting conducted in-person pursuant to the Procedure Bylaw
28th Floor Boardroom, 4515 Central Boulevard, Burnaby, British Columbia
Webstream available at <http://www.metrovancouver.org>**

[Membership and Votes](#)

A G E N D A¹

A. ADOPTION OF THE AGENDA

1. July 29, 2022 Regular Meeting Agenda

That the GVS&DD Board adopt the agenda for its regular meeting scheduled for July 29, 2022 as circulated.

B. ADOPTION OF THE MINUTES

1. June 24, 2022 Regular Meeting Minutes

That the GVS&DD Board adopt the minutes for its regular meeting held June 24, 2022 as circulated. *pg. 4*

2. July 7, 2022 Regular Joint Board Meeting Minutes

That the GVS&DD Board adopt the minutes for its regular joint meeting of the MVRD, MVHC, GVWD and GVS&DD Boards held July 7, 2022 as circulated. *pg. 9*

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. LIQUID WASTE COMMITTEE REPORTS

1.1 Sewage and Waste Heat Recovery Policy

pg. 15

Note: This report was considered by both Liquid Waste Committee and Zero Waste Committee.

That the GVS&DD Board approve the proposed *Sewage and Waste Heat Recovery Policy*, as presented in the report dated July 5, 2022, titled “Sewage and Waste Heat Recovery Policy”.

1.2 Proposed Capital Investment for the Surrey City Energy Sewer Heat Recovery Project

pg. 27

That the GVS&DD Board:

- a) direct staff to enter into contract negotiations with the City of Surrey for the Surrey City Centre Sewer Heat Recovery project, as presented in the report dated June 28, 2022, titled “Proposed Capital Investment for the Surrey City Centre Sewer Heat Recovery Project”; and
- b) authorize expenditures up to \$19 million as endorsed in the 2022 to 2026 capital plan.

1.3 Award of a Contract Resulting from Request for Proposal No. 22-006: Construction of Gilbert Trunk Sewer No.2 Gilbert Road South Section

pg. 34

That the GVS&DD Board:

- a) approve award of a contract in the amount of up to \$39,856,650 (exclusive of taxes) to Jacob Brothers Construction Inc., resulting from Request for Proposal No. 22-006: Construction of Gilbert Trunk Sewer No.2 Gilbert Road South Section, 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 award should proceed.

F. ITEMS REMOVED FROM THE CONSENT AGENDA

G. REPORTS NOT INCLUDED IN CONSENT AGENDA

1. FINANCE COMMITTEE REPORTS

1.1 GVS&DD Temporary Borrowing Bylaw No. 358, 2022

pg. 38

[Recommendation a): simple weighted majority vote.] and

[Recommendation b): 2/3 weighted majority vote.]

That the GVS&DD Board:

- a) authorize Metro Vancouver Regional District (“MVRD”) to temporary borrow on behalf of GVS&DD an amount, or amounts in aggregate, not exceeding \$1.42 billion dollars, the remaining amount of the *Greater Vancouver Sewerage & Drainage District Borrowing Bylaw No. 321, 2018*, and the maximum borrowing authorized; and
- b) give first, second and third readings to “*Greater Vancouver Sewerage & Drainage District Temporary Borrowing Bylaw Number 358, 2022*” and forward to the Inspector of Municipalities for statutory approval.

H. MOTIONS FOR WHICH NOTICE HAS BEEN GIVEN

I. OTHER BUSINESS

- 1. GVS&DD Board Committee Information Items and Delegation Summaries** *pg. 45*

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 29, 2022 pursuant to the *Community Charter* provisions, Section 90 (1) (g) and (j) as follows:

- "90 (1) A part of the meeting may be closed to the public if the subject matter being considered relates to or is one or more of the following:
- (g) litigation or potential litigation affecting the regional district; and
 - (j) information that is prohibited, or information that if it were presented in a document would be prohibited, from disclosure under section 21 of the *Freedom of Information and Protection of Privacy Act*."

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

M. ADJOURNMENT/CONCLUSION

That the GVS&DD Board adjourn/conclude its regular meeting of July 29, 2022.

**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 11:00 a.m. on Friday, June 24, 2022 in the 28th Floor Boardroom, 4515 Central Boulevard, 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 Jeannie Kanakos
 Delta, Alternate Director Dylan Kruger* for
 George Harvie
 Electoral Area A, Director Jen McCutcheon
 Langley City, Director Gayle Martin*
 Langley Township, Director Jack Froese*
 Langley Township, Director Kim Richter*
 Maple Ridge, Director Mike Morden*
 New Westminster, Director Jonathan Coté*
 North Vancouver District, Director Lisa Muri*
 Pitt Meadows, Director Bill Dingwall*
 Port Coquitlam, Director Brad West*
 Port Moody, Director Rob Vagramov*
 Richmond, Director Malcolm Brodie*

Richmond, Director Harold Steves*
 Surrey, Director Linda Annis*
 Surrey, Alternate Director Jack Hundial* for
 Laurie Guerra
 Surrey, Alternate Director Brenda Locke* for
 Doug Elford
 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, Alternate Director Pete Fry* for
 Kennedy Stewart
 Vancouver, Director Colleen Hardwick*
 Vancouver, Director Michael Wiebe*
 West Vancouver, Director Mary-Ann Booth*
 White Rock, Director Darryl Walker*
 Commissioner Jerry W. Dobrovolny (Non-voting
 member)

MEMBERS ABSENT:

None

OTHERS PRESENT

Belcarra, Mayor Jamie Ross †
 Bowen Island, Councillor David Hocking †
 Lions Bay, Mayor Ron McLaughlin †
 Tsawwassen, Chief Ken Baird †

† denotes electronic meeting participation

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

STAFF PRESENT:

Chris Plagnol, Corporate Officer

Morgan Mackenzie, Legislative Services Coordinator, Board and Information Services

A. ADOPTION OF THE AGENDA

1. June 24, 2022 Regular Meeting Agenda

It was MOVED and SECONDED

That the GVS&DD Board adopt the agenda for its regular meeting scheduled for June 24, 2022 as circulated.

CARRIED

B. ADOPTION OF THE MINUTES

1. May 27, 2022 Regular Meeting Minutes

It was MOVED and SECONDED

That the GVS&DD Board adopt the minutes for its regular meeting held May 27, 2022 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 24, 2022 MVRD Board Consent Agenda:

- 1.1 Out-of-Region Trucked Liquid Waste Discharge Request (Super Save)
- 1.2 Appointment of Deputy Sewage Control Manager and Enforcement Officer

1.1 Out-of-Region Trucked Liquid Waste Discharge Request (Super Save)

Report dated May 31, 2022, from Dana Zheng, Program Manager, Policy, Planning and Analysis, Liquid Waste Services, seeking the GVS&DD Board's consideration for the temporary discharge of out-of-region trucked liquid waste from Super Save Toilet Rentals Inc. at GVS&DD wastewater treatment plants.

Recommendation:

That the GVS&DD Board authorize staff to issue an out-of-region discharge number based on the application from Super Save Toilet Rentals Inc. to discharge out-of-region trucked liquid waste from June 1, 2022 to September 30, 2022 pursuant to *GVS&DD Trucked Liquid Waste Bylaw No. 345, 2021*, as presented in the report dated May 31, 2022 titled “Out-of-Region Trucked Liquid Waste Discharge Request (Super Save)”.

Adopted on Consent

1.2 Appointment of Deputy Sewage Control Manager and Enforcement Officer

Report dated May 3, 2022, from Kathy Preston, Director, Environmental Regulation and Enforcement, Parks and Environment, seeking the GVS&DD Board’s approval to appoint and rescind appointments of Metro Vancouver and City of Vancouver employees as Board-designated deputy sewage control managers and officers.

Recommendation:

That the GVS&DD Board:

- a) pursuant to the Greater Vancouver Sewerage and Drainage District Sewer Use Bylaw and the Environmental Management Act:
 - i. rescind the appointment of former Metro Vancouver employee Grant McGillivray as a deputy sewage control manager and as an officer;
 - ii. appoint Metro Vancouver employee Maari Hirvi Mayne as a deputy sewage control manager; and
 - iii. appoint City of Vancouver employee Charla Brake as an officer.
- b) pursuant to Section 28 of the Offence Act for the purpose of serving summons for alleged violations under the Greater Vancouver Sewerage and Drainage District Sewer Use Bylaw:
 - i. rescind the appointment of former Metro Vancouver employee Grant McGillivray; and
 - ii. appoint City of Vancouver employee Charla Brake.

Adopted on Consent

F. ITEMS REMOVED FROM THE CONSENT AGENDA

No items presented.

G. REPORTS NOT INCLUDED IN CONSENT AGENDA

No items presented.

1.1 Greater Vancouver Sewerage and Drainage District Sewerage and Drainage Areas Boundaries Amending Bylaw No. 356, 2022 – Fraser Sewerage Area – City of Maple Ridge

Report dated June 10, 2022, from Janis Knaupp, Acting Corporate Officer, together with the report dated May 30, 2022, from Mark Wellman, Senior Engineer, Policy, Planning and Analysis, Liquid Waste Services, seeking the

GVS&DD Board's approval to amend the *Greater Vancouver Sewerage and Drainage District Sewerage and Drainage Areas Boundaries Bylaw No. 310, 2018* to include the property located at 13179 224 Street, Maple Ridge within the Fraser Sewerage Area (FSA).

It was MOVED and SECONDED

That the GVS&DD Board give first, second and third reading to the *Greater Vancouver Sewerage and Drainage District Sewerage and Drainage Areas Boundaries Amending Bylaw No. 356, 2022*.

CARRIED

It was MOVED and SECONDED

That the GVS&DD Board pass, and finally adopt the *Greater Vancouver Sewerage and Drainage District Sewerage and Drainage Areas Boundaries Amending Bylaw No. 356, 2022*.

CARRIED

2.1 GVS&DD Development Cost Charge Rate Amending Bylaw No. 353, 2022

Report dated June 13, 2022, from Dean Rear, Chief Financial Officer, Financial Services, seeking the GVS&DD Board's approval to adopt *GVS&DD Development Cost Charge Amending Bylaw No. 353, 2022* that has received its certificate of approval from the Inspector of Municipalities.

It was MOVED and SECONDED

That the GVS&DD Board pass and finally adopt *Greater Vancouver Sewerage and Drainage District Development Cost Charge Amending Bylaw No. 353, 2022*.

CARRIED

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 24, 2022.

CARRIED

J. BUSINESS ARISING FROM DELEGATIONS

No items presented.

K. RESOLUTION TO CLOSE MEETING

It was MOVED and SECONDED

That the GVS&DD Board close its regular meeting scheduled for June 24, 2022 pursuant to the *Community Charter* provisions, Section 90 (1) (g) and (i) 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:

(g) litigation or potential litigation affecting the regional district; and

(i) the receipt of advice that is subject to solicitor-client privilege, including communications necessary for that purpose.”

