

**METRO VANCOUVER REGIONAL DISTRICT  
LIQUID WASTE COMMITTEE**

**MEETING**

**March 15, 2023**

**1:00 pm**

**Meeting conducted electronically/in-person pursuant to the Procedure Bylaw  
28<sup>th</sup> Floor Committee Room, 4515 Central Boulevard, Burnaby, British Columbia**

**A G E N D A<sup>1</sup>**

**1. ADOPTION OF THE AGENDA**

**1.1 March 15, 2023 Meeting Agenda**

That the Liquid Waste Committee adopt the agenda for its meeting scheduled for March 15, 2023 as circulated.

**2. ADOPTION OF THE MINUTES**

**2.1 February 8, 2023 Meeting Minutes**

That the Liquid Waste Committee adopt the minutes of its meeting held February 8, 2023 as circulated.

*pg 5*

**3. DELEGATIONS**

**4. INVITED PRESENTATIONS**

**5. REPORTS FROM COMMITTEE OR STAFF**

**5.1 Appointment of Deputy Sewage Control Manager and Enforcement Officers**

*pg 9*

That the GVS&DD Board:

- a) pursuant to the *Greater Vancouver Sewerage and Drainage District Sewer Use Bylaw* and the *Environmental Management Act*:
  - i. appoint Metro Vancouver employee Riley Sziklai as a deputy sewage control manager;
  - ii. rescind the appointments of former Metro Vancouver employees Doreen Cheng, Manjit Dhillon, Marlene Fuhrmann, and Peter Hagens as officers; and
  - iii. appoint Metro Vancouver employees Mosi Aghbolaghy, Michael Goods, Jim Penrose, Jeffery Schmidt and Joanne Tunkiewicz as officers; and

---

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

- iv. appoint City of Vancouver employee Bonny Brokenshire 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 appointments of former Metro Vancouver employees Doreen Cheng, Manjit Dhillon, Marlene Fuhrmann, and Peter Hagens; and
  - ii. appoint Metro Vancouver employees Jeffery Schmidt and Joanne Tunkiewicz; and
  - iii. appoint City of Vancouver employee Bonny Brokenshire.

**5.2 2022 “Our Ocean Thanks You” Campaign Results**

pg 12

That the Liquid Waste Committee receive for information the report dated January 17, 2023 titled “2022 ‘Our Ocean Thanks You’ Campaign Results”.

**5.3 Greater Vancouver Sewerage and Drainage District Cost Apportionment Amendment Bylaw No. 362, 2023 - Wet Weather Pricing**

pg 17

That the GVS&DD Board:

- a) approve the amendments to the *Greater Vancouver Sewerage and Drainage District Cost Apportionment Bylaw No. 283, 2014* as presented in the Attachment to the report dated March 9, 2023 titled “Greater Vancouver Sewerage and Drainage District Cost Apportionment Amendment Bylaw No. 362, 2023 - Wet Weather Pricing”;
- b) give first, second and third reading to *Greater Vancouver Sewerage and Drainage District Cost Apportionment Amendment Bylaw No. 362, 2023*; and
- c) pass and finally adopt *Greater Vancouver Sewerage and Drainage District Cost Apportionment Amendment Bylaw No. 362, 2023*.

**5.4 Award of Contract Resulting from Request for Proposal No. 22-009: Supply and Installation of North Road Trunk Sewer No. 2 - Phase 2 Lougheed Highway to Clarke Road**

pg 31

That the GVS&DD Board:

- a) approve the award of a contract for an amount of \$7,947,758.20 (exclusive of taxes) to Clearway Construction Inc., resulting from Request for Proposal No. 22-009: Supply and Installation of North Road Trunk Sewer No. 2 Phase 2 Lougheed Highway to Clarke Road, subject to final review by the Commissioner; and
- b) authorize the Commissioner and the Corporate Officer to execute the required documentation once the Commissioner is satisfied that the award should proceed.

**5.5 Award of Phase C3, Engineering Construction Services for RFP 14-230 for Installation of Gilbert Trunk Sewer No.2 Central Section**

pg 35

That the GVS&DD Board:

- a) approve the award of Phase C3, Engineering Construction Services, for an amount up to \$2,997,555 (exclusive of taxes) to the Phase A and B consultant,

AECOM Canada Ltd, for the Installation of Gilbert Trunk Sewer No.2 Central Section, and

- b) authorize the Commissioner and Corporate Officer to execute the required documentation once the Commissioner is satisfied that the award should proceed.

**5.6 North Shore Wastewater Treatment Plant Project Early Works Agreement Extension**

pg 38

That the GVS&DD Board:

- a) approve a change order to PCL Constructors Westcoast Inc. Pre-Construction Services and Early Works Agreements (PC21-457 and PC22-227) in an amount of up to \$85,000,000 (exclusive of taxes), subject to final review by the Commissioner; and
- b) authorize the Commissioner and the Corporate Officer to execute the required documentation once the Commissioner is satisfied that the amendment should proceed.

**5.7 Manager's Report**

pg 41

That the Liquid Waste Committee receive for information the report dated March 6, 2023 titled "Manager's Report".

**6. INFORMATION ITEMS**

**6.1 2023 Liquid Waste Sustainability Innovation Fund Application**

pg 44

**6.2 Metro 2050 Climate Policy Enhancement Study – Project Initiation**

pg 50

**6.3 Climate 2050 Land Use and Urban Form Roadmap – Scope of Work and Project Status**

pg 57

**7. OTHER BUSINESS**

**8. BUSINESS ARISING FROM DELEGATIONS**

**9. RESOLUTION TO CLOSE MEETING**

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

That the Liquid Waste Committee close its meeting scheduled for February 8, 2023 pursuant to section 226 (1) (a) of the *Local Government Act* and the *Community Charter* provisions 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.

**10. ADJOURNMENT/CONCLUSION**

That the Liquid Waste Committee adjourn/conclude its meeting of March 15, 2023.

---

Membership:

Hurley, Mike (C) – Burnaby  
Knight, Megan (VC) – White Rock  
Albrecht, Paul – Langley City  
Cassidy, Christine – West Vancouver  
Ferguson, Steve – Langley Township

Johnstone, Patrick – New Westminster  
Kim, Steve – Coquitlam  
Kirby-Yung, Sarah – Vancouver  
Kooner, Pardeep – Surrey

Little, Mike – North Vancouver District  
Loo, Alexa – Richmond  
West, Brad – Port Coquitlam  
Yousef, Ahmed – Maple Ridge



**METRO VANCOUVER REGIONAL DISTRICT  
LIQUID WASTE COMMITTEE**

**2.1**

Minutes of the Regular Meeting of the Metro Vancouver Regional District (MVRD) Liquid Waste Committee held at 1:00 pm on Wednesday, February 8, 2023 in the 28<sup>th</sup> Floor Boardroom, 4515 Central Boulevard, Burnaby British Columbia.

**MEMBERS PRESENT:**

Chair, Mayor Mike Hurley, Burnaby  
Vice Chair, Mayor Megan Knight\*, White Rock  
Councillor Paul Albrecht\*, Langley City  
Councillor Christine Cassidy, West Vancouver  
Councillor Steve Ferguson\*, Langley Township  
Mayor Patrick Johnstone, New Westminster  
Councillor Steve Kim, Coquitlam  
Councillor Sarah Kirby-Yung\*, Vancouver (arrived at 1:05 pm)  
Councillor Pardeep Kooner\*, Surrey  
Mayor Mike Little\*, North Vancouver District  
Councillor Alexa Loo, Richmond  
Mayor Brad West\*, Port Coquitlam  
Councillor Ahmed Yousef\*, Maple Ridge

**MEMBERS ABSENT:**

None.

**STAFF PRESENT:**

Peter Navratil, General Manager, Liquid Waste Services  
Natalia Melnikov, Legislative Services Coordinator, Board and Information Services

**1. ADOPTION OF THE AGENDA**

**1.1 February 8, 2023 Meeting Agenda**

**It was MOVED and SECONDED**

That the Liquid Waste Committee adopt the agenda for its meeting scheduled for February 8, 2023 as circulated.

**CARRIED**

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

## **2. ADOPTION OF THE MINUTES**

### **2.1 January 18, 2023 Meeting Minutes**

Members were informed of an administrative error in the January 18, 2023 Liquid Waste Committee minutes with Councillor Albrecht's title listed as Mayor, and were advised the minutes will be corrected.

#### **It was MOVED and SECONDED**

That the Liquid Waste Committee adopt the minutes, as revised, for its meeting held January 18, 2023.

**CARRIED**

## **3. DELEGATIONS**

No items presented.

## **4. INVITED PRESENTATIONS**

No items presented.

## **5. REPORTS FROM COMMITTEE OR STAFF**

### **5.1 Recommended Wet Weather Cost Apportionment Approach**

Report dated January 30, 2023, from Paul Kadota, Director, Policy, Planning and Analysis, Liquid Waste Services, providing the Liquid Waste Committee and the GVS&DD Board with the recommended approach for wet weather cost apportionment and request direction to make commensurate adjustments to the *Cost Apportionment Bylaw 283, 2014*.

1:05 pm Councillor Kirby-Yung arrived at the meeting.

Members were provided with a presentation on the principles and reasons for the proposed policy update and the recommended wet weather rate structure. Members commented on the fairness of the cost distribution, and if the cost needs to be a blended approach taking into consideration the weather and population, including the population growth projection.

Presentation material titled "Recommended Wet Weather Cost Apportionment Approach" is retained with the February 8, 2023 Liquid Waste Committee agenda.

#### **It was MOVED and SECONDED**

That the GVS&DD Board:

- a) direct staff to prepare amendments to *Cost Apportionment Bylaw 283, 2014* for its consideration in accordance with the key terms described in the report dated January 30, 2023, titled "Recommended Wet Weather Cost Apportionment Approach"; and

- b) initiate wet weather cost apportionment in the 2024 billing cycle to be implemented incrementally over ten years.

**CARRIED**

**5.2 2022 “Wipe It, Green Bin It” Campaign Results**

Report dated January 17, 2023, from Larina Lopez, Division Manager, and Carol Nicolls, Communications Specialist, Corporate Communications, providing the Liquid Waste Committee with an update on the 2022 regional “Wipe It, Green Bin It” campaign to reduce the disposal of fats, oils, and grease in the sewer system.

Members were provided a presentation on the 2022 Wipe It, Green Bin It Campaign outlining the campaign’s approach, tactics and results.

Presentation material titled “2022 Wipe It, Green Bin It – Campaign Results” is retained with the February 8, 2023 Liquid Waste Committee agenda.

**It was MOVED and SECONDED**

That the Liquid Waste Committee receive for information the report dated January 17, 2023, titled “2022 ‘Wipe It, Green Bin It’ Campaign Results”.

**CARRIED**

**5.3 Manager’s Report**

Report dated January 25, 2023, from Peter Navratil, General Manager, Liquid Waste Services, providing the Liquid Waste Committee with updates on the North Shore Wastewater Treatment Plant projects and the Liquid Waste Committee 2023 Work Plan.

**It was MOVED and SECONDED**

That the Liquid Waste Committee receive for information the report dated January 25, 2023 titled “Manager’s Report”.

**CARRIED**

**6. INFORMATION ITEMS**

No items presented.

**7. OTHER BUSINESS**

No items presented.

**8. BUSINESS ARISING FROM DELEGATIONS**

No items presented.

**9. RESOLUTION TO CLOSE MEETING**

**It was MOVED and SECONDED**

That the Liquid Waste Committee close its meeting scheduled for February 8, 2023 pursuant to section 226 (1) (a) of the *Local Government Act* and the *Community Charter* provisions 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:
- (e) the acquisition, disposition or expropriation of land or improvements, if the board or committee considers that disclosure could reasonably be expected to harm the interests of the regional district.

**CARRIED**

**10. ADJOURNMENT/CONCLUSION**

**It was MOVED and SECONDED**

That the Liquid Waste Committee adjourn its meeting of February 8, 2023.

**CARRIED**

(Time: 1:38 pm)

---

Natalia Melnikov,  
Legislative Services Coordinator

---

Mike Hurley,  
Chair

58069441 FINAL

To: Liquid Waste Committee

From: Kathy Preston, Director Environmental Regulation and Enforcement, Parks & Environment

Date: March 8, 2023

Meeting Date: March 15, 2023

Subject: **Appointment of Deputy Sewage Control Manager and Enforcement 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. appoint Metro Vancouver employee Riley Sziklai as a deputy sewage control manager;
    - ii. rescind the appointments of former Metro Vancouver employees Doreen Cheng, Manjit Dhillon, Marlene Fuhrmann, and Peter Hagens as officers; and
    - iii. appoint Metro Vancouver employees Mosi Aghbolaghy, Michael Goods, Jim Penrose, Jeffery Schmidt and Joanne Tunkiewicz as officers; and
    - iv. appoint City of Vancouver employee Bonny Brokenshire 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 appointments of former Metro Vancouver employees Doreen Cheng, Manjit Dhillon, Marlene Fuhrmann, and Peter Hagens; and
    - ii. appoint Metro Vancouver employees Jeffery Schmidt and Joanne Tunkiewicz; and
    - iii. appoint City of Vancouver employee Bonny Brokenshire.
- 

### EXECUTIVE SUMMARY

Recent changes in staff have resulted in a need to update staff appointments as Greater Vancouver Sewerage and Drainage District (GVS&DD) Board-designated officers and a deputy sewage control manager and officers under the *Greater Vancouver Sewerage and Drainage District Sewer Use Bylaw* (the Bylaw), the *Environmental Management Act* and the *Offence Act*. Staff recommend that the GVS&DD Board appoint staff and rescind appointments accordingly.

### PURPOSE

To appoint and rescind appointments of Metro Vancouver and City of Vancouver employees as a Board-designated deputy sewage control manager and officers.

### BACKGROUND

Metro Vancouver's Liquid Waste Regulatory Program supports the goals of the *Integrated Liquid Waste and Resource Management Plan* through regulation of the discharge of wastes to the region's sanitary sewer systems.

Employment status changes for Metro Vancouver and City of Vancouver environmental regulatory staff have resulted in a need to update staff appointments to ensure appropriate authority to

advance liquid waste management goals. Section 29 of the *Environmental Management Act* and the *Greater Vancouver Sewerage and Drainage District Sewer Use Bylaw No. 299, 2007* grant authority to Board-designated deputy sewage control managers and officers.

#### **ROLE OF THE DEPUTY SEWAGE CONTROL MANAGER**

A deputy sewage control manager has the same powers as the sewage control manager under the *Environmental Management Act* and is a statutory decision maker in the administration of *Greater Vancouver Sewerage and Drainage District Sewer Use Bylaw No. 299, 2007*. The deputy sewage control manager's powers include the ability to issue permits, authorizations and orders under this bylaw.

#### **ROLE OF MUNICIPAL SEWAGE CONTROL OFFICERS**

Officers may enter property, inspect works, and obtain records and other information to promote compliance with the *Greater Vancouver Sewerage and Drainage District liquid waste management bylaws*.

Metro Vancouver staff are responsible for the administration of the GVS&DD liquid waste management bylaws within the boundaries of the GVS&DD. Within the City of Vancouver, City staff have historically administered these bylaws. This arrangement has been in effect since the Bylaw was first enacted in 1990. A formal agreement between Metro Vancouver and the City of Vancouver was established to ensure that delivery of source control services by the City serves the interests of the GVS&DD and its taxpayers.

The *Offence Act* allows regional districts to appoint enforcement officers for the purpose of serving summons for bylaw violations. Officers, if appointed for that purpose, may serve a summons in respect of alleged offences under the GVS&DD liquid waste management bylaws.

#### **ALTERNATIVES**

1. That the GVS&DD Board:
  - a) pursuant to the *Greater Vancouver Sewerage and Drainage District Sewer Use Bylaw* and the *Environmental Management Act*:
    - i. appoint Metro Vancouver employee Riley Sziklai as a deputy sewage control manager;
    - ii. rescind the appointments of former Metro Vancouver employees Doreen Cheng, Manjit Dhillon, Marlene Fuhrmann, and Peter Hagens as officers; and
    - iii. appoint Metro Vancouver employees Mosi Aghbolaghy, Michael Goods, Jim Penrose, Jeffery Schmidt and Joanne Tunkiewicz as officers; and
    - iv. appoint City of Vancouver employee Bonny Brokenshire 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 appointments of former Metro Vancouver employees Doreen Cheng, Manjit Dhillon, Marlene Fuhrmann, and Peter Hagens; and
    - ii. appoint Metro Vancouver employees Jeffery Schmidt and Joanne Tunkiewicz; and
    - iii. appoint City of Vancouver employee Bonny Brokenshire.

2. That the GVS&DD Board receive for information the report dated March 8, 2023 titled "Appointment of Deputy Sewage Control Manager and Enforcement Officers" and provide alternative direction to staff.

**FINANCIAL IMPLICATIONS**

There are no financial implications as the GVS&DD appointees are already on staff, and there are no expenditures for rescindments.

**CONCLUSION**

Recent changes in staff have resulted in a need to update staff appointments as a GVS&DD Board-designated deputy sewage control manager and officers under the *Greater Vancouver Sewerage and Drainage District Sewer Use Bylaw*, the *Environmental Management Act*, and the *Offence Act*. Staff recommend Alternative 1.

57391996

To: Liquid Waste Committee

From: Larina Lopez, Division Manager, Corporate Communications  
Carol Nicolls, Communications Specialist, Corporate Communications

Date: January 17, 2023 Meeting Date: March 15, 2023

Subject: **2022 “Our Ocean Thanks You” Campaign Results**

---

## RECOMMENDATION

That the Liquid Waste Committee receive for information the report dated January 17, 2023, titled “2022 ‘Our Ocean Thanks You’ Campaign Results”.

---

## EXECUTIVE SUMMARY

Microfibres from laundry are one of the largest sources of microplastics pollution in the ocean, where they may be harmful to aquatic life. The 2022 “Our Ocean Thanks You” campaign ran from September 12 to October 30, asking residents to wash their laundry in cold water to reduce microfibre shedding from clothing. The campaign targeted parents with children under 18 and included social media, YouTube, digital ads, television, radio, billboards, Google AdWords, and a campaign website. The campaign generated 14 million impressions, 1 million video views, 2,800 clicks for more information, 125 engagements, 3,900 website visits, and reached 911,000 residents through television and online tactics. A post-campaign survey of parents showed that 29% of parents recalled seeing at least one campaign ad and that many were unaware of microfibre impacts prior to the campaign. The campaign will run in 2023 with similar timing and approach, and will likely include additional creative materials.

## PURPOSE

To update the Liquid Waste Committee on the 2022 regional “Our Ocean Thanks You” campaign to reduce microfibres generated through laundry.