CARRIED

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 adjourn its regular meeting of June 24, 2022.

CARRIED

(Time: 11:03 a.m.)

CERTIFIED CORRECT

Chris Plagnol, Corporate Officer

Sav Dhaliwal, Chair

53615721 FINAL

**REGULAR JOINT MEETING
MVRD, MVHC, GVWD, and GVS&DD BOARDS**

Minutes of the Regular Joint Meeting of the Metro Vancouver Regional District (MVRD), Metro Vancouver Housing Corporation (MVHC), the Greater Vancouver Water District (GVWD), and the Greater Vancouver Sewerage and Drainage District (GVS&DD) Board of Directors held at 9:15 a.m. on Thursday, July 7, 2022 in the 28th Floor Boardroom, 4515 Central Boulevard, Burnaby, British Columbia.

MEMBERS PRESENT:

Burnaby, Chair, Director Sav Dhaliwal	Port Coquitlam, Director Brad West* (departed at 11:04 a.m.)
North Vancouver City, Vice Chair Director Linda Buchanan*	Port Moody, Director Rob Vagramov
Anmore, Director John McEwen	Richmond, Director Malcolm Brodie* (departed at 9:57 a.m.)
Belcarra, Director Jamie Ross	Richmond, Director Harold Steves*
Bowen Island, Director David Hocking*	Surrey, Director Linda Annis*
Burnaby, Director Pietro Calendino*	Surrey, Director Doug Elford* (arrived at 9:18 a.m.)
Burnaby, Director Mike Hurley	Surrey, Director Laurie Guerra*
Coquitlam, Director Craig Hodge*	Surrey, Director Doug McCallum*
Coquitlam, Director Richard Stewart* (arrived at 9:17 a.m.)	Surrey, Director Allison Patton*
Delta, Alternate Director Dylan Kruger* for Director George Harvie (arrived at 9:33 a.m.)	Vancouver, Director Christine Boyle*
Delta, Director Jeannie Kanakos* (arrived at 9:16 a.m.)	Vancouver, Director Adriane Carr
Electoral Area A, Director Jen McCutcheon*	Vancouver, Director Melissa De Genova (arrived at 9:47 a.m.)
Langley City, Director Gayle Martin*	Vancouver, Director Lisa Dominato
Langley Township, Director Jack Froese	Vancouver, Director Colleen Hardwick*
Langley Township, Director Kim Richter*	Vancouver, Alternate Director Pete Fry* for Director Kennedy Stewart
Lions Bay, Director Ron McLaughlin	Vancouver, Director Michael Wiebe* arrived at 9:19 a.m.)
Maple Ridge, Director Mike Morden*	West Vancouver, Director Mary-Ann Booth* (arrived at 9:16 a.m.)
New Westminster, Director Jonathan Coté* (departed at 11:30 a.m.)	White Rock, Director Darryl Walker*
North Vancouver District, Director Lisa Muri*	
Pitt Meadows, Director Bill Dingwall*	

MEMBERS ABSENT:

Surrey, Director Mandeep Nagra	Tsawwassen, Director Ken Baird
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STAFF PRESENT:

Jerry W. Dobrovolsky, Chief Administrative Officer
Dorothy Shermer, Deputy Corporate Officer
Natalia Melnikov, Legislative Services Coordinator, Board and Information Services

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

A. ADOPTION OF THE AGENDA

1. July 7, 2022 Regular Joint Board Meeting Agenda

The Chair called the meeting to order and confirmed the agenda as circulated.

9:16 a.m. Directors Booth and Kanakos arrived at the meeting.

9:17 a.m. Director Stewart arrived at the meeting.

9:18 a.m. Director Elford arrived at the meeting.

9:19 a.m. Director Wiebe arrived at the meeting.

B. PRESENTATION AND DISCUSSION

1. Board Strategic Plan – A Look Back at 2019-2022

Sav Dhaliwal, Chair, Metro Vancouver Board of Directors, and Linda Buchanan, Vice Chair, Metro Vancouver Board of Directors, acknowledged the traditional territory of Metro Vancouver First Nations, welcomed members, and provided an overview of the Board's goals and priorities for each of Metro Vancouver's service areas, highlighting the impacts of the extreme weather events and COVID-19 pandemic on the region.

Liquid Waste Committee

Richard Stewart, Chair, Liquid Waste Committee, provided an overview of the Liquid Waste Committee and its work, highlighting Liquid Waste Services' accomplishments, including the approved Project Definition for the Iona Island Wastewater Treatment Plant, the expansion of the Annacis Wastewater Treatment Plant, the resumption of the construction of the North Shore Wastewater Treatment Plant, and the ongoing collaboration with the BC Centre for Disease Control and the University of British Columbia to track the presence of COVID-19 virus in the region's wastewater.

9:33 a.m. Director Kruger arrived at the meeting.

Members were shown a Metro Vancouver video on the Renewable Natural Gas Project at Lulu Island Wastewater Treatment Plant, which is not retained with the agenda.

Water Committee

Malcolm Brodie, Chair, Water Committee, provided an overview of the Water Committee and its work, highlighting Water Services' accomplishments, including the completion of the Port Mann Corridor Project, the Second Narrows Water Supply Tunnel, and the Clayton and Jericho Reservoirs. Other accomplishments included the upgrades of the Annacis and Stanley Park Water Supply Tunnels, and the implementation of the Cleveland Dam Safety Enhancements Program. He also noted the updates to the *Drinking Water Conservation Plan* and the *Water Supply Outlook 2120*, highlighting the importance of drinking water quality and preservation.

In response to questions, members were informed about the ongoing discussions with First Nations regarding the pipe removal in Stanley Park to restore the area.

Members were shown a Metro Vancouver video regarding the *Water Supply Outlook 2120*, which is not retained with the agenda.

9:47 a.m. Director De Genova arrived at the meeting.

Zero Waste Committee

Jack Froese, Chair, Zero Waste Committee, provided an overview of the Solid Waste Committee and Solid Waste Services' accomplishments, including the new United Boulevard and Central Surrey Recycling and Waste Centres, the upgrade of the Waste-to-Energy Facility in Burnaby, an update of the *Integrated Solid Waste and Resource Management Plan*, and the waste reduction campaigns.

In response to questions regarding excess packaging, members were informed about the work with the Canada Plastics Pact.

Members were shown a Metro Vancouver video regarding the enhanced recycling and waste services, which is not retained with the agenda.

Housing Committee

Mike Hurley, Chair, Housing Committee, provided an overview of the Housing Committee and Metro Vancouver's Housing Services accomplishments, including the advancement of seven affordable housing projects, the adopted Metro Vancouver Housing 10-Year Plan, expanded tenant programs promoting community building and community gardens, the revised *Tenant Selection Policy*, and the start of the construction of Kingston Gardens and Welcher Avenue apartments.

9:57 a.m. Director Brodie departed the meeting.

Members were shown a Metro Vancouver video regarding the adoption of the 10-Year Housing Plan, which is not retained with the agenda.

Regional Parks Committee

John McEwen, Chair, Regional Parks Committee, provided an overview of the Regional Parks Committee, highlighting accomplishments in Regional Parks, including record park visitations, park acquisitions, trail upgrades, the update to the *Regional Greenways 2050 Plan*, the completed *Regional Parks Alternative Transportation Study*, the signed Cultural Planning and Co-Operative Agreement for təmtə́míxʷtən/Belcarra Regional Park with the Tsleil-Waututh Nation, advanced design for enhancements in Crippen Regional Park, Campbell Valley Regional Park, and Grouse Mountain Regional Park, and advanced planning for Widgeon Marsh Regional Park.

Regional Culture Committee

Lisa Muri, Chair, Regional Culture Committee, provided an overview of the Regional Culture Committee and the regional arts and culture program challenges during the COVID-19 pandemic. Director Muri highlighted program accomplishments, including adapted grant provision as part of the Regional Cultural Grants Program, and the annual allocation of \$150,000 of grant funding supplemented with an additional \$150,000 from BC Safe Restart funding.

Invest Vancouver

Sav Dhaliwal, Chair, Invest Vancouver Management Board, provided an overview of Invest Vancouver, the regional economic prosperity service, highlighting its funding initiatives and accomplishments, including collaboration with Amazon Web Services to create a workforce development initiative for technology, \$200,000 Federal funding received through the CanExport Community Investment Program, declaration of June as Clean Transportation Month, and the *Motivate Vancouver* event cohosted with CoMotion Global.

In response to a question regarding opportunities to discuss the idea of wind turbine manufacturing, members were informed about plans to begin discussions through the Canadian Consulate in Copenhagen.

Members were shown a Metro Vancouver video regarding the launch and highlights of Invest Vancouver, which is not retained with the agenda.

Mayors Committee

Brad West, Chair, Mayors Committee, provided an overview of the Mayors Committee and its work, outlining Metro Vancouver's initiatives and collaborations with other orders of government, including work on the overdose crisis, municipal harm reduction discussion with Local Leadership United, 2021 All-Party-Federal Election Forum, and the joint event between the Mayors Committee, Invest Vancouver, and European Union Consulate Generals to discuss the potential trade, investment, and partnership opportunities.

Regional Planning Committee

Jonathan Coté, Chair, Regional Planning Committee, provided an overview of the Regional Planning Committee and Regional Planning Services' challenges and accomplishments, highlighting the completed draft of *Metro 2050*, which is now in the approval phase, the approved *Regional Industrial Land Strategy*, the *Industrial Intensification Analysis Study*, and the *Social Equity in Regional Growth Management Study*.

In response to a question, members were informed that the School Board was invited to participate in *Metro 2050* consultations as legislatively required, but the inclusion of police services is up to local jurisdictions.

Electoral Area Committee

Jen McCutcheon, Chair, Electoral Area Committee, provided an overview of the Electoral Area Committee and Metro Vancouver Electoral Area A, highlighting a geotechnical study to map rural portions of the Electoral Area, community engagement and cleanup events, electric vehicle charging, recycling, and active transportation projects, and the emergency preparedness efforts for at-risk communities. Members were informed about the ongoing engagement with the Katzie First Nation and the Province to mitigate potential flooding impacts.

Performance and Audit Committee

Lisa Dominato, Chair, Performance and Audit Committee, provided an overview of the Performance and Audit Committee's role, highlighting Metro Vancouver's financial reporting improvements and accomplishments, including the 2022 Excellence in Financial Reporting Award received from the Government Finance Officers Association of the United States and Canada.

Finance Committee

Sav Dhaliwal, Chair, Finance Committee, provided an overview of the Finance Committee, highlighting Metro Vancouver's financial planning process and accomplishments, including Metro Vancouver's high credit rating and budget reductions to keep the 2022 levy rate increase below the inflation rate, and the amended *Federal Gas Tax Fund Expenditures Policy* to improve processes and apply a climate action lens.

George Massey Crossing Task Force

Sav Dhaliwal, Chair, Board of Directors, on behalf of George Harvie, Chair, George Massey Crossing Task Force, provided an overview of the George Massey Crossing Task Force and its work, highlighting Metro Vancouver's accomplishments in the George Massey Crossing Project development, which is intended to facilitate efficiency and movement of people and goods in the region.

Flood Resiliency Task Force – 10:49

Bill Dingwall, Chair, Flood Resiliency Task Force, noted the effects of the Atmospheric River flooding events affecting multiple communities in British Columbia in November 2021, and provided an overview of Metro Vancouver's accomplishments and engagement with the affected municipalities and First Nations to identify regional risks and gaps in existing infrastructure and the priority areas in need of regional investment while reviewing the existing *Lower Mainland Flood Management Strategy*.

Climate Action Committee

Adriane Carr, Chair, Climate Action Committee, provided an overview of the Climate Action Committee and Air Quality and Environmental Planning Services, highlighting climate change impacts, and regional challenges and accomplishments, including the adopted *Clean Air Plan*, improved air quality

monitoring, and the amended *Climate 2050* strategic plan with a goal of becoming a carbon neutral region by 2050.

Members were shown a Metro Vancouver video titled “Metro Vancouver Achieves Carbon Neutrality”, which is not retained with the agenda.

Indigenous Relations Committee

Mary-Ann Booth, Chair, Indigenous Relations Committee, provided an overview of the Indigenous Relations Committee and its work, highlighting Metro Vancouver’s accomplishments, including the cooperation agreement with the Tsleil-Waututh Nation and renaming of təmtə́míxʷtən/Belcarra Regional Park, treaty negotiations with the Katzie First Nation, Lunch-and-Learn opportunities for staff, and strengthening relationships with First Nations through project-related engagement work.

Members were shown Metro Vancouver videos of the təmtə́míxʷtən/Belcarra Regional Park Renaming Ceremony and the Board Strategic Plan 2019 – 2022 Look Back, which are not retained with the agenda.

Presentation material titled “2019 – 2022 Look Back – Board Strategic Plan” is retained with the July 7, 2022 MVRD/MVHC/GVWD/GVS&DD Regular Joint Board Meeting agenda.

Closing Remarks

Vice Chair Buchanan and Chair Dhaliwal offered closing remarks highlighting members’ contributions and Metro Vancouver’s role in delivering essential services.

11:30 a.m. Director Coté departed the meeting.

C. ADJOURNMENT/CONCLUSION

It was MOVED and SECONDED

That the MVRD/MVHC/GVWD/GVS&DD Board conclude its regular joint meeting of July 7, 2022.

CARRIED

(Time: 11:32 a.m.)

CERTIFIED CORRECT

Dorothy Shermer, Deputy Corporate Officer

Sav Dhaliwal, Chair

53822623 FINAL

To: Liquid Waste Committee and Zero Waste Committee

From: Jeff Carmichael, Division Manager, Business Development, Liquid Waste Services
Sarah Wellman, Senior Engineer, Solid Waste Operations, Solid Waste Services

Date: July 5, 2022 Meeting Dates: July 13, 2022
July 15, 2022

Subject: **Sewage and Waste: Heat Recovery Policy**

RECOMMENDATION

That the GVS&DD Board approve the proposed *Sewage and Waste: Heat Recovery Policy*, as presented in the report dated July 5, 2022, titled “Sewage and Waste: Heat Recovery Policy”.

EXECUTIVE SUMMARY

Metro Vancouver has the opportunity to reduce greenhouse gas emissions by investing in waste heat recovery to offset fossil fuel use for building heat and hot water. Metro Vancouver’s *Climate 2050* strategy includes a target of a climate neutral region by 2050 with an interim target of 45% greenhouse gas emission reductions by 2030. Metro Vancouver’s liquid waste system and the Waste-to-Energy Facility have the potential to provide heat and hot water for up to 130,000 homes, reducing greenhouse gas emissions by up to 300,000 tonnes per year, or equivalent to approximately the annual emissions of 60,000 passenger vehicles. The proposed *Sewage and Waste: Heat Recovery Policy* facilitates maximizing the recovery of this resource.

The proposed *Sewage and Waste: Heat Recovery Policy* replaces the existing *Liquid Waste Heat Recovery Policy*:

- incorporating Waste-to-Energy Facility district energy projects;
- standardizing the baseline for GHG emission reduction calculations;
- updating the approach to allocating GHG emission reduction credits between the GVS&DD and member jurisdictions; and
- standardizing the approach for applying the *Carbon Price Policy* to liquid waste and solid waste system projects.

PURPOSE

To present a proposed *Sewage and Waste: Heat Recovery Policy* for consideration by the GVS&DD Board.

BACKGROUND

On June 23, 2017, the MVRD Board approved a *Carbon Price Policy* for Metro Vancouver that established a Carbon Price (inclusive of any applicable external carbon taxes) of \$150 per tonne of CO₂e. On July 26, 2019, the MVRD Board approved the *Climate 2050 Strategic Framework*, which targets 45% reduction in greenhouse gas (GHG) emission by 2030 and a climate neutral region by 2050.

On March 26, 2021, the GVS&DD Board approved the following resolutions:

- a) *approve the revised Liquid Waste Heat Recovery Policy, as presented in the report dated March 2, 2021, titled “Liquid Waste Heat Recovery Policy Amendments to Expand Opportunities for Sewer Heat Recovery”; and*
- b) *direct staff to work with GVS&DD members’ staff to assess the range of options available for carbon accounting for liquid waste heat recovery projects; and if appropriate, develop a framework for allocation of carbon offset credits among the GVS&DD members; and report back to the GVS&DD Board by the end of 2021.*

The updated policy included the potential for GVS&DD investment in sewer heat projects considering the GHG emission benefits of the projects.

On May 28, 2021, the GVS&DD Board approved proceeding with development of a district energy system for the Waste-to-Energy Facility that will serve River District in Vancouver along with developments in Burnaby and potentially New Westminster.

This report proposes replacement of the *Liquid Waste Heat Recovery Policy* with an overarching *Sewage and Waste: Heat Recovery Policy* for liquid waste and Waste-to-Energy Facility projects consistent with the *Carbon Price Policy*. The proposed policy supports maximizing energy recovery and GHG emission reduction by offsetting fossil fuel use.

SEWAGE AND WASTE: HEAT RECOVERY POLICY

The purpose of the proposed *Sewage and Waste: Heat Recovery Policy* is to facilitate maximizing heat recovery from the region’s liquid waste and solid waste systems. The proposed *Sewage and Waste: Heat Recovery Policy* is attached to this report.

Liquid Waste and Waste-to-Energy Facility Heat Recovery Opportunity

There is enough excess heat energy in the liquid waste collection system to heat 100,000 homes throughout the region, which could reduce GHG emissions by nearly 250,000 tonnes per year. An agreement is in place to provide heat to Lonsdale Energy Corporation, a capital contribution toward the Sapperton District sewer heat project has been approved by the Board, and several additional sewer heat recovery projects are under development or assessment.

The Waste-to-Energy Facility currently generates approximately 20 MW of electricity, sufficient for 16,000 homes. Developing a district energy system in addition to continuing to generate electricity will triple the energy recovery efficiency for the facility compared to electricity generation alone. The Waste-to-Energy Facility district energy system will provide heat and hot water for up to 30,000 homes and reduce GHG emissions by up to 45,000 tonnes per year. An agreement is in place with River District Energy in Vancouver to substitute Waste-to-Energy Facility waste heat for natural gas to provide heat and hot water for the development. Agreements are being negotiated with Vancouver and Burnaby to facilitate access to municipal streets, and in the case of Burnaby to provide energy for district energy systems for developments in Burnaby.

The total emission reduction potential of liquid waste system projects and the Waste-to-Energy Facility district energy system projects equate to the emissions of approximately the annual emissions of 60,000 passenger vehicles.

Sewage and Waste: Heat Recovery Policy Elements

Greenhouse Gas Emission Reduction Calculation: Member jurisdictions have different policies in place with respect to green building requirements. To allow a standardized approach for GHG emission reduction calculations the proposed *Sewage and Waste: Heat Recovery Policy* establishes a baseline for GHG emission reduction calculations as the Provincial regulatory standard for building construction. On that basis, the current baseline for calculating GHG emission reductions would be natural gas heating.

Environmental Attributes: Given the different green building policies in the region, GHG emission reduction credits may vary between projects. To ensure GVS&DD investment can be provided equitably in all member jurisdictions, the amount of GHG emission reduction credits generated by a project will not be a criterion for determining investment in projects. In the event there are GHG emission reduction credits generated by a project, those credits will be allocated between GVS&DD and the other project participants based on financial and non-financial contributions to the project, with the allocation being subject to Board approval as part of any agreement with those parties.

For credits allocated to Metro Vancouver, those credits will be used for the GVS&DD to attain carbon neutrality with any residual credits distributed to member jurisdictions based on population.

Application of Carbon Price Policy: The proposed *Sewage and Waste: Heat Recovery Policy* allows for investment in projects with the maximum investment determined by the *Carbon Price Policy*. Investment would be limited such that the cost to the consumer would not be reduced below the least expensive alternative allowed under Provincial regulatory requirements – currently natural gas.

Sewage and Waste: Heat Recovery Policy Implementation Examples: Under the proposed *Sewage and Waste: Heat Recovery Policy*, GVS&DD capital investments in sewer heat projects would be calculated based on the *Carbon Price Policy*, with heat users paying all operating and maintenance costs. For the Waste-to-Energy District Energy system, GVS&DD would provide heat to member district energy systems with pricing based on natural gas prices with the maximum GVS&DD investment based on the *Carbon Price Policy*.

Municipal Staff Advisory Committee Engagement

An original draft of the policy was provided to municipal staff advisory committees including the Regional Engineers Advisory Committee and the Regional Administrators Advisory Committee. The proposed *Sewage and Waste: Heat Recovery Policy* includes suggestions provided by those committees.

ALTERNATIVES

1. That the GVS&DD Board approve the proposed *Sewage and Waste: Heat Recovery Policy*, as presented in the report dated July 5, 2022, titled “Sewage and Waste: Heat Recovery Policy”.

2. That the Liquid Waste and Zero Waste Committees receive for information the report dated July 5, 2022, titled “Sewage and Waste: Heat Recovery Policy” and provide alternate direction to staff.

FINANCIAL IMPLICATIONS

If the Board approves Alternative 1, Metro Vancouver will negotiate agreements for the recovery of waste heat with member jurisdictions consistent with the new policy. Each agreement will be negotiated based on business casing considering the benefit of GHG emission reductions. If Provincial regulatory requirements change or if the price of natural gas increases, future agreements will be based on the new baseline conditions as determined by Provincial regulatory requirements.

CONCLUSION

Metro Vancouver’s *Climate 2050* strategy includes targets for regional GHG reductions of 45% by 2030 compared to 2010 levels, and a carbon neutral region by 2050. The proposed *Sewage and Waste: Heat Recovery Policy* supports capital funding for projects that recover energy from liquid and solid waste systems for building heat and hot water. These projects reduce greenhouse gas emissions by offsetting the use of fossil fuels. The policy will replace the *Liquid Waste Heat Recovery Policy*. Staff recommend Alternative 1.