## BACKGROUND

Microfibres from laundry are one of the largest sources of microplastics in the ocean. Microfibres are tiny fibre pieces — less than 5 mm in size — that are shed from fabrics when they are washed. The majority of microplastics in Metro Vancouver wastewater are microfibres from synthetic material, according to joint Metro Vancouver/Ocean Wise research. While wastewater treatment plants can capture up to 95% of incoming microfibres, the remaining microfibres that end up in the ocean may be harmful to fish and other aquatic life.

This report provides a summary of the 2022 “Our Ocean Thanks You” campaign results, as identified in the 2023 Liquid Waste Committee Work Plan.

## “OUR OCEAN THANKS YOU” 2022 CAMPAIGN

The 2022 regional “Our Ocean Thanks You” campaign ran from September 12 to October 30 and asked residents to reduce microfibres by washing their laundry in cold water.



## **Campaign Approach**

The campaign targeted parents with children under 18 as a key group to reach. Earlier campaign research showed that this group does the most laundry and was also open to doing a simple action that fit into their existing routines. Creative materials featured local aquatic wildlife thanking residents for switching to cold water (see Attachment).

## **Engagement with Members**

Prior to launch, campaign details and creative materials were shared with members’ communication staff and the REAC Liquid Waste Subcommittee. All materials are available for download on the Metro Vancouver website and members can request custom, co-branded materials. The media buy included all member jurisdictions, ensuring that the campaign ads appear across the region. Six members shared the campaign on social media.

## **Results**

The campaign’s paid media included: social media, YouTube, digital ads, television, radio, billboards, and Google AdWords, all of which directed people to the campaign website. The campaign generally performed well, with most results similar or better than 2021.

### *Media Buy and Website*

- The campaign generated 14 million impressions from digital tactics and billboards
- The public service announcement (PSA) video aired 1,870 times on Telus and Shaw, reaching an estimated 911,000 residents, while radio ads aired 1,653 times
- The campaign reached 266,000 residents through digital channels
- Video ads received over 1 million views through Facebook, Instagram, YouTube, and digital TV placements
- Google Search terms, digital ads, and digital TV placements generated 2,800 clicks for more information
- Social media generated 125 engagements (likes, shares, saves, comments)
- 3,900 people visited the webpage ([switchtocold.ca](https://switchtocold.ca)) from September 12 to October 30

The three videos (one 30 second and two 10 second) are a key element for the online platforms used during the campaign. While the number of video views increased from last year, showing that these videos continue to resonate with the target audience, there is much less uptake of the longer 30-second video this year. The shorter videos performed best on most platforms and will be used more widely in next year’s campaign. After two campaigns, Google AdWords is showing itself to be a less successful tactic, likely because people are unaware of this issue and aren’t searching for information. It will be scaled back for the next campaign.

### *Post-campaign Survey*

A post-campaign survey of 504 parents with children under 18 was conducted between October 31 to November 9, 2022. Results showed that:

- 29% of parents recalled seeing at least one campaign ad (aided recall)
- 22% of parents talked to others about the campaign’s message
- Of those who saw the advertising while it was in market, 42% said they are washing more loads in cold water

- 61% of those who saw the advertising for the first time as part of the survey said they are now more likely to wash clothes in cold water
- Overall, seven-in-ten parents (69%) were already making a conscious effort to do more laundry in cold water, mainly to save energy and money on utility bills, with 15% doing this to reduce microfibre shedding
- Just under one-in-five parents (17%) report that they do not currently wash any of their laundry in cold water, mainly due to concerns around killing germs and getting clothes clean
- Most people surveyed found that the campaign reinforced the importance of washing in cold water (87%) and that they learned something new about the impacts of microfibre shedding (63%)

### **PLANS FOR 2023 CAMPAIGN**

The campaign will run again in 2023, using similar timing and approach. Additional creative materials will likely be developed, featuring new marine animals, to keep audiences engaged and increase website traffic. Metro Vancouver will continue to explore opportunities to engage other groups to help promote campaign messaging.

### **OTHER MICROPLASTICS PROJECTS**

Metro Vancouver has been working with Ocean Wise since 2016 to develop standardized methods to quantify and track microplastics in wastewater. Additional work with Ocean Wise and the University of British Columbia is planned to better understand microplastics in the urban watershed. Metro Vancouver is also part of the Microfiber Partnership, an Ocean Wise-led initiative that brings together researchers, the apparel industry, and government to look for solutions to marine microfibre pollution

### **ALTERNATIVES**

This is an information report. No alternatives are presented.

### **FINANCIAL IMPLICATIONS**

The 2022 “Our Ocean Thanks You” campaign had a budget of \$220,000. These costs were included in the 2022 Liquid Waste Communications Program Budget managed by the External Relations Department.

### **CONCLUSION**

Microfibres from laundry are one of the largest sources of microplastics pollution in the ocean, but awareness of this remains fairly low. The campaign was introduced to raise awareness of microplastics issues and reduce microplastics generated from laundry, by asking residents to wash clothes in cold. Survey results show that many parents are washing in cold for other reasons and for this group, the campaign reinforces the importance of this action. The relatively small percentage of parents (15%) who said they wash in cold to minimize the harmful effects of microfibre shedding underscores that the campaign communicates something new. Those that do not wash in cold need to overcome concerns around killing germs and getting clothes clean. It may be difficult to shift these behaviours with current messaging and it may also not be worthwhile to focus resources on reaching this relatively small group. In 2023 the campaign will look at ways to refresh creative materials, adding new pieces to increase engagement and website visits.

**Attachment:**

Sample of Campaign Materials

**References:**

Campaign website: [switchtocold.ca](https://switchtocold.ca)

56396467

Sample of Campaign Materials



Social media post



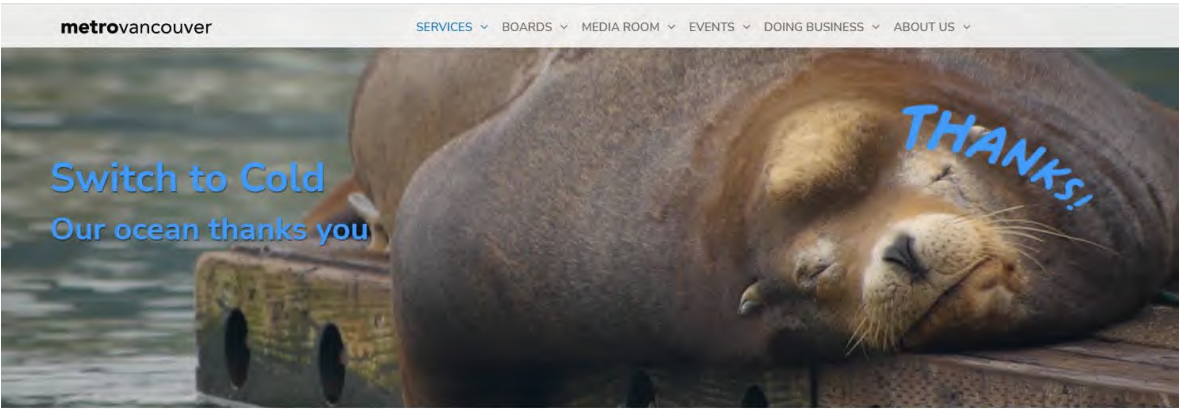
Television PSA



Online advertising



Digital billboard



Services / Liquid Waste / Preventing Problems in Your Pipes / Microfibres

Small act. Positive impact.

Campaign website

To: Liquid Waste Committee

From: Rick Gallilee, Director, Support Services & Strategic Initiatives, Liquid Waste Services

Date: March 9, 2023 Meeting Date: March 15, 2023

Subject: **Greater Vancouver Sewerage and Drainage District Cost Apportionment Amendment Bylaw No. 362, 2023 - Wet Weather Pricing**

---

## RECOMMENDATION

That the GVS&DD Board:

- a) approve the amendments to the *Greater Vancouver Sewerage and Drainage District Cost Apportionment Bylaw No. 283, 2014* as presented in the Attachment to the report dated March 9, 2023 titled “Greater Vancouver Sewerage and Drainage District Cost Apportionment Amendment Bylaw No. 362, 2023 - Wet Weather Pricing”;
  - b) give first, second and third reading to *Greater Vancouver Sewerage and Drainage District Cost Apportionment Amendment Bylaw No. 362, 2023*; and
  - c) pass and finally adopt *Greater Vancouver Sewerage and Drainage District Cost Apportionment Amendment Bylaw No. 362, 2023*.
- 

## EXECUTIVE SUMMARY

At its February 24, 2023 meeting, the GVS&DD Board directed staff to prepare amendments to the *GVS&DD Cost Apportionment Bylaw 283, 2014* to incent action on excessive inflow and infiltration through wet weather based apportionment of GVS&DD costs. Proposed amendments to the bylaw have been prepared in accordance with the key terms presented to the Board, and are proposed for adoption by the Board.

## PURPOSE

To provide the GVS&DD Board for consideration, proposed amendments to the *GVS&DD Cost Apportionment Bylaw 283, 2014* to implement the wet weather pricing strategy as directed by the Board on February 24, 2023.

## BACKGROUND

At its February 24, 2023 meeting, the GVS&DD Board received a report providing recommendations for a wet weather cost apportionment approach and directed staff to prepare amendments to the *GVS&DD Cost Apportionment Bylaw 283, 2014*.

*That the GVS&DD Board:*

- a) *direct staff to prepare amendments to Cost Apportionment Bylaw 283, 2014 for its consideration in accordance with the key terms described in the report dated January 30, 2023, titled “Recommended Wet Weather Cost Apportionment Approach”; and*
- b) *initiate wet weather cost apportionment in the 2024 billing cycle to be implemented incrementally over ten years.*

## **PROPOSED AMENDMENTS TO BYLAW 283**

The proposed amendments introduce the gradual application of the apportionment of non-growth costs to GVS&DD members within each sewerage area (with the exception of the Lulu Island West Sewerage Area) on the basis of wet weather flows. Apportionment of costs for GVS&DD services among the sewerage areas is unchanged as is the apportionment for growth related costs.