Attachments

1. Proposed *Sewage and Waste: Heat Recovery Policy* (blackline version)
2. Proposed *Sewage and Waste: Heat Recovery Policy* (clean version)

49319410

LIQUID SEWAGE AND WASTE: ~~HEAT RECOVERY~~ HEAT RECOVERYEffective Date: June 23, 2017 (revised ~~March 26, 2021~~ July 29, 2022)

Approved By: GVS&DD Board

Policy No. UT-008**PURPOSE**

To ~~enable~~encourage beneficial use of waste heat from Metro Vancouver's liquid waste and associated solid waste systems, and maximize greenhouse gas emission reductions ~~from Metro Vancouver's liquid waste system~~ by external parties using the heat to displace fossil fuel use.

DEFINITIONS

"Waste heat" is excess heat that is available from GVS&DD operations, including but not limited to heat from untreated sewage, treated effluent, ~~equipment or processes~~ and municipal solid waste processing.

"Heat user" is a third party interested in accessing excess heat from GVS&DD's liquid waste ~~system or solid waste systems.~~ A heat user may be a member municipality jurisdiction or other entity.

POLICY

Metro Vancouver is committed to pursuing strategies and actions that mitigate climate change. Waste heat recovery projects that displace the use of fossil fuels result in a reduction in regional greenhouse gas emissions. Recovering waste heat from the liquid waste ~~system contributes and solid waste systems contribute~~ to GVS&DD's *Integrated Liquid Waste and Resource Management Plan* ~~goal and Integrated Solid Waste and Resource Management Plan goals~~ of using waste as a resource.

This policy enables expedient access to waste heat where technically and financially feasible, while ensuring that GVS&DD is able to convey and ~~treat~~process wastewater and municipal solid waste and meet all service objectives. This policy applies to situations where external parties request waste heat from GVS&DD's liquid waste ~~system or solid waste systems~~ and to situations where GVS&DD offers waste heat to interested external parties.

LIQUID WASTE COLLECTION SYSTEM PROJECTS**Allocation of Waste Heat**

GVS&DD will allocate access to untreated sewage for heat recovery on a first-come first-served basis in response to requests by interested heat users, provided the proposed heat recovery project will not adversely impact GVS&DD services or other established heat recovery projects, as determined by GVS&DD review. If an established heat recovery project that is already in place or approved for development by GVS&DD could be impacted by a proposed new heat recovery project, the established project's heating and/or cooling requirements will have priority. Private entities requesting access to waste heat must provide a letter of support from the host ~~municipality member jurisdiction~~ demonstrating support and cooperation including allowance for works within municipal rights of way. Projects that access heat from municipal sewers do not require GVS&DD approval.

Ownership and Responsibilities

GVS&DD owns a sewerage system and is responsible for sewage in its liquid waste system, including any associated resources such as heat. The boundaries of responsibility for heat recovery equipment and infrastructure ~~are primarily tied to property ownership and~~ will be defined in a contract between GVS&DD and the heat user. GVS&DD will in all situations own and be responsible for the portion of the tie-in up to and including a shut-off valve on both the diversion and return lines-, and may also own and maintain additional supporting infrastructure. GVS&DD will consider an in-line heat recovery system built directly in a GVS&DD sewer if the system will not impair GVS&DD operations.

Cost Recovery

GVS&DD will charge the heat user for all costs incurred to establish and maintain access to sewage. The value of sewage will be assessed using business case processes, including consideration of nominal value of sewage, and incorporated into sewage access contracts. GVS&DD may consider capital investment in heat recovery projects accessing sewage from GVS&DD infrastructure. GVS&DD staff will evaluate heat recovery projects using established life cycle cost analysis and options analysis frameworks and will consider each project on a case-by-case basis. Benefits will include the value of avoided greenhouse gas emissions. ~~GVS&DD does not seek to profit from the provision of heat.~~ A contract with the heat user will be established for each project that assigns the costs and benefits between GVS&DD, the heat user and other funding sources.

All maintenance and operating costs borne by GVS&DD from GVS&DD infrastructure will be recovered from ~~energy purchasers~~heat users.

LIQUID WASTE TREATMENT PLANT AND OUTFALL PROJECTS

Allocation of Waste Heat

When GVS&DD identifies waste heat opportunities in wastewater treatment plants and effluent outfalls, GVS&DD will follow competitive processes in offering available waste heat to potential heat users, to ensure fairness and transparency.

Ownership and Responsibilities

The boundaries of responsibility for heat recovery equipment and infrastructure are primarily tied to property ownership and will be defined in a contract between GVS&DD and the heat user. GVS&DD will own and be responsible for waste heat recovery equipment and related infrastructure installed within its wastewater treatment plants and effluent outfalls, except in cases where ownership by an external party is deemed preferable to the GVS&DD.

Cost Recovery

Heat recovery projects within wastewater treatment plants and effluent outfalls will require capital investment by GVS&DD and will require ongoing operations and maintenance by GVS&DD. ~~GVS&DD will recover the costs incurred in providing waste heat to external parties over the life of the project. GVS&DD does not seek to profit from the provision of heat.~~GVS&DD staff will evaluate heat recovery projects using established life cycle cost analysis and options analysis frameworks and will consider each project on a case-by-case basis. Benefits will include the value of avoided greenhouse gas emissions. A contract with the heat user will be established for each project that assigns the costs and benefits between GVS&DD, the heat user and other funding sources.

SOLID WASTE PROJECTS - WASTE-TO-ENERGY FACILITY

Ownership and Responsibilities

The GVS&DD is developing a district energy system to distribute heat from the Waste-to-Energy Facility. GVS&DD expects to deliver heat to local distribution systems including River District in Vancouver and various developments in Burnaby and potentially New Westminster. GVS&DD expects to own and operate an energy centre at the Waste-to-Energy Facility, and potentially large scale distribution piping delivering heat to the local distribution systems as well.

Allocation of Heat

Heat will be allocated to potential users on a first-come first served basis considering proximity to heat distribution infrastructure and expected heat user load. Modelling of potential heat demand has demonstrated that there is sufficient waste heat available from the Waste-to-Energy Facility to connect River District, Metrotown, Edmonds, and downtown New Westminster.

Cost Recovery

The Waste-to-Energy Facility District Energy system will require capital investment by GVS&DD and will require ongoing operations and maintenance by GVS&DD. GVS&DD staff will evaluate heat recovery projects using established life cycle cost analysis and options analysis frameworks and will consider each project on a case-by-case basis. Benefits will include the value of avoided greenhouse gas emissions. Anticipated lost revenue resulting from any reduction in electricity sales revenue will be included in any business case. A contract with the heat user will be established for each project that assigns the costs and benefits between GVS&DD, the heat user and other funding sources.

ALL PROJECTS

Environmental Attributes

Benefits associated with avoided greenhouse gas ~~reduction~~emissions (such as carbon-~~offset~~ credits) and the costs of administering those benefits will be allocated on a case-by-case basis, in accordance with the costs and risks incurred by the parties involved in developing the heat recovery project. If a project does not create carbon credits, credits will not be allocated.

~~Carbon credits~~GVS&DD will be allocated to thenegotiate carbon credit allocation with each project participant (including host member jurisdiction-as) on a project proponent for case-by-case basis, based on one or more of (1) contributions to the project that can be financially valued (other than Tier 1 excluding contributions paid as part of GVS&DD liquid waste disposal fees and 2 cost apportionments). In recognition of the important role of the host levies or solid waste tipping fees) and of impacts(2) contributions to the project that cannot be valued financially, the host jurisdiction will receive 5% of the valued. GVS&DD credits allocated to GVS&DD, for the initial term of the the project participants will be subject to approval by the GVS&DD Board as part of any agreement for with the sale of heat parties.

Carbon credits from GVS&DD ~~emissions reduction~~waste heat recovery projects that have been allocated to GVS&DD as a project proponent will be retained by GVS&DD, up to the amount needed

for GVS&DD to be carbon neutral in a given year. If GVS&DD achieves carbon neutrality in a given year, excess carbon credits will be transferred to member jurisdictions. The distribution of excess carbon credits among member jurisdictions will be calculated based on ~~capital contribution to BC Stats population estimates for the portfolio of GVS&DD liquid waste heat recovery emissions reduction projects previous year~~. Calculated excess carbon credit distributions less than one tonne will not be transferred, ~~but will instead be redistributed among the other member jurisdictions~~.

Life Cycle Cost Analysis Parameters

In determining the quantity of avoided greenhouse gas emissions, GVS&DD will compare greenhouse gas emissions based on Provincial regulatory requirements to greenhouse gas emissions based on the proposed sewer heat or Waste-to-Energy Facility district energy system. On this basis, greenhouse gas emission reductions for a project will be calculated by comparing the emissions following implementation of the project to the emissions assuming building heat and hot water were provided using the lowest cost alternative based on Provincial regulatory requirements – currently natural gas.

GVS&DD's will invest in projects based on the difference between the life cycle project revenues and combination of capital and operational costs of a waste heat recovery project. The investment will be the lower of the value of the avoided greenhouse gas emissions based on Metro Vancouver's Carbon Price Policy or the amount required for the end-user of the heat's costs to not exceed their costs using the least expensive option under Provincial regulations – currently natural gas.

SEWAGE AND WASTE: HEAT RECOVERY

Effective Date: June 23, 2017 (revised July 29, 2022)

Approved By: GVS&DD Board

Policy No. UT-008

PURPOSE

To encourage beneficial use of waste heat from Metro Vancouver's liquid waste and solid waste systems, and maximize greenhouse gas emission reductions by using the heat to displace fossil fuel use.

DEFINITIONS

"Waste heat" is excess heat that is available from GVS&DD operations, including but not limited to heat from untreated sewage, treated effluent, and municipal solid waste processing.

"Heat user" is a third party interested in accessing excess heat from GVS&DD's liquid waste or solid waste systems. A heat user may be a member jurisdiction or other entity.

POLICY

Metro Vancouver is committed to pursuing strategies and actions that mitigate climate change. Waste heat recovery projects that displace the use of fossil fuels result in a reduction in regional greenhouse gas emissions. Recovering waste heat from the liquid waste and solid waste systems contribute to GVS&DD's *Integrated Liquid Waste and Resource Management Plan* and *Integrated Solid Waste and Resource Management Plan* goals of using waste as a resource.

This policy enables expedient access to waste heat where technically and financially feasible, while ensuring that GVS&DD is able to convey and process wastewater and municipal solid waste and meet all service objectives. This policy applies to situations where external parties request waste heat from GVS&DD's liquid waste or solid waste systems and to situations where GVS&DD offers waste heat to interested external parties.

LIQUID WASTE COLLECTION SYSTEM PROJECTS**Allocation of Waste Heat**

GVS&DD will allocate access to untreated sewage for heat recovery on a first-come first-served basis in response to requests by interested heat users, provided the proposed heat recovery project will not adversely impact GVS&DD services or other established heat recovery projects, as determined by GVS&DD review. If an established heat recovery project that is already in place or approved for development by GVS&DD could be impacted by a proposed new heat recovery project, the established project's heating and/or cooling requirements will have priority. Private entities requesting access to waste heat must provide a letter of support from the host member jurisdiction demonstrating support and cooperation including allowance for works within municipal rights of way. Projects that access heat from municipal sewers do not require GVS&DD approval.

Ownership and Responsibilities

GVS&DD owns a sewerage system and is responsible for sewage in its liquid waste system, including any associated resources such as heat. The boundaries of responsibility for heat recovery equipment and infrastructure will be defined in a contract between GVS&DD and the heat user. GVS&DD will in all situations own and be responsible for the portion of the tie-in up to and including a shut-off valve on both the diversion and return lines, and may also own and maintain additional supporting infrastructure. GVS&DD will consider an in-line heat recovery system built directly in a GVS&DD sewer if the system will not impair GVS&DD operations.

Cost Recovery

GVS&DD will charge the heat user for all costs incurred to establish and maintain access to sewage. The value of sewage will be assessed using business case processes, including consideration of nominal value of sewage, and incorporated into sewage access contracts. GVS&DD may consider capital investment in heat recovery projects accessing sewage from GVS&DD infrastructure. GVS&DD staff will evaluate heat recovery projects using established life cycle cost analysis and options analysis frameworks and will consider each project on a case-by-case basis. Benefits will include the value of avoided greenhouse gas emissions. A contract with the heat user will be established for each project that assigns the costs and benefits between GVS&DD, the heat user and other funding sources.

All maintenance and operating costs borne by GVS&DD from GVS&DD infrastructure will be recovered from heat users.

LIQUID WASTE TREATMENT PLANT AND OUTFALL PROJECTS

Allocation of Waste Heat

When GVS&DD identifies waste heat opportunities in wastewater treatment plants and effluent outfalls, GVS&DD will follow competitive processes in offering available waste heat to potential heat users, to ensure fairness and transparency.

Ownership and Responsibilities

The boundaries of responsibility for heat recovery equipment and infrastructure are primarily tied to property ownership and will be defined in a contract between GVS&DD and the heat user. GVS&DD will own and be responsible for waste heat recovery equipment and related infrastructure installed within its wastewater treatment plants and effluent outfalls, except in cases where ownership by an external party is deemed preferable to the GVS&DD.

Cost Recovery

Heat recovery projects within wastewater treatment plants and effluent outfalls will require capital investment by GVS&DD and will require ongoing operations and maintenance by GVS&DD. GVS&DD staff will evaluate heat recovery projects using established life cycle cost analysis and options analysis frameworks and will consider each project on a case-by-case basis. Benefits will include the value of avoided greenhouse gas emissions. A contract with the heat user will be established for each project that assigns the costs and benefits between GVS&DD, the heat user and other funding sources.

SOLID WASTE PROJECTS - WASTE-TO-ENERGY FACILITY

Ownership and Responsibilities

The GVS&DD is developing a district energy system to distribute heat from the Waste-to-Energy Facility. GVS&DD expects to deliver heat to local distribution systems including River District in Vancouver and various developments in Burnaby and potentially New Westminster. GVS&DD expects to own and operate an energy centre at the Waste-to-Energy Facility, and potentially large scale distribution piping delivering heat to the local distribution systems as well.

Allocation of Heat

Heat will be allocated to potential users on a first-come first served basis considering proximity to heat distribution infrastructure and expected heat user load. Modelling of potential heat demand has demonstrated that there is sufficient waste heat available from the Waste-to-Energy Facility to connect River District, Metrotown, Edmonds, and downtown New Westminster.

Cost Recovery

The Waste-to-Energy Facility District Energy system will require capital investment by GVS&DD and will require ongoing operations and maintenance by GVS&DD. GVS&DD staff will evaluate heat recovery projects using established life cycle cost analysis and options analysis frameworks and will consider each project on a case-by-case basis. Benefits will include the value of avoided greenhouse gas emissions. Anticipated lost revenue resulting from any reduction in electricity sales revenue will be included in any business case. A contract with the heat user will be established for each project that assigns the costs and benefits between GVS&DD, the heat user and other funding sources.

ALL PROJECTS

Environmental Attributes

Benefits associated with avoided greenhouse gas emissions (such as carbon credits) and the costs of administering those benefits will be allocated on a case-by-case basis, in accordance with the costs and risks incurred by the parties involved in developing the heat recovery project. If a project does not create carbon credits, credits will not be allocated.

GVS&DD will negotiate carbon credit allocation with each project participant (including host member jurisdiction) on a case-by-case basis, based on one or more of (1) contributions to the project that can be financially valued (excluding contributions paid as part of GVS&DD liquid waste disposal fees and levies or solid waste tipping fees) and (2) contributions to the project that cannot be financially valued. GVS&DD credits allocated to the project participants will be subject to approval by the GVS&DD Board as part of any agreement with the parties.

Carbon credits from GVS&DD waste heat recovery projects that have been allocated to GVS&DD as a project proponent will be retained by GVS&DD, up to the amount needed for GVS&DD to be carbon neutral in a given year. If GVS&DD achieves carbon neutrality in a given year, excess carbon credits will be transferred to member jurisdictions. The distribution of excess carbon credits among member jurisdictions will be calculated based on BC Stats population estimates for the previous year. Calculated excess carbon credit distributions less than one tonne will not be transferred.

Life Cycle Cost Analysis Parameters

In determining the quantity of avoided greenhouse gas emissions, GVS&DD will compare greenhouse gas emissions based on Provincial regulatory requirements to greenhouse gas emissions based on the proposed sewer heat or Waste-to-Energy Facility district energy system. On this basis, greenhouse gas emission reductions for a project will be calculated by comparing the emissions following implementation of the project to the emissions assuming building heat and hot water were provided using the lowest cost alternative based on Provincial regulatory requirements – currently natural gas.

GVS&DD's will invest in projects based on the difference between the life cycle project revenues and combination of capital and operational costs of a waste heat recovery project. The investment will be the lower of the value of the avoided greenhouse gas emissions based on Metro Vancouver's *Carbon Price Policy* or the amount required for the end-user of the heat's costs to not exceed their costs using the least expensive option under Provincial regulations – currently natural gas.

To: Liquid Waste Committee

From: Jeff Carmichael, Division Manager, Business Development, Liquid Waste Services

Date: June 28, 2022 Meeting Date: July 13, 2022

Subject: **Proposed Capital Investment for the Surrey City Energy Sewer Heat Recovery Project**

RECOMMENDATION

That the GVS&DD Board:

- a) direct staff to enter into contract negotiations with the City of Surrey for the Surrey City Centre Sewer Heat Recovery project, as presented in the report dated June 28, 2022, titled “Proposed Capital Investment for the Surrey City Centre Sewer Heat Recovery Project”; and
 - b) authorize expenditures up to \$19 million as endorsed in the 2022 to 2026 capital plan.
-

EXECUTIVE SUMMARY

Metro Vancouver’s *Climate 2050* strategy (Reference 1) includes a target to achieve a 45% reduction in regional greenhouse gas emissions by 2030, from 2010 levels. Sewer heat recovery facilities will provide renewable, fossil fuel-free heat extracted from sewage to residents and businesses in the region. There is enough excess heat in the liquid waste collection system to heat 700 high rise buildings throughout the region.

The project will reduce greenhouse gas emissions, contributing to the *Climate 2050* Strategy, as guided by the *Waste Heat Recovery Policy*. The investment will be capped at \$19 million out of a total estimated project cost of \$151 million. The investment is based on the value of the anticipated greenhouse gas reductions over the life of the project, and was included in the endorsed 2022 to 2026 capital plan. Metro Vancouver will receive carbon credits based on relative costs incurred by both parties, which will contribute toward Metro Vancouver’s goal of carbon neutrality.

PURPOSE

To present to the Liquid Waste Committee for consideration by the GVS&DD Board a recommendation to direct staff to negotiate a contract with the City of Surrey for the Surrey City Centre Sewer Heat Recovery project, which will recover heat from the GVS&DD North Surrey Interceptor and make it available to the City of Surrey’s District energy system, and to authorize expenditures up to \$19 million as endorsed in the 2022 to 2026 capital plan.

BACKGROUND

Several plans and policies provide the foundation for the recommendations in this report.

The *Integrated Liquid Waste and Resource Management Plan* (Reference 2) includes the goal to use liquid waste as a resource, and commitments to evaluate opportunities to expand the recovery of energy from the liquid waste system, and to implement projects based on business case evaluations for such projects.

The *Waste Heat Recovery Policy* (Reference 3) enables waste heat from the liquid waste system to be used by municipalities and other external parties. It also provides guidelines for GVS&DD financial contributions to such projects, which require capital funding by municipalities and potentially by Metro Vancouver. GVS&DD is capable of contributing to both regional and corporate greenhouse gas (GHG) emission reduction targets by capturing unused heat from sewage and making it available to municipalities and private parties for use, replacing fossil fuel combustion.

The *Carbon Price Policy* (Reference 4) establishes a price on GHG emissions, and directs staff to incorporate that value into life cycle cost analyses for projects.

The *Climate 2050* Strategy vision is that Metro Vancouver demonstrate bold leadership in responding to climate change. It commits to achieving a carbon-neutral region by 2050, with an interim target of reducing GHG emissions by 45% from 2010 levels by 2030.

On March 26, 2021, the GVS&DD Board approved an amendment to the *Cost Apportionment Bylaw 283* (Reference 5), to allocate heat recovery project investments using Tier III cost apportionment (100% regional). At the same meeting, the GVS&DD Board approved an amendment to the *Liquid Waste Heat Recovery Policy* (Reference 6), which expanded the scope of allowed investments to include sewer heat projects as well as wastewater treatment plant based effluent heat projects. The amendment allows the Board to consider approving capital contributions to sewer heat recovery projects to support collaborative district energy projects.

In collaboration with the City of Surrey, a proposed sewer heat recovery project has been developed to provide recovered heat to the Surrey's district energy system, and a capital investment proposal to support the project has been created.

BUSINESS CASE

Several sewer heat recovery projects are under development or assessment. A number of future capital investment proposals are anticipated over the next several years.

The City of Surrey is expanding its district energy systems in Surrey City Centre. The system will use waste heat recovered from sewage to meet most heating needs, displacing natural gas use by existing customers.