The proposed amendments align with the key terms described in the report to the Board dated January 30, 2023, titled "Recommended Wet Weather Cost Apportionment Approach". Additional amendments are proposed to provide clarity, ensure consistent language is used throughout the bylaw and to remove redundant sections.

## **ALTERNATIVES**

1. That the GVS&DD Board:
  - a) approve the amendments to the *Greater Vancouver Sewerage and Drainage District Cost Apportionment Bylaw No. 283, 2014* as presented in the Attachment to the report dated March 9, 2023 titled "Greater Vancouver Sewerage and Drainage District Cost Apportionment Amendment Bylaw No. 362, 2023 - Wet Weather Pricing";
  - b) give first, second and third reading to *Greater Vancouver Sewerage and Drainage District Cost Apportionment Amendment Bylaw No. 362, 2023*; and
  - c) pass and finally adopt *Greater Vancouver Sewerage and Drainage District Cost Apportionment Amendment Bylaw No. 362, 2023*.
2. That the GVS&DD Board receive for information the report dated March 9, 2023 titled "Greater Vancouver Sewerage and Drainage District Cost Apportionment Amendment Bylaw No. 362, 2023 - Wet Weather Pricing" and provide alternate direction to staff.

## **FINANCIAL IMPLICATIONS**

The proposed amendments do not affect the overall cost of GVS&DD services. This will only result in adjustments to the apportionment of costs among members within sewerage areas, University Endowment Lands and University of British Columbia in order to incentivize action to manage wet weather performance of municipal and private infrastructure.

## **CONCLUSION**

Metro Vancouver is proposing changes to the apportionment of costs within a sewerage area to provide GVS&DD members, University Endowment Lands and University of British Columbia a meaningful incentive to manage wet weather flows. Proposed amendments of the *GVS&DD Cost Apportionment Bylaw 283, 2014* have been prepared as directed by the GVS&DD Board. These amendments align with the recommended approach presented to the Board in February 2023. Staff recommend Alternative 1.

## **Attachment**

*Greater Vancouver Sewerage and Drainage District Cost Apportionment Amendment Bylaw No. 362, 2023* (56331616)

## References

1. [“Recommended Wet Weather Cost Apportionment Approach”](#), report dated January 30, 2023
2. [Greater Vancouver Sewerage and Drainage District Cost Apportionment Bylaw No. 283, 2014 - Unofficial Consolidation](#)

56689906

**GREATER VANCOUVER SEWERAGE AND DRAINAGE DISTRICT  
BYLAW NO. 362, 2023  
A Bylaw to Amend Greater Vancouver Sewerage and Drainage District  
Cost Apportionment Bylaw No. 283, 2014**

**WHEREAS:**

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

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

**Citation**

- 1. The official citation of this bylaw is “Greater Vancouver Sewerage and Drainage District Cost Apportionment Amendment Bylaw No. 362, 2023”.

**Amendment of Bylaw**

- 2. “Greater Vancouver Sewerage and Drainage District Cost Apportionment Bylaw No. 283, 2014” (the “Bylaw”) is hereby amended as follows:
  - (a) the definition “**Combined Sewer Member Municipality**” is added to the definitions in section 1 of the Bylaw in alphabetic order as follows:

“**Combined Sewer Member Municipality**” means, for the purposes of allocation of costs within a sewerage area, the City of Vancouver and the City of New Westminster;
  - (b) The definition “**Dry Weather Flow**” in section 1 of the Bylaw is deleted and replaced as follows:

“**Dry Weather Flow**” in respect of any 12-month period means:
    - (i) for a Sewerage Area, the 25th percentile of the average daily flow of wastewater, as determined by the Corporation, measured at whichever (one or more) of the Corporation’s five wastewater treatment plants



(being Annacis Island, Iona Island, Lions Gate, Lulu Island and Northwest Langley) providing service to that Sewerage Area;

- (ii) for a member municipality of the Fraser Sewerage Area for the purposes of section 7.10, the 25th percentile of the average daily flow of wastewater discharged from that member municipality as measured at the flow metering stations for that member municipality, or where there is insufficient data from flow metering stations, as determined by the Corporation, based on (A) temporary flow monitoring from mobile meters, (B) data from pump stations or, (C) such other data deemed appropriate by the Corporation for making such determination;

- (c) the definition “**Dry Weather Share**” is added to the definitions in section 1 of the Bylaw in alphabetic order as follows:

“**Dry Weather Share**” means a part of the Total Non-Growth Costs for a Sewerage Area (except for Lulu Island West Sewerage Area), as defined in section 7A.1;

- (d) the definition “**Industrial Flow**” is added to the definitions in section 1 of the Bylaw in alphabetic order as follows:

“**Industrial Flow**” in respect of any 12-month period, for a Sewerage Area, any member municipality thereof, the University Endowment Lands or the University of British Columbia, means the average daily flow of wastewater discharged within the Sewerage Area, the member municipality, the University Endowment Lands or the University of British Columbia during such 12-month period under an Industrial Permit or Industrial Permits, as determined by the Corporation;

- (e) the definition “**Industrial Flows**” in section 1 of the Bylaw is deleted;

- (f) the definition “**Total Non-Growth Costs**” is added to the definitions in section 1 of the Bylaw in alphabetic order as follows:

“**Total Non-Growth Costs**”, for any 12-month period, means the costs identified in section 7 as the Total Non-Growth Costs for each Sewerage Area;

- (g) the definition “**UBC Wet Weather Flow**” is added to the definitions in section 1 of the Bylaw in alphabetic order as follows:

“**UBC Wet Weather Flow**” in respect of any 12-month period means the 75th percentile of the average daily flow of wastewater discharged from the university site, as determined by the Corporation, and based upon:

- (i) flow monitoring meters for the University of British Columbia, and
  - (ii) such other data deemed relevant by the Corporation for making such determination;
- (h) the definition “**UEL Wet Weather Flow**” is added to the definitions in section 1 of the Bylaw in alphabetic order as follows:

“**UEL Wet Weather Flow**” in respect of any 12-month period means the 75th percentile of the average daily flow of wastewater discharged from the University Endowment Lands, as determined by the Corporation, and based upon:

- (i) temporary flow monitoring by mobile flow meters for the University Endowment Lands, and
  - (ii) such other data deemed relevant by the Corporation for making such determination;
- (i) in the definition “**University Endowment Lands**” delete the word “and” that appears after the semicolon;
- (j) the definition “**Wastewater**” is added to the definitions in section 1 of the Bylaw in alphabetic order as follows:

“**Wastewater**” has the same definition as that found in the *Wastewater Systems Effluent Regulations*, SOR/2012-139;

- (k) the definition “**Wet Weather Flow**” is added to the definitions in section 1 of the Bylaw in alphabetic order as follows:

“**Wet Weather Flow**” in respect of any 12- month period means:

- (i) for a Sewerage Area, the 75th percentile of the average daily flow of wastewater, as determined by the Corporation, measured at whichever (one or more) of the Corporation’s five wastewater treatment plants (being Annacis Island, Iona Island, Lions Gate, Lulu Island and Northwest Langley) providing service to that Sewerage Area;
- (ii) for a Combined Sewer Member Municipality, the 60th percentile of the average daily flow of wastewater discharged from that member municipality as measured at the flow metering stations for that member municipality, or where there is insufficient data from flow metering stations, as determined by the Corporation, based on (A) temporary flow monitoring from mobile meters, (B) data from pump

stations or, (C) such other data deemed appropriate by the Corporation for making such determination;

- (iii) for all other member municipalities, the 75th percentile of the average daily flow of wastewater discharged from that member municipality as measured at the flow metering stations for that member municipality, or where there is insufficient data from flow metering stations, as determined by the Corporation, based on (A) temporary flow monitoring from mobile meters, (B) data from pump stations or, (C) such other data deemed appropriate by the Corporation for making such determination;

- (l) the definition “**Wet Weather Share**” is added to the definitions in section 1 of the Bylaw in alphabetic order as follows:

“**Wet Weather Share**” means a part of the Total Non-Growth Costs for a Sewerage Area (except Lulu Island West Sewerage Area), as defined in section 7A.1; and

- (m) the definition “**Wet Weather Share Method of Apportionment**” is added to the definitions in section 1 of the Bylaw in alphabetic order as follows:

“**Wet Weather Share Method of Apportionment**” means that each member municipality within the Sewerage Area must pay X per cent of the Wet Weather Share for the Sewerage Area, where X is calculated as follows:

$$X = \frac{100\% \text{ Wet Weather Flow for the member municipality} - 100\% \text{ Industrial Flow for the member municipality}}{100\% \text{ Wet Weather Flow for the Sewerage Area} - 100\% \text{ Industrial Flow for the Sewerage Area}}$$

(where flows are calculated for the five-year period ending June 30 of the previous year).

- (n) section 5.2 of the Bylaw is deleted and replaced as follows:

5.2 For the purpose of section 7.2(b), all Assessed Values will be reduced by an amount equal to the Industrial Assessed Value within each relevant area for Industrial Permits (Permittees).