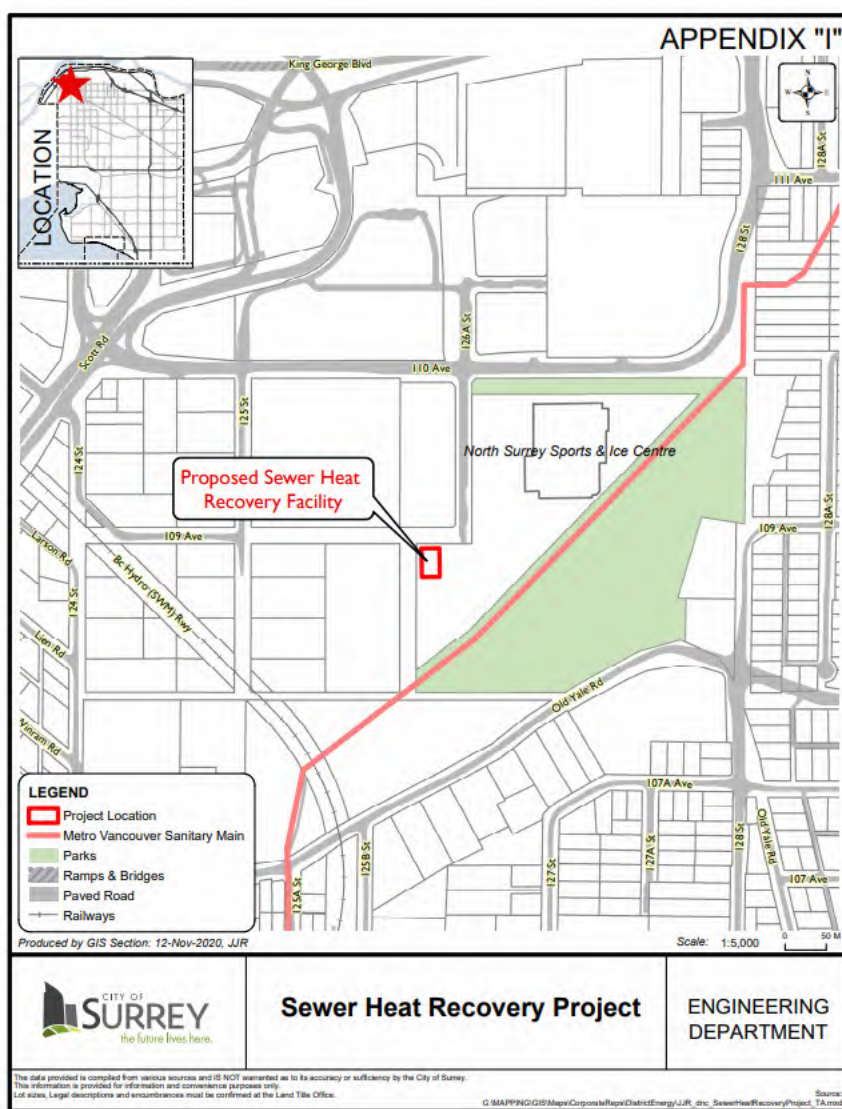
Figure 1 shows a schematic of the proposed service area and the location of the proposed sewer heat recovery facility.

The proposed sewer heat recovery infrastructure will be constructed on a municipally-owned site in the Bridgeview area of Surrey. Connections will be established to the North Surrey Interceptor. Heat will be extracted from the sewage and the sewage returned to the sewer main. Equipment is required to extract heat from the sewage.

It is proposed that GVS&DD make a capital investment for supporting sewer heat recovery equipment. The investment will be capped at \$19 million, which is based on the value of the

anticipated GHG reductions over the life of the project. Metro Vancouver's investment will not be the primary funding source for the project: it is estimated that this investment will provide approximately 14 percent of the total capital cost of this district energy expansion project. In exchange, Metro Vancouver will receive carbon credits based on relative costs incurred by both parties, which will contribute toward Metro Vancouver's goal of carbon neutrality.

Figure 1. Proposed Surrey City Centre Sewer Heat Recovery Project



This opportunity was evaluated using life-cycle cost analysis methods, including application of the *Carbon Price Policy*, and determined to be a cost-effective project. Low carbon energy source options were evaluated by the City of Surrey, and it was determined that sewer heat-sourced energy is competitive with other clean energy sources, and is a lower risk long-term energy source than some sources (like biomass).

Capital costs will be allocated by GVS&DD using Tier III cost apportionment, as a wastewater resource recovery project that will reduce GHG emissions regionally. Any and all operating and maintenance costs incurred by GVS&DD will be recovered from the City of Surrey.

Table 1. Business Case Summary

Item	GVS&DD	City of Surrey
District energy system estimated capital costs	(\$19 million)	(\$139 million)
Spending authority requested	\$19 million	
Operating costs	(\$331,500) / year	tbd
Revenues	\$331,500 / year	tbd, based on rate structure
Benefits from GHG reductions (as per Carbon Price Policy)	\$32 million	
Net benefit to GVS&DD	\$13 million	

The project is anticipated to reduce GHG emissions by 300,000 tonnes over the life of the project. GHG reductions, which are valued as benefits as per the *Carbon Price Policy*, are expected to generate \$13 million in benefits. GHG reductions at this location are voluntary, and may be transferred to other parties as credits. Metro Vancouver will receive some credits, as per *Waste Heat Recovery Policy* guidelines. Terms of Reference for the proposed contract, including GHG reduction allocations, are outlined in Attachment 1.

Project Risks and Risk Mitigation Strategies

Given the long-term commitment and relatively large capital investment for the development of a district energy system, there are inherent risks. Key risks and mitigation strategies are listed in Attachment 2.

ALTERNATIVES

1. That the GVS&DD Board:
 - a) direct staff to enter into contract negotiations with the City of Surrey for the Surrey City Centre Sewer Heat Recovery project, as presented in the report dated June 28, 2022, titled "Proposed Capital Investment for the Surrey City Centre Sewer Heat Recovery Project"; and
 - b) authorize expenditures up to \$19 million as endorsed in the 2022 to 2026 capital plan.
2. That the GVS&DD Board receive for information the report dated June 28, 2022, titled "Proposed Capital Investment for the Surrey City Centre Sewer Heat Recovery Project" and provide alternate direction to staff.

FINANCIAL IMPLICATIONS

If the Board approves Alternative 1, GVS&DD will authorize expenditures up to \$19 million for the project. The investment by Metro Vancouver is expected to be \$19M and will be capped at \$19M based on the application of the *Carbon Price Policy*. Metro Vancouver will receive carbon credits based on relative costs incurred by both parties, which will contribute toward Metro Vancouver's goal of carbon neutrality. Costs will be recovered from GVS&DD members under Tier III cost apportionment (100% regional allocation). The household financial impact will be less than \$1 per household per year.

OTHER IMPLICATIONS

The City of Surrey and Metro Vancouver may be required to seek approval or exemption for the system from the British Columbia Utilities Commission. This can be accomplished with existing staff and at minimal cost.

CONCLUSION

In the *Climate 2050* strategy, Metro Vancouver has committed to reduce GHG emissions by 45% by 2030 compared to 2010 levels, and be a carbon neutral region by 2050. Metro Vancouver has the potential and opportunity to take action on climate change to reduce greenhouse gas emissions by enabling the provision of capital funding for new facilities that will provide renewable, fossil fuel-free heat extracted from sewage to residents and businesses in the region.

Several projects are currently under development and further potential exists. A proposed sewer heat recovery project has been developed in collaboration with the City of Surrey, which will provide clean, renewable energy to Surrey City Centre's district energy system. Metro Vancouver will make a capital investment of up to \$19 million for necessary sewer heat extraction infrastructure. All ongoing operation and maintenance costs will be borne by the district energy system owner. The benefits of the reduced GHG emissions from the proposed project are \$19 million, so the project has a positive business case. Staff recommend Alternative 1.

Attachments

1. GVS&DD and City of Surrey Agreement Terms of Reference
2. Risk Matrix

References

1. [*Climate 2050*](#)
2. [*Integrated Liquid Waste and Resource Management Plan*](#)
3. [*Waste Heat Recovery Policy*](#)
4. [*Carbon Price Policy*](#)
5. "[Tier III Cost Apportionment Bylaw Amendments](#)", report dated March 11, 2021
6. "[Liquid Waste Heat Recovery Policy Amendments to Expand Opportunities for Sewer Heat Recovery](#)", report dated March 2, 2021

ATTACHMENT 1

GVS&DD AND CITY OF SURREY AGREEMENT TERMS OF REFERENCE

The terms of reference below between the Greater Vancouver Sewerage and Drainage District (GVS&DD) and the City of Surrey (CoS) reflect the current intent of the parties in drafting a detailed agreement.

Preamble	
Contract Term	Initial term of 20 years from service commencement. Expected service commencement Jan 1, 2026 Charges to begin when GVS&DD invested infrastructure is completed and commissioned.
Renewal Provisions	Option to renew on mutual agreement. Renewal to be confirmed a minimum of 3 years before end of initial term.
Proposed Sewer Heat Recovery Location	North Surrey, near North Surrey Sports and Ice Centre
Subscribed Capacity	City of Surrey intends to recover 6 MW of thermal capacity from sewage in the GVS&DD's North Surrey Interceptor
Charges	All operating and maintenance costs incurred by GVS&DD will be recovered from the City of Surrey.
Allocation of GHG Emissions Reductions	GVS&DD will receive some GHG credits, as per the Liquid Waste Heat Recovery Policy, which states: <ul style="list-style-type: none">• Carbon allocation will be on the basis of relative financial contributions.• Transferred credits to be retained by GVS&DD until carbon neutrality achieved in a given year.

Terms will also be established concerning items including: termination or default by either party, scheduled outages, insurance, reporting, cooperation and coordination mechanisms, and dispute resolution mechanisms.

RISK MATRIX

Risk	Description	Mitigation Strategy
Capital Cost Risk	Overall costs are a key risk for any capital project.	The GVS&DD infrastructure capacity and the corresponding purchase will be structured to contain contingency of 50% to ensure that actual cost is less than budget.
City of Surrey Utility Risk	The City of Surrey may not choose to proceed with development of the Surrey City Centre District Energy system.	The agreement will be structured such that GVS&DD's capital investment will only proceed if commitments are in place for development of the system.
Regulatory Risk	Expected GHG emission reductions are based on current regulatory requirements in the City of Surrey. If those requirements change in the future, there is some risk that GHG credits available in the future will diminish.	The agreement will front load GHG emission credit transfers to GVS&DD, minimizing credit transfers further into the future when requirement change risk is more significant.

To: Liquid Waste Committee

From: Roy Moulder, Director Procurement, Procurement and Real Estate Services
Joan Liu, Division Manager, Collection Systems, Engineering Design and Construction,
Liquid Waste Services

Date: June 28, 2022 Meeting Date: July 13, 2022

Subject: **Award of a Contract Resulting from Request for Proposal No. 22-006: Construction of Gilbert Trunk Sewer No.2 Gilbert Road South Section**

RECOMMENDATION

That the GVS&DD Board:

- a) approve award of a contract in the amount of up to \$39,856,650 (exclusive of taxes) to Jacob Brothers Construction Inc., resulting from Request for Proposal No. 22-006: Construction of Gilbert Trunk Sewer No.2 Gilbert Road South Section, 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 award should proceed.