(o) Section 7A is added as follows:

**7A. Total Non-Growth Costs for Sewerage Areas to be Divided into Two Amounts to be Further Apportioned**

**7A.1** The Total Non-Growth Costs for each of the Sewerage Areas except Lulu Island West Sewerage Area, will be divided into two amounts for each Sewerage Area, as follows:

- (a) A “Dry Weather Share,” which is the amount of Total Non-Growth Costs for a Sewerage Area that is calculated using the percentage set out in Column 2 of Table 7A.1 opposite the applicable year of calculation set out in Column 1 of Table 7A.1; and
- (b) A “Wet Weather Share,” which is the amount of Total Non-Growth Costs for a Sewerage Area that is calculated using the percentage set out in Column 3 of Table 7A.1 opposite the applicable year of calculation set out in Column 1 of Table 7A.1,

except that, starting in 2033 and for every year following, the Total Non-Growth Costs for every Sewerage Area except Lulu Island West Sewerage Area will be 100% Wet Weather Share for the purposes of further apportionment, as set out in Table 7A.1.

Table 7A.1

<b>Column 1</b>	<b>Column 2</b>	<b>Column 3</b>
<b>Year</b>	<b>Dry Weather Share</b>	<b>Wet Weather Share</b>
2024	90%	10%
2025	80%	20%
2026	70%	30%
2027	60%	40%
2028	50%	50%
2029	40%	60%
2030	30%	70%
2031	20%	80%
2032	10%	90%
2033 and Beyond	0%	100%

**7A.2** The Total Non-Growth Costs for Lulu Island West Sewerage Area, and the Total Non-Growth Costs (as divided into Dry Weather Share and Wet Weather Share

amounts) for every other Sewerage Area will respectively be further apportioned in accordance with section 7.

(p) Section 7.1 of the Bylaw is deleted and replaced as follows:

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

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

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

(q) Section 7.2 of the Bylaw is deleted and replaced as follows:

7.2 The Dry Weather Share for the Vancouver Sewerage Area will be further apportioned as follows:

- (a) First, as a special apportionment for the Vancouver Sewerage Area:
  - (i) The amount to be apportioned to the University Endowment Lands in respect of the University Endowment Lands will be equal to that portion of the Dry Weather Share for the Vancouver Sewerage Area that the UEL Dry Weather Flow bears to 100% of the Dry Weather Flow for the Vancouver Sewerage Area less 100% of the Industrial Flow for the Vancouver Sewerage Area, during the 12-month period ending June 30 of the immediately preceding year; and
  - (ii) The amount to be apportioned to the University of British Columbia in respect of the university site will be equal to that portion of the Dry Weather Share for the Vancouver Sewerage Area that the UBC Dry Weather Flow bears to 100% of the Dry Weather Flow for the Vancouver Sewerage Area less 100% of the Industrial Flow for the Vancouver Sewerage Area, during the 12-month period ending June 30 of the immediately preceding year; and

- (b) Second, after deduction of the special apportionments in section 7.2(a), the remaining costs of the Dry Weather Share will be further apportioned among the member municipalities within the Vancouver Sewerage Area in the same proportion that the Assessed Value (as adjusted in accordance with section 5.2) of the lands of each member municipality within the Vancouver Sewerage Area bears to the Assessed Value (as adjusted in accordance with section 5.2) of all lands within the Vancouver Sewerage Area.

(r) Section 7.3 of the Bylaw is deleted and replaced as follows:

7.3 The Wet Weather Share for the Vancouver Sewerage Area will be further apportioned among the member municipalities within the Vancouver Sewerage Area in accordance with the Wet Weather Share Method of Apportionment, and among University Endowment Lands (UEL) and University of British Columbia (UBC), as follows:

- (a) As a special apportionment for Vancouver Sewerage Area,
  - (i) University Endowment Lands (UEL) must pay Y percent of the Wet Weather Share for the Vancouver Sewerage Area, where Y is calculated as follows:

$$Y = \frac{100\% \text{ UEL Wet Weather Flow} - 100\% \text{ Industrial Flow for UEL}}{100\% \text{ Wet Weather Flow for the Sewerage Area} - 100\% \text{ Industrial Flow for the Sewerage Area}}$$

(where flows are calculated for the five-year period ending June 30 of the previous year); and

- (ii) University of British Columbia (UBC) must pay Z percent of the Wet Weather Share for the Vancouver Sewerage Area, where Z is calculated as follows:

$$Z = \frac{100\% \text{ UBC Wet Weather Flow} - 100\% \text{ Industrial Flow for UBC}}{100\% \text{ Wet Weather Flow for the Sewerage Area} - 100\% \text{ Industrial Flow for the Sewerage Area}}$$

(where flows are calculated for the five-year period ending June 30 of the previous year).

(s) Section 7.4 of the Bylaw is deleted and replaced as follows:

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

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

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

(t) Section 7.5 is added as follows:

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

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

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

(u) Section 7.6 is added as follows:

7.6 The Dry Weather Share for the North Shore Sewerage Area will be further apportioned among the member municipalities within the North Shore Sewerage Area as follows:

The Corporation of the District of West Vancouver	30%
The Corporation of the District of North Vancouver	45%
City of North Vancouver	25%

(v) Section 7.7 is added as follows:

7.7 The Wet Weather Share for the North Shore Sewerage Area will be further apportioned among the member municipalities within the North Shore Sewerage Area in accordance with the Wet Weather Share Method of Apportionment.

(w) Section 7.8 is added as follows:

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

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

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

(x) Section 7.9 is added as follows:

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

(y) Section 7.10 is added as follows:

7.10 The Dry Weather Share for the Fraser Sewerage Area will be further apportioned among the member municipalities within the Fraser Sewerage Area, such that each municipality must pay X percent of the Dry Weather Share for the Fraser Sewerage Area, where X is calculated as follows:



$$X = \frac{100\% \text{ Dry Weather Flow for the member municipality} - 100\% \text{ Industrial Flow for the member municipality}}{100\% \text{ Dry Weather Flow for the Fraser Sewerage Area} - 100\% \text{ Industrial Flow for the Fraser Sewerage Area}}$$

(where flows are calculated for the five-year period ending June 30 of the previous year).

(z) Section 7.11 is added as follows:

7.11 The Wet Weather Share for the Fraser Sewerage Area will be further apportioned among the member municipalities within the Fraser Sewerage Area in accordance with the Wet Weather Share Method of Apportionment.

(aa) The entirety of section 8A of the Bylaw is deleted.

(bb) The entirety of section 8 of the Bylaw is deleted.

(cc) All references to the phrase “12 month”, and the phrase “twelve month” in the Bylaw are deleted and replaced with the phrase “12-month”;

(dd) All references to the phrase “average daily flows” in the Bylaw are deleted and replaced with the phrase “average daily flow”;

(ee) All references to the phrase “sewage and wastewater” in the Bylaw are deleted and replaced with the phrase “wastewater”;

(ff) All references to the phrase “on the basis set out in sections 7 and 8” are deleted and replaced with the phrase “on the basis set out in section 7”;

(gg) All references to the phrase “section 804.2 of the *Local Government Act*” are deleted and replaced with the phrase “section 383 of the *Local Government Act*”;

(hh) All references to the phrase “*Wastewater Systems Effluent Regulations* SOR/2012-139, as amended from time to time” are deleted and replaced with the phrase “*Wastewater Systems Effluent Regulations* SOR/2012-139”.

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

Passed and finally adopted this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

---

George V. Harvie, Chair

---

Dorothy Shermer, Corporate Officer

To: Liquid Waste Committee

From: George Kavouras, Acting Director Procurement, Procurement and Real Estate Services  
Colin Meldrum, Director Engineering Design and Construction, Liquid Waste Services

Date: March 8, 2023 Meeting Date: March 15, 2023

Subject: **Award of Contract Resulting from Request for Proposal No. 22-009: Supply and Installation of North Road Trunk Sewer No. 2 - Phase 2 Lougheed Highway to Clarke Road**

---

### RECOMMENDATION

That the GVS&DD Board:

- a) approve the award of a contract for an amount of \$7,947,758.20 (exclusive of taxes) to Clearway Construction Inc., resulting from Request for Proposal No. 22-009: Supply and Installation of North Road Trunk Sewer No. 2 Phase 2 Lougheed Highway to Clarke Road, subject to final review by the Commissioner; and
  - b) authorize the Commissioner and the Corporate Officer to execute the required documentation once the Commissioner is satisfied that the award should proceed.
- 

### EXECUTIVE SUMMARY

A Request for Proposal (RFP) No. 22-009 was issued in October 2022 for supply and installation of North Road Trunk Sewer No. 2 Phase 2 Lougheed Highway to Clarke Road. Clearway Construction Inc. was identified as the highest ranked and lowest cost proponent. It is recommended that the GVS&DD Board authorize the award of a Contract for Supply and Installation of North Road Trunk Sewer No. 2 Phase 2 Lougheed Highway to Clarke Road, in an amount of \$7,947,758.20 (exclusive of taxes) to Clearway 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 RFP No. 22-009: Supply and Installation of North Road Trunk Sewer No. 2 Phase 2 Lougheed Highway to Clarke Road and to recommend award of the contract in an amount of \$7,947,758.20 to Clearway Construction Inc. (Clearway).

### BACKGROUND

Pursuant to the *GVS&DD Officers and Delegation Bylaw, No. 284, 2014* (Bylaw) and the *Procurement and Real Estate 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 existing North Road Trunk Sewer, located on North Road between Clarke Road and Brunette River is required to be upsized to accommodate the increasing wastewater flows from the catchment, due to population growth and ongoing developments in the City of Burnaby and the City

of Coquitlam. The sewer upgrade project called North Road Trunk Sewer No. 2 is divided into three phases:

- Phase 1A – the section between Brunette River and Lougheed Highway;
- Phase 1B – Burlington Northern Santa Fe (BNSF) Railway crossing south of Highway 1; and
- Phase 2 – the section between Lougheed Highway and Clarke Road.