EXECUTIVE SUMMARY

A Request for Proposals No. 22-006, was issued in February 2022 for construction of the Gilbert Trunk Sewer No.2 Gilbert Road South Section. Jacob Brothers Construction Inc. was identified as the highest ranked proponent. It is recommended that the GVS&DD Board authorize the award of a Contract for Construction of the Gilbert Trunk Sewer No.2 Gilbert Road South Section, in an amount of \$39,856,650 (exclusive of taxes) to Jacob Brothers Construction Inc. and authorize the Commissioner and the Corporate Officer to execute the required documentation.

PURPOSE

This report is to advise the GVS&DD Board of the results of Request for Proposal (RFP) No. 22-006: Gilbert Trunk Sewer No.2 Gilbert Road South Section and to recommend award of the contract in the amount of up to \$39,856,650 (exclusive of taxes) to Jacob Brothers Construction Inc. (Jacob Brothers).

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.

PROJECT DESCRIPTION

The 10km long Gilbert Trunk Sewer (GTS) that services the majority of the City of Richmond is in a state of corrosion and in need of repair. A high level of maintenance is also required to address significant build-up of grease and dirt, which reduces pipe capacity. In order to facilitate future repairs and more efficient maintenance and meet the long term capacity need in the City of Richmond, it is necessary to construct the Gilbert Trunk Sewer No.2 (GTS2).

The GTS2 project was divided into four phases. The construction of GTS2 Phases 1 and 2 is complete, and both phases are now in service. The design of GTS2 Phases 3 and 4 (Central and South sections respectively) is complete, and Phases 3 and 4 are ready for construction.

EVALUATION

As a result of Request for Qualifications (RFQ) No. 21-244: Construction of the Gilbert Trunk Sewer No.2 Gilbert Road (Central and South Sections) five (5) experienced contractors were shortlisted and invited to respond to RFP No. 22-006. The RFP competition closed on April 21, 2022 and four (4) compliant submissions were received, as shown in Table 1. RFP 22-006 for Construction of the Gilbert Road No.2 Gilbert Road South Section was issued in February 2022.

Table 1: Proposal Submission Pricing

Proponent	Proposed Fee (exclusive of taxes)
Jacob Brothers Construction	\$39,856,650
Clearway Construction	\$40,377,900
Hall Constructors	\$48,941,600
JJM Construction	\$54,502,590

Proposals were evaluated based on 50% technical and 50% financial. The technical component of the proposals was evaluated by staff within the Liquid Waste Department and supporting external consultants and the financial component was evaluated by staff within the Procurement Division.

Jacob Brothers' submission illustrated strong experience of working in similar conditions. Jacob Brothers, along with their joint venture partner successfully completed the earlier Phase 2 of this project in 2021.

As is allowed for within the competition documents, negotiations were conducted with Jacob Brothers, as the highest ranked proponent. The negotiations confirmed that shoring methodology is the contractor's responsibility based on existing pipe restoration details, groundwater drawdown analysis and concrete pipe joint deflection limits. The contract value after negotiation remains unchanged at \$39,856,650 (exclusive of taxes).

ALTERNATIVES

1. That the GVS&DD Board:
 2. approve award of a contract in the amount of up to \$39,856,650 (exclusive of taxes) to Jacob Brothers Construction Inc., resulting from Request for Proposal No. 22-006: Construction of Gilbert Trunk Sewer No.2 Gilbert Road South Section, subject to final review by the Commissioner; and
 3. authorize the Commissioner and the Corporate Officer to execute the required documentation once the Commissioner is satisfied that award should proceed.
2. That the GVS&DD Board terminate Request for Proposal No. 22-006: Construction of Gilbert Trunk Sewer No.2 Gilbert Road South Section 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 Jacob Brothers Construction Inc. for the amount of \$39,856,650 (exclusive of taxes) to complete the south section. This amount is within the budget allocated for this project and comes in under the engineer's estimate for the work.

The GVS&DD Board has the choice to not proceed with Alternative 1, but staff will need further direction in relation to completion of the project. Alternative 2 will result in a delay in construction of the GTS2 South Section which would potentially result in damage to the environment due to sanitary sewer overflows and incur higher construction costs in future.

CONCLUSION

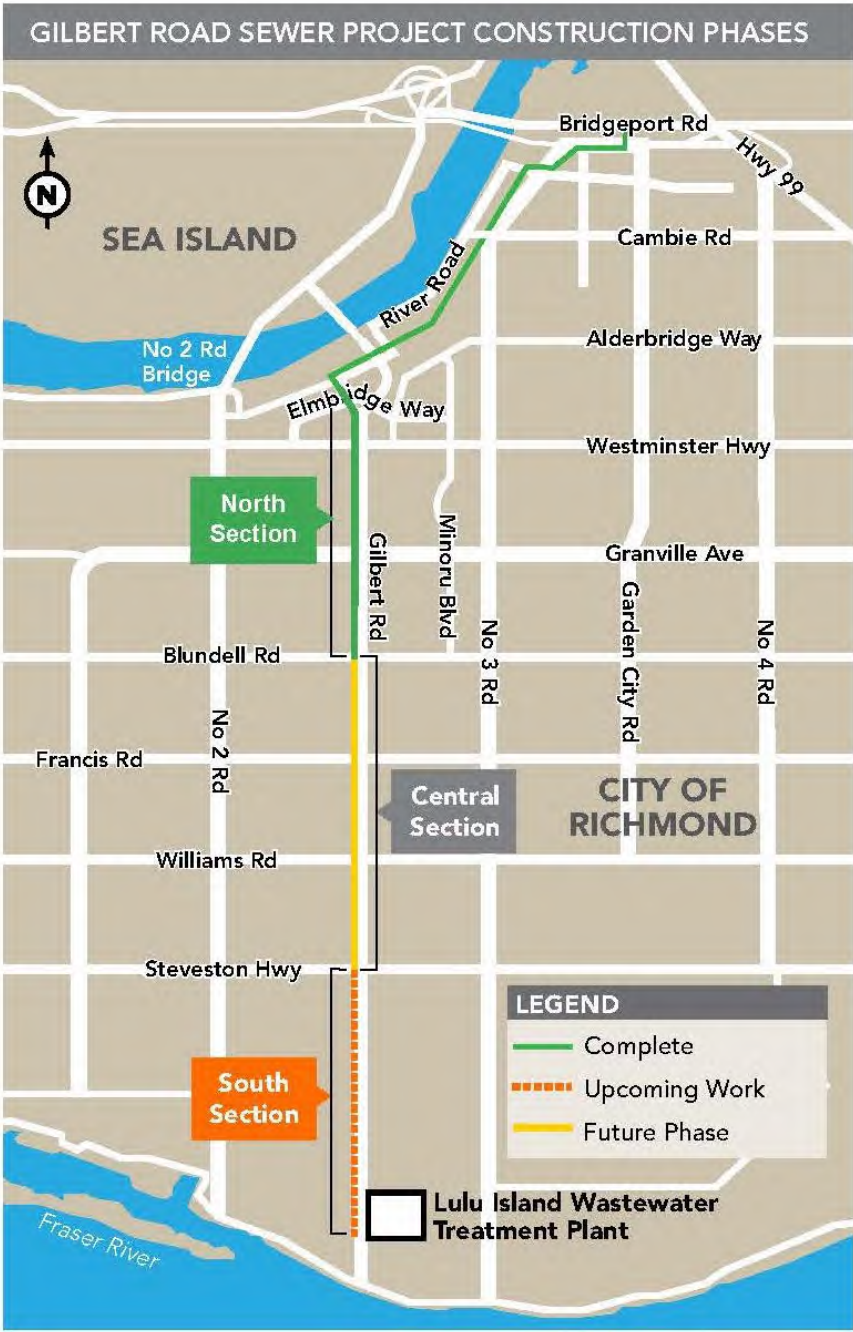
A Request for Proposals No. 22-006 was issued in February 2022 for Construction of the Gilbert Trunk Sewer No.2 Gilbert Road South Section and Jacob Brothers Construction Inc. was identified as the highest ranked proponent. Based on the evaluations of the proposals, it is recommended that the GVS&DD Board authorize the award of a contract resulting from RFP No. 22-006 for the Construction of Gilbert Trunk Sewer No.2 Gilbert Road South Section, in an amount of up to \$39,856,650, to Jacob Brothers Construction Inc. and authorize the Commissioner and the Corporate Officer to execute the required documentation.

Attachment

Gilbert Road Sewer Project Construction Phases

52856845

Gilbert Road Sewer Project Construction Phases



To: Finance Committee

From: Linda Sabatini, Acting Director, Financial Operations

Date: June 27, 2022

Meeting Date: July 14, 2022

Subject: **GVS&DD Temporary Borrowing Bylaw No. 358, 2022**

RECOMMENDATION

That the GVS&DD Board:

- a) authorize Metro Vancouver Regional District ("MVRD") to temporary borrow on behalf of GVS&DD an amount, or amounts in aggregate, not exceeding \$1.42 billion dollars, the remaining amount of the *Greater Vancouver Sewerage & Drainage District Borrowing Bylaw No. 321, 2018*, and the maximum borrowing authorized.
 - b) give first, second and third readings to "*Greater Vancouver Sewerage & Drainage District Temporary Borrowing Bylaw Number 358, 2022*" and forward to the Inspector of Municipalities for statutory approval.
-

EXECUTIVE SUMMARY

An opportunity exists to improve cash management by using temporary borrowing, which will reduce the amount of cash on hand and maximize cash invested in the long-term investment portfolio. Temporary borrowing will allow for enhanced investment decisions and optimize investment returns by approximately \$1.8 million per year, across the organization as whole.

Metro Vancouver's current infrastructure financing strategy revolves around MFA's bi-annual long-term borrowing process and does not include temporary borrowing. Through the *Municipal Enabling and Validating Act (MEVA)*, MVRD can access temporary borrowing from MFA on behalf of the GVS&DD. Approval of the *Greater Vancouver Sewerage & Drainage District Temporary Borrowing Bylaw No. 358, 2022* provides the authority for temporary borrowing in the amount not exceeding \$1.42 billion, the remaining amount of the *Greater Vancouver Sewerage & Drainage District Borrowing Bylaw No. 321, 2018*, and the maximum borrowing authorized. This will provide Metro Vancouver with borrowing methods equivalent to what is used in municipalities.

PURPOSE

To seek Board approval for temporary borrowing through the *Metro Vancouver Regional District ("MVRD")* and the *Municipal Finance Authority of British Columbia ("MFA")*, for the anticipated capital infrastructure activities, for an amount, or amounts in the aggregate, not exceeding \$1.42 billion dollars, the remaining amount of the *Greater Vancouver Sewerage & Drainage District Borrowing Bylaw No. 321, 2018*, and the maximum borrowing authorized.

BACKGROUND

Metro Vancouver's current cash management strategy for infrastructure financing for GVWD and GVS&DD revolves around MFA's two annual long-term borrowing opportunities (in April and October). In the intervening months, infrastructure projects are funded internally by drawing down cash on hand and investments. It's expected that continued reliance on internal interim funding will put pressure on investment balances and returns unless alternative financing strategies are implemented.

TEMPORARY BORROWING AUTHORITY

The current borrowing process under the GVS&DD Act, does not include provisions for temporary borrowing. Metro Vancouver's current cash management strategy for infrastructure financing for GVWD and GVS&DD revolves around MFA's two annual long-term long term borrowing opportunities (in April and October). In the intervening months, infrastructure projects are funded internally by utilizing reserves and drawing down cash on hand and investments. It's expected that continued reliance on internal interim funding will put pressure on investment balances unless alternative financing strategies are implemented.

The proposed strategy is to temporary borrow in the months between MFA's spring and fall long-term borrowing opportunities. This will allow the optimization of investment returns and enhance portfolio investment decisions. GVS&DD has been restricted from taking advantage of this arrangement because the borrowing process under the *GVS&DD Act* does not include provisions for temporary borrowing. However, through the *Municipal Enabling and Validating Act (MEVA S.45 No.2)*, MVRD can access temporary borrowing on behalf of the GVS&DD, from a financial institution or other lender (including the MFA). Temporary borrowing will provide Metro Vancouver with borrowing methods equivalent to what is used in municipalities.

Under the MEVA legislation, two approved bylaws are required to allow GVS&DD the opportunity to temporary borrow. The first bylaw is the *Greater Vancouver Sewerage & Drainage District Borrowing Bylaw No. 358, 2022* establishing the authority for GVS&DD to access temporary borrowing. This report introduces this bylaw for consideration and approval from the GVS&DD Board.

The second bylaw required for temporary borrowing is the *Metro Vancouver Regional District Temporary Borrowing Bylaw No. 1356, 2022* to authorize MVRD to borrow on behalf of GVS&DD, which is being submitted to the MVRD Board for approval on July 29, 2022.

A cash management strategy that includes a combination of temporary and long-term borrowing allows the optimization of cash and investment portfolio decisions which can reduce overall debt servicing costs and provide maximum investment returns, as investments can be retained for longer periods.

A simple example, below shows that capital spending of \$240 million per year (\$20 million per month), can yield additional investment returns of \$1.8 million a year, across the organization as whole.

	Annual Amount (in millions of dollars)
Incremental Interest Earned from Investing Long-Term (3.5%) versus Short-term (2.05%)	\$ 3.2
Less Temporary Borrowing Interest Expense (1.98%)	(1.4)
Net Benefit of Temporary Borrowing	\$ 1.8

The *Greater Vancouver Sewerage & Drainage District Borrowing Bylaw No. 358, 2022*, Attachment 1, provides a block of temporary borrowing authority in advance of any actual borrowing. The borrowing authority under this bylaw is consistent with the expenditures included in the five-year financial plan and the *Greater Vancouver Sewerage & Drainage District Borrowing Bylaw No. 321, 2018*.

FINANCING AGENCY

The Municipal Finance Authority (MFA) is the financing agency for all municipalities and regional districts within British Columbia, except the City of Vancouver. It is also the financing agency for the GVS&DD and the GVWD. The MFA currently has two bond issues per year which provide opportunity for long term borrowing, one in each of the spring and fall. The MFA also provides temporary financing to municipalities and regional districts at variable interest rates over terms of not more than five years.

The approval of this temporary borrowing bylaw along with an approved *Metro Vancouver Regional District (MVRD) Temporary Bylaw No. 1356, 2022* will enable the MVRD to secure temporary funding for the capital program of the GVS&DD which will enhance cash management strategies.

BORROWING AMOUNT

The *Greater Vancouver Sewerage & Drainage District Borrowing Bylaw No. 321, 2018*, authorized long-term borrowing to a maximum of \$2.1 billion, based on GVS&DD's 5-year capital plan at the time of bylaw approval. As of June 30, 2022, the remaining amount under this bylaw is \$1.42 billion. Under legislation, the maximum borrowing undertaken at any time, cannot exceed the combination of both temporary and long-term financing, which is the remaining amount of the long-term borrowing bylaw of \$1.42 billion. In addition, MFA will restrict the combined temporary borrowing of GVWD and GVS&DD to \$400 million, Metro Vancouver's proportionate share of MFA's temporary borrowing program, and terms not exceeding two years, at which time the temporary borrowing will need to be converted to long-term.

ALTERNATIVES

1. That the Greater Vancouver Sewerage & Drainage District ("GVS&DD") Board:
 - a) authorize Metro Vancouver Regional District ("MVRD") to temporary borrow on behalf of GVS&DD an amount, or amounts in aggregate, not exceeding \$1.42 billion dollars, the remaining amount of the *Greater Vancouver Sewerage & Drainage District Borrowing Bylaw No. 321, 2018*, and the maximum borrowing authorized.
 - b) give first, second and third readings to "*Greater Vancouver Sewerage & Drainage District Temporary Borrowing Bylaw Number 358, 2022*" and forward to the Inspector of Municipalities for statutory approval.
2. That the GVS&DD Board direct staff to continue the current practice of long-term borrowing under the GVS&DD Act and not take advantage of opportunities available with temporarily borrowing.

FINANCIAL IMPLICATIONS

The approval of alternative one will provide staff with the authority to continue to make prudent financing decisions with respect to GVS&DD's capital programs. A cash management strategy that includes a combination of temporary and long-term borrowing allows the optimization of cash and investment portfolio decisions which can reduce overall debt servicing costs and provide maximum investment returns. Analysis shows that for \$240 million of capital spending, additional returns of \$1.8 million per year, across the organization, can be obtained as investments can be retained for longer periods to optimize returns. Temporary borrowing will provide the flexibility to make appropriate decisions regarding balancing the cost of financing with the services provided by the related infrastructure.

Should this authority not be granted, under alternative two, staff will continue current cash flow management practices.

CONCLUSION

This Borrowing Bylaw, as recommended under alternative one, provides the necessary authorization for the GVS&DD to temporary borrow funds as and when required up to a maximum of \$1.42 billion, the remaining amount of the *Greater Vancouver Sewerage & Drainage District Borrowing Bylaw No. 321, 2018*, and the maximum borrowing authorized.

Attachments

1. GVS&DD Temporary Borrowing Bylaw No. 358X, 2022

52980148

**GREATER VANCOUVER SEWERAGE AND DRAINAGE DISTRICT
TEMPORARY BORROWING REQUEST BYLAW NO. 358, 2022
A Bylaw to Request Temporary Borrowing through Metro Vancouver Regional District Pending
the Sale of Debentures**

WHEREAS:

- A. Section 45 of the *Municipalities Enabling and Validating Act (No. 2)* (the “MEVA”) authorizes the Metro Vancouver Regional District (“MVRD”) to borrow from a bank, financial institution, regional authority, or any other lender, for the purpose of providing temporary financing for a regional authority.
- B. The Greater Vancouver Sewerage and Drainage District (the “District”) is a regional authority under s.45 of the MEVA.
- C. MVRD may only borrow under s.45 of the MEVA if the District:
 - (a) is authorized to contract debt for the purpose for which the financing is to be used;
 - (b) requests MVRD to provide the financing, by bylaw approved by the Inspector of Municipalities; and
 - (c) enters into an agreement with MVRD which provides that the District will pay to MVRD all costs associated with the borrowing, and if requested by MVRD, deliver to it security in the form of securities sufficient for MVRD to meet and discharge all its obligations associated with the borrowing. The District and MVRD entered into such agreement on June 30, 2022.

Upon the adoption of this bylaw, all of the aforementioned conditions will be satisfied.
- D. The District has adopted the “Greater Vancouver Sewerage and Drainage District Debenture Bylaw No. 321, 2018” (the “Debenture Bylaw”), which authorizes a maximum of \$2,100,000,000 in borrowing for the purpose of undertakings authorized by the *Greater Vancouver Sewerage and Drainage District Act* (the “Act”), or for the purpose of discharging the payment of any matter or thing contemplated or authorized by the Act, including for the purpose of repaying or refunding either before or at maturity monies which have been borrowed by the District by issue of temporary securities or other debentures or securities.
- E. As of June 30, 2022, the District has borrowed \$680,000,000 against the Debenture Bylaw, and therefore \$1,420,000,000 is remaining and authorized to borrow against the Debenture Bylaw.
- F. The sale of debentures has been temporarily deferred.

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

1. The Board is hereby authorized and empowered to request MVRD to obtain temporary borrowing for an amount or amounts not exceeding the sum of \$1,420,000,000, which is equal to the amount authorized and remaining to be borrowed by the District under the Debenture Bylaw.
2. \$2,100,000,000 is the maximum amount of total borrowing that may be outstanding at any time under the combination of both this bylaw and the Debenture Bylaw.
3. The maximum term of any borrowing arrangements under this bylaw is five (5) years.
4. Any money borrowed will be used solely for the purposes set out in the Debenture Bylaw, specifically for the purposes of the District's capital requirements or other requirements for which financing is to be used in accordance with the its approved financial plan.
5. The proceeds from the sale of debentures or so much thereof as may be necessary will be used to repay the money so borrowed.
6. The Commissioner is hereby authorized on behalf of the District to do all such things and to execute, with or without the seal of the District, and deliver all such agreements, documents or instruments that may be necessary or desirable to give effect to this bylaw. Any such agreement, documents or instruments will also be signed by the other signatories that may be required in accordance with the "Greater Vancouver Sewerage and Drainage District Banking Authority Bylaw No. 349, 2021", as such bylaw may be amended.

Severability

7. If any portion of this bylaw is deemed *ultra vires*, illegal, invalid, or unenforceable in any way in whole or in part by any court of competent jurisdiction, such decision will not be deemed to invalidate or void the remainder of the bylaw.

Citation

8. This bylaw may be cited as "Greater Vancouver Sewerage and Drainage District Temporary Borrowing Request Bylaw No. 358, 2022".

Read a first, second and third time this _____ day of _____, 2022.

Approved by the Inspector of Municipalities this _____ day of _____, 2022.

Passed and finally adopted this _____ day of _____, 2022.

Sav Dhaliwal, Chair

Chris Plagnol, Corporate Officer

COMMITTEE INFORMATION ITEMS AND DELEGATION SUMMARIES

Greater Vancouver Sewerage and Drainage District
Board Meeting Date – Friday, July 29, 2022

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 13, 2022*Delegations:*

None

Information Items:

- 5.1 Draft Liquid Waste 2023 – 2027 Capital Plan
- 5.2 Project Delivery Capital Portfolio Update
- 5.5 Climate and Seismic Resilience Planning at Iona Island

Zero Waste Committee – July 15, 2022*Delegations:*

None

Information Items:

- 5.1 Draft Solid Waste Services 2023-2027 Capital Plan
- 5.2 2021 Disposal Ban Program Update

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