Phase 1A was completed in 2020, and Phase 1B will be constructed subject to resolution of the property issues with BNSF Railway. The design of Phase 2 was completed and is the subject of this award.

## EVALUATION

As a result of Request for Qualifications (RFQ) No. 22-008: Supply and Installation of North Road Trunk Sewer No. 2 Phase 2 Lougheed Highway to Clarke Road, six (6) experienced contractors were shortlisted and invited to respond to RFP No. 22-009. The RFP was issued in October 2022 and closed on December 21, 2022 with four (4) compliant submissions received, as shown in Table 1 below.

**Table 1: Proponent Submission Pricing**

<b>Proponent</b>	<b>Proposed Fee (exclusive of taxes)</b>
Clearway Construction Inc.	\$7,947,758.20
Hall Constructors	\$11,532,635.00
B&B Contracting (2012) Ltd	\$14,566,600.00
BEL Contracting	\$16,205,125.00

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

Clearway succeeded in delivering the previous North Road Trunk Sewer No. 2 Phase 1A with acceptable quality of work, on time, and within budget. The majority of their proposed Phase 2 construction management staff are new to the project team; however, they are all experienced in the proposed type of sewer installation work. Their proposed subcontractors are known to MV with good experiences and references.

As allowed for within the competition documents, negotiations were conducted with Clearway, as the highest ranked proponent. The negotiations re-confirmed their commitments and strategies to address and tackle the foreseeable challenges with trench excavation, traffic management, and other site constraints on North Road. Also, Clearway thoroughly reviewed the work scope requirements and confirmed their clear understanding and accurate pricing, as given in the

proposal. The contract value after negotiations remains unchanged at \$7,947,758.20 (exclusive of taxes).

## **ALTERNATIVES**

1. That the GVS&DD Board:
  - a) approve the award of a contract for an amount of up to \$7,947,758.20 (exclusive of taxes) to Clearway Construction Inc., resulting from Request for Proposal No. 22-009: Supply and Installation of North Road Trunk Sewer No. 2 Phase 2 Loughheed Highway to Clarke Road, subject to final review by the Commissioner; and
  - b) authorize the Commissioner and the Corporate Officer to execute the required documentation once the Commissioner is satisfied that the award should proceed.
2. That the GVS&DD Board terminate Request for Proposal No. 22-009: Supply and Installation of North Road Trunk Sewer No. 2 Phase 2 Loughheed Highway to Clarke Road 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 Clearway Construction Inc. in the amount of \$7,947,758.20 (exclusive of taxes) to complete Phase 2 section between Loughheed Highway and Clarke Road. This amount is within the overall North Road Trunk Sewer No. 2 construction budget and higher than the engineer's estimate for the work by about \$1M.

The GVS&DD Board has the choice not to 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 Phase 2 section between Loughheed Highway and Clarke Road which would potentially result in damage to the environment due to wastewater overflows from the undersized sewer system and incur higher construction costs in the future.

## **CONCLUSION**

Request for Proposals No. 22-009 was issued in October 2022 for Supply and Installation of North Road Trunk Sewer No. 2 - Phase 2 Loughheed Highway to Clarke Road. Clearway Construction Inc. was identified as the highest ranked and lowest cost proponent. It is therefore recommended that the GVS&DD Board authorize the award of a contract resulting from RFP No. 22-009 for the Supply and Installation of North Road Trunk Sewer No. 2 - Phase 2 Loughheed Highway to Clarke Road, in an amount of \$7,947,758.20, to Clearway Construction Inc. and authorize the Commissioner and the Corporate Officer to execute the required documentation.

## **Attachment**

North Road Sewer Upgrade

58096905



To: Liquid Waste Committee

From: George Kavouras, Acting Director Procurement, Procurement and Real Estate Services  
Colin Meldrum, Director Engineering Design and Construction, Liquid Waste Services

Date: March 8, 2023 Meeting Date: March 15, 2023

Subject: **Award of Phase C3, Engineering Construction Services for RFP 14-230 for Installation of Gilbert Trunk Sewer No.2 Central Section**

---

**RECOMMENDATION**

That the GVS&DD Board:

- a) approve the award of Phase C3, Engineering Construction Services, for an amount up to \$2,997,555 (exclusive of taxes) to the Phase A and B consultant, AECOM Canada Ltd, for the Installation of Gilbert Trunk Sewer No.2 Central Section, and
  - b) authorize the Commissioner and Corporate Officer to execute the required documentation once the Commissioner is satisfied that the award should proceed.
- 

**EXECUTIVE SUMMARY**

RFP 14-230 for consulting engineering services was awarded to AECOM Canada Ltd in May 2015 for design and construction of approximately 6.5km of the Gilbert Trunk Sewer No.2 (GTS2) in the City of Richmond. The project was split into three sections, North, South and Central. Construction of the North Section is complete. Construction of the South Section is underway. In October 2022, the GVS&DD Board awarded RFP 22-007 for Installation of the GTS2 Central Section to BD Hall Constructors.

The construction management services for the GTS2 Central Section are required to support the above noted construction contract. It is recommended that the GVS&DD Board authorize the Commissioner and the Corporate Officer to award Phase C3, Engineering Construction Services, for an amount up to \$2,997,555 (exclusive of taxes) to the Phase A and B consultant, AECOM Canada Ltd, for Engineering Construction Services for the GTS2 Central Section, bringing the total award to AECOM to date to \$10,822,323 for the project.

**PURPOSE**

This report is to request authorization by the GVS&DD Board to award Phase C3, Engineering Construction Services, in an amount of up to \$2,997,555 (exclusive of taxes), to the Phase A and B consultant, AECOM Canada Ltd. (AECOM), to support the Installation of the GTS2 Central Section.

**BACKGROUND**

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

This report is being brought forward to the Liquid Waste Committee to consider a recommendation to the GVS&DD Board to award Phase C3, Engineering Construction Services, for Installation of the GTS2 Central Section. The total award to date to AECOM for this project excluding this request is \$7,824,768.

### **PROJECT DESCRIPTION**

The 10km long Gilbert Trunk Sewer that services the City of Richmond was found to be 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 the pipe capacity. In order to facilitate future repairs and efficient maintenance of the existing sewer, and to meet the long term capacity needs in the City of Richmond, it is necessary to construct the GTS2.

In May 2015, through a Request for Proposals (RFP 14-230), the consulting engineering services for 6.5km of the GTS2 was awarded to AECOM Canada Ltd. GTS2 was split into three Sections, North, South and Central . Construction of the North Section (1.8km long) was completed in December 2020. Construction of the South Section (2.2km long), previously awarded by the Board (RFP 22-006) is underway.

RFP 22-007 for Installation of the GTS2 Central Section (2.5km long) was awarded by the GVS&DD Board in October 2022 to BD Hall Constructors. Construction is expected to commence in the spring of 2023. The Engineering Construction Services for the GTS2 Central Section now need to be awarded.

Engineering Construction Services were accounted for in the original RFP (14-230) for consulting engineering services with the number of hours stipulated Metro Vancouver staff. The hours provided at that time were for evaluation purposes only. Metro Vancouver staff requested AECOM to provide an updated proposal for Engineering Construction Services for each section (North, South and Central). The GVS&DD Board previously awarded Engineering Construction Services Phases C1 (North Section) and C2 (South Section) for amounts of \$1,323,390 and \$2,548,466 (exclusive of taxes) respectively. This request is for Phase C3, award for Engineering Construction Services for the GTS2 Central Section in the amount of up to \$2,997,555 (exclusive of taxes).

### **ALTERNATIVES**

1. That the GVS&DD Board:
  - a) approve the award of Phase C3, Engineering Construction Services, for an amount up to \$2,997,555 (exclusive of taxes) to the Phase A and B consultant, AECOM Canada Ltd., for Installation of the Gilbert Trunk Sewer No.2 Central Section, and
  - b) authorize the Commissioner and Corporate Officer to execute the required documentation once the Commissioner is satisfied that the award should proceed.
2. That the GVS&DD Board terminate the contract with AECOM resulting from Request for Proposals 14-230 Consulting Engineering Services for Design and Construction of the Gilbert Trunk Sewer No.2 Central Section and direct staff to report back to the GVS&DD Board with options for alternative course of action.



### **FINANCIAL IMPLICATIONS**

The GVS&DD Board previously approved a project budget of \$169,650,000. There are enough funds in the budget to accommodate award of Phase C3, Engineering Construction Services, to AECOM Canada Ltd, in the amount of up to \$2,997,555.

If the GVS&DD Board approves Alternative 1, an amendment in the amount of \$2,997,555 (exclusive of taxes) will be added to the contract with AECOM Canada Ltd.

The GVS&DD Board has the choice not to proceed with Alternative 1 but staff will need further direction in relation to completion of the project. Alternative 2 will result in delay in Installation of the GTS2 Central Section and possibly delay claims by the GTS2 Central Section Installation contractor as any alternative approach will require time to engage a new consultant to provide the necessary Engineering Construction Services.

### **CONCLUSION**

A Request for Proposals (14-230) was issued for consulting engineering services for the design and construction of 6.5km of the GTS2. Work was contemplated to be done in three sections (North, South and Central). AECOM Canada Ltd was the successful proponent.

It is recommended that the GVS&DD Board Award Phase C3, Engineering Construction Services, for an amount up to \$2,997,555 (exclusive of taxes) to the Phase A and B consultant, AECOM Canada Ltd., for the Installation of the GTS2 Central Section.

The GVS&DD Board previously awarded Phases C1 and C2, Engineering Construction Services, for the GTS2 North and South Sections in the amounts of \$1,323,390 and \$2,548,466 (exclusive of taxes) respectively to the Phase A and B consultant.

This request for Phase C3 award brings the total award to AECOM Canada Ltd., to \$10,822,323 (exclusive of taxes), for the design and construction of the 6.5km GTS2.

Staff recommend Alternative 1.

57813215

To: Liquid Waste Committee

From: Cheryl Nelms, General Manager, Project Delivery

Date: March 3, 2023 Meeting Date: March 15, 2023

Subject: **North Shore Wastewater Treatment Plant Project Early Works Agreement Extension**

---

**RECOMMENDATION**

That the GVS&DD Board:

- a) approve a change order to PCL Constructors Westcoast Inc. Pre-Construction Services and Early Works Agreements (PC21-457 and PC22-227) in an amount of up to \$85,000,000 (exclusive of taxes), subject to final review by the Commissioner; and
  - b) authorize the Commissioner and the Corporate Officer to execute the required documentation once the Commissioner is satisfied that the amendment should proceed.
- 

**EXECUTIVE SUMMARY**

In January 2022, Metro Vancouver terminated its contract with Acciona Wastewater Solutions LP (Acciona/Project Co) to design, construct, finance, test, and commission the North Shore Wastewater Treatment Plant for material breach of the Project Agreement, which it failed to remedy.

Metro Vancouver has been working with a new construction manager, PCL Constructors Westcoast Inc. (PCL) to develop a plan to complete the project and complete some early works construction, and a design consultant, AECOM, to complete the design, be the Engineer of Record, and provide quality assurance services post-termination. PCL and AECOM have identified significant deficiencies in Project Co's design and construction, and, in some cases, more extensive deficiencies than originally anticipated. As a result, a substantial amount of effort to-date has been focused on identifying and repairing concrete deficiencies on structures built by Project Co, with less focus on advancing new construction. Additionally, related design delays have extended the timeline for the overall completion of Phase 1.

In order to address deficiencies and advance construction for structures on the critical path until Phase 2 is executed, staff recommend implementing a change order of \$85,000,000 to the current Pre-Construction Services and Early Works Agreements with PCL.

**PURPOSE**

This report is to request authorization by the GVS&DD Board for a change order to PCL, the construction manager for the North Shore Wastewater Treatment Plant, for the Pre-Construction Services and Early Works Agreements in the amount of up to \$85,000,000 (exclusive of taxes) to continue early works construction for structures on the critical path, including continuing with rectification of excessive deficiencies brought on by Project Co's design and construction.

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.

## **BACKGROUND**

Under the previous project delivery model, Project Co was responsible for the design, construction, commissioning, and process for performance for the plant.

Following termination of the Project Agreement with Project Co, a new construction manager, PCL, and new designer, AECOM, were brought on to help progress the project. To help to expedite the project while also retaining the ability for competitive pricing of construction for the final delivery of the project, Metro Vancouver adjusted the project delivery model to deliver the remainder of the project in two phases:

- 1) Within Phase 1, design delivery includes design due diligence review and advancement of the design, and construction delivery includes preconstruction services and early works construction. PCL and AECOM are working collaboratively with Metro Vancouver to advance the design and to develop a detailed execution plan, schedule, and cost estimate to complete the project.
- 2) Phase 2 will be the completion of all design, construction, and commissioning of the project.

PCL was awarded a Phase 1 contract by the GVS&DD Board at the February 25, 2022 Board Meeting, for early contractor involvement and construction management services estimated at \$40,000,000. At that time, PCL was authorized to commence Pre-Construction Services in the form of developing the project execution plan, schedule, and cost estimate to complete the project. In July 2022, PCL was further authorized to commence specific early works within this budget to ensure that construction of structures on the critical path could be advanced to minimize schedule impacts. The early works authorization included a concrete deficiency assessment and repair package, collaborating with AECOM to identify and repair concrete deficiencies in the work completed by Project Co.

## **CURRENT STATUS AND EARLY WORKS EXTENSION**

During Phase 1 work, PCL and AECOM have identified significant additional concrete deficiencies and, in some cases, more extensive deficiencies than originally anticipated. The deficiency identification and required repair work is taking longer than anticipated due to the high number of deficiencies identified and the more challenging repair procedures required. Further, design due diligence reviews have identified that the design was not as advanced as reported by Project Co at the time of termination and that there are a number of non-compliances with the Project Agreement than anticipated. Because of Project Co's deficiencies, extensive constructability reviews between AECOM, PCL, and Metro Vancouver have been required to advance the design.

As a result of the substantial time and effort required by AECOM and PCL to date to address these deficiencies and progress the design and construction, the completion of Phase 1 work and development of the plan for Phase 2 has been delayed. In order to enable continued advancement

of concrete construction for the structures on the critical path and minimize future project schedule delays, the scope and duration of early works requires extension until Phase 2 is executed. This additional scope of work identified for early works includes advancing the structures up to a specific elevation, in most cases to the operator deck level. The work will allow PCL to progress the critical path of the project, as well as allow AECOM to continue overall plant design with the least amount of disruption. It is anticipated that the work will be included in the main construction contract once awarded in 2023 to allow for seamless transition.

Staff recommend a change order in the amount of \$85,000,000 to extend the Early Works Agreement and continue to advance construction for the structures on the critical path.

### **ALTERNATIVES**

1. That the GVS&DD Board:
  - a) approve a change order to PCL Constructors Westcoast Inc. Pre-Construction Services and Early Works Agreements (PC21-457 and PC22-227) in an amount of up to \$85,000,000 (exclusive of taxes), subject to final review by the Commissioner; and
  - b) authorize the Commissioner and the Corporate Officer to execute the required documentation once the Commissioner is satisfied that the amendment should proceed.
2. That the GVS&DD Board not authorize the change order to PCL Constructors Westcoast Inc. Pre-Construction Services and Early Works Agreements to extend the scope and duration of Early Works, and direct staff to report back to the GVS&DD Board with options for an alternate course of action.

### **FINANCIAL IMPLICATIONS**

The current approved budget for the North Shore Wastewater Treatment Plant Program is \$1.058B. This program budget is an overall budget inclusive of construction of the treatment plant, the conveyance project, and preliminary design for decommissioning of Lions Gate Wastewater Treatment Plant. The current approved project budget and current year cash flow can accommodate the requested change order to the PCL contract.

If the GVS&DD Board approves Alternative 1, the contract with PCL will be amended by Change Order in the amount of up to \$85,000,000 (exclusive of taxes) to allow the completion of the concrete deficiency repairs and to add additional early works scope to mitigate schedule risk.

### **CONCLUSION**

Metro Vancouver continues to work collaboratively with the new contractor, PCL, and the new designer, AECOM, to develop design and construction definition, and a new plan to complete the project. Due to the expected level of effort required to overcome deficiencies in the design and construction undertaken by Project Co and the resulting extended time to complete Phase 1 work for the project, it is recommended that GVS&DD proceed with a change order to PCL's contract by an amount of up to \$85,000,000 (exclusive of taxes), to expand the early works scope and complete concrete deficiency repairs.

56779187

To: Liquid Waste Committee

From: Peter Navratil, General Manager, Liquid Waste Services

Date: March 6, 2023 Meeting Date: March 15, 2023

Subject: **Manager's Report**

---

## **RECOMMENDATION**

That the Liquid Waste Committee receive for information the report dated March 6, 2023 titled "Manager's Report".

---

### **1. North Shore Wastewater Treatment Plant Project Update**

Throughout February 2023, Metro Vancouver continued to work with PCL and AECOM to progress the development of the project execution plan, cost estimate, and schedule, and address design and construction errors and deficiencies from the previous design build contractor.

PCL, the project's construction manager, continued early works construction by correcting deficiencies in existing concrete structures, pouring concrete for walls and foundations for the Influent Pumping Station and Power Distribution Building, and preparing for future concrete pours for the Operations and Maintenance Building.

AECOM, the project's design consultant, provided PCL with design support for early works, continued work to identify and correct errors and deficiencies in the existing design, and advanced the development of the next batch of 90% and Issued For Construction detailed design packages.

The project team is also progressing work in other areas required to move the project forward, such as equipment procurement, ongoing engagement with Metro Vancouver's operations and maintenance teams to review the detailed design, and development of contracts for technical services and construction completion.

### **2. Annacis Island Wastewater Treatment Plant New Outfall Project**

Due to population growth, a new and much larger outfall is required for the Annacis Island Wastewater Treatment Plant. The New Outfall Project consists of a 4.2m diameter tunnel 35m below ground extending from the plant to the Fraser River and two 130m-long diffuser manifold pipes in shallow trenches in the bottom of the river with 18 diffuser ports to discharge the effluent over a large area in the river. The new outfall will have significantly improved seismic resiliency, and it will provide improved dilution of the effluent in the river. Construction is 85% complete; however, the Tunnel Boring Machine (TBM) is currently stalled due to a mechanical issue or an obstruction. The contractor is in the process of completing a ground freezing

program to freeze the soil around the front of the TBM in order to access the TBM cutterhead to determine the cause and rectify it. As a precaution, Metro Vancouver has engaged its construction management consultant, design engineer and its own tunneling expert to provide advice.

### **3. 2023 Unflushables Campaign Update**

The 2023 regional “Unflushables” campaign will launch on April 3, 2023. The campaign supports Metro Vancouver’s source control initiatives to reduce unwanted items in our wastewater and will run until the end of May. Now in its seventh year, the campaign focuses on seven priority items that should not be flushed: wipes, paper towels, floss, tampons and applicators, condoms, hair, and medications. It asks residents to return medications to the pharmacy and dispose of other unflushable items in the garbage. The campaign addresses all seven items, but continues to place extra emphasis on wipes and medications. The target audience remains Metro Vancouver residents age 24–54, skewing slightly towards women (the main buyers of many of these items). The campaign will use existing creative materials and direct residents to [Unflushables.ca](https://www.metrovancouver.ca/services/water/unflushables). Tactics include digital (YouTube, Facebook, Instagram, and search ads), radio, television, and out-of-home advertising (buses and elevators). New tactics for 2023 include radio endorsements and refreshed digital creative materials. The Pee and Poo campaign mascots will make regular appearances at Metro Vancouver’s PNE exhibit space this summer.

### **4. Liquid Waste Committee 2023 Work Plan**

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

#### **Attachment**

Liquid Waste Committee 2023 Work Plan

57703765

## Liquid Waste Committee 2023 Work Plan

Report Date: March 15, 2023

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

To: Liquid Waste Committee

From: Lillian Zaremba, Program Manager, Collaborative Innovations, Liquid Waste Services

Date: February 22, 2023

Meeting Date: March 15, 2023

Subject: **2023 Liquid Waste Sustainability Innovation Fund Application**

---

The attached report dated February 21, 2023 titled “2023 Liquid Waste Sustainability Innovation Fund Application” is being presented to the Climate Action Committee for consideration and recommendation at its March 9, 2023 meeting. The report is presented to the Liquid Waste Committee for its information only.

**Attachment**

“2023 Liquid Waste Sustainability Innovation Fund Application”, dated February 21, 2023



To: Climate Action Committee

From: Lillian Zaremba, Program Manager, Collaborative Innovations, Liquid Waste Services

Date: February 21, 2023 Meeting Date: March 9, 2023

Subject: **2023 Liquid Waste Sustainability Innovation Fund Application**

---

### **RECOMMENDATION**

That the GVS&DD Board approve the allocation from the Liquid Waste Sustainability Innovation Fund of \$625,000 over two years starting in 2023 for the Hydrogen System Integration at Lulu Island Wastewater Treatment Plant (Phase 1) project.

---

### **EXECUTIVE SUMMARY**

The Climate Action Committee is responsible for overseeing the Sustainability Innovation Funds, and for making all funding recommendations to the respective Boards. Staff assist the Climate Action Committee in reviewing and evaluating all proposals that are submitted for consideration. This report presents the Hydrogen System Integration at Lulu Island Wastewater Treatment Plant (Phase 1) project recommended for funding, totaling \$625,000 over two years, which will be funded through the Liquid Waste Sustainability Innovation Fund. The project aims to generate additional renewable natural gas and green hydrogen from wastewater, to decrease the use of fossil natural gas in the region.

### **PURPOSE**

To present one project recommended for Sustainability Innovation Funding for the Climate Action Committee and the GVS&DD Board's consideration.

### **BACKGROUND**

The Liquid Waste Sustainability Innovation Fund was created by the Board in 2004 to provide financial support to Liquid Waste Utility projects that contribute to the region's sustainability. The GVS&DD Board adopted the *Liquid Waste Sustainability Innovation Fund Policy* on June 27, 2014, with further amendments in 2016 and 2021, to guide the use and management of the Fund. The Policy describes a process of generating, submitting, evaluating and recommending proposals for funding each year.

The Climate Action Committee is responsible for overseeing the Fund, and for making all funding recommendations to the respective Boards. Staff assist the Climate Action Committee in reviewing and evaluating all proposals that are submitted for consideration.

### **LIQUID WASTE SUSTAINABILITY INNOVATION FUND POLICY**

On an annual basis, Liquid Waste projects are submitted to an internal staff Steering Committee, representing a cross-section of the organization, to evaluate projects and initiatives based on the Fund's evaluation criteria. As defined in the policy, projects need to fulfill the following criteria:

- be overseen by the GVS&DD;

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

On an annual basis the Climate Action Committee receives an update report on the projects supported by the Fund including the deliverables, outcomes, and the measurable benefits of these projects to the region’s sustainability. A summary of past projects can be found on the Sustainability Innovation Program website (see Reference).

### **2023 APPLICATION PROCESS**

An internal call for proposals closed on November 4, 2022 and two proposals concerning Liquid Waste were considered by the cross-departmental Sustainability Innovation Fund Steering Committee, comprised of representatives from seven different departments within Metro Vancouver.

The Steering Committee evaluated the submissions and determined that one application strongly aligns with promoting regional sustainability and innovation. The project recommended for funding by the Steering Committee is listed in the table below with additional detail provided in the executive summary (see Attachment).

<b>Recommended Allocation from the Liquid Waste Sustainability Innovation Fund</b>		
<b>Project Title</b>	<b>Year</b>	<b>Amount Requested</b>
Hydrogen System Integration at Lulu Island Wastewater Treatment Plant Pilot (Phase 1)	2023-2024	\$625,000

### **ALTERNATIVES**

1. That the GVS&DD Board approve the allocation from the Liquid Waste Sustainability Innovation Fund of \$625,000 over two years starting in 2023 for the Hydrogen System Integration at Lulu Island Wastewater Treatment Plant (Phase 1) project.
2. That the Climate Action Committee receive for information the report dated February 21, 2023, titled “2023 Liquid Waste Sustainability Innovation Fund Application” and provide alternate direction to staff.

### **FINANCIAL IMPLICATIONS**

If the Board approves Alternative 1, \$625,000 for one project will be disbursed from the Liquid Waste Sustainability Innovation Fund over two years. The Fund has sufficient capacity to support Alternative 1.

The approved project will be incorporated into the applicable work plans and budgets.

## CONCLUSION

The Liquid Waste Sustainability Innovation Fund was created by the Board in 2004 to provide financial support for Liquid Waste projects that contribute to the region's sustainability. The *Liquid Waste Sustainability Innovation Fund Policy* guides the use and management of the Fund and describes the process of generating, submitting, evaluating and recommending proposals for funding each year. The Climate Action Committee is responsible for overseeing the Fund, and for making all funding recommendations to the GVS&DD Board. Staff assist the Climate Action Committee in reviewing and evaluating all proposals that are submitted for consideration.

This report presents the Steering Committee's recommendation to fund the Hydrogen System Integration at Lulu Island Wastewater Treatment Plant (Phase 1) project.

Additional details of the project are provided in the attached executive summary. Staff recommend that the Climate Action Committee approve the Steering Committee's recommendations for funding the proposal and forward the recommendation to the GVS&DD Board for consideration. Staff recommendation is presented as Alternative 1.

## Attachment

Liquid Waste Services Sustainability Innovation Fund – Executive Summary

## Reference

Sustainability Innovation Program website: <http://www.metrovancouver.org/services/air-quality/sustainability-innovation-program/Pages/default.aspx>

57160083

## Sustainability Innovation Fund: Liquid Waste Services Executive Summary

### Project Name: **Hydrogen System Integration at Lulu Island Wastewater Treatment Plant**

Amount Requested from Sustainability Innovation Fund: \$625,000 for Phase 1 (2023-2024)

#### Purpose:

The purpose of this project is to evaluate the technical feasibility of integrating a hydrogen system at the Lulu Island Wastewater Treatment Plant (WWTP). The entire system includes hydrogen production from wastewater by-products, hydrogen injection into wastewater digestion processes, and hydrogen blending. The hydrogen injection component builds on insights gained from a previous SIF project, Genomics Approach to Anaerobic Digestion Optimization, that discovered a particular microbial community can convert more carbon dioxide to methane when supplemented with hydrogen gas. The goal of the hydrogen system is to increase the renewable natural gas (RNG) content of biogas produced by wastewater treatment processes and produce green hydrogen to reduce fossil fuel usage in the natural gas grid.

#### Project Objectives:

The project consists of two phases with the intent to seek funding separately for each phase. This application is for Phase 1, which includes a feasibility study of hydrogen production and hydrogen blending, and a trial of hydrogen injection using external supplies of hydrogen and carbon dioxide to evaluate the increase in methane production. Phase 1 will take place over two years (2023-2024) with the following objectives:

- Design, construct and install the hydrogen injection system.
- Operate and evaluate the performance of the hydrogen injection system.
- Determine feasibility of onsite hydrogen production systems.

A positive assessment may lead to Phase 2, testing the entire hydrogen system integrated into the Lulu Island Pilot Digestion Optimization Facility. In Phase 2, the hydrogen injection system would use hydrogen provided from an onsite hydrogen production system and carbon dioxide provided from the Lulu Island WWTP Biogas Cleanup Facility.

#### Contributions to Regional Sustainability:

Due to the biological pathways being harnessed, methane produced by the hydrogen injection system with a green hydrogen source has a low carbon intensity. The enhanced production of RNG at WWTPs using this technology helps displace fossil natural gas, reduce regional greenhouse gas emissions, and generate revenue. In addition, the project will explore the production of hydrogen from by-products of existing wastewater treatment processes such as ammonia and waste carbon

dioxide from the biogas clean-up facility. Onsite hydrogen production from these waste streams offers the potential to sell excess hydrogen along with excess RNG, further contributing to the circular economy and generating revenue on two fronts.

#### Innovation Element:

The hydrogen injection system is a first-of-its-kind innovation that maximizes anaerobic digestion's biological potential to produce usable RNG, by activating naturally-occurring microbes called hydrogenotrophic methanogenic archaea. While the proof of concept has been tested at bench scale, this hydrogen injection system will be the first prototype developed in a wastewater treatment plant. The trial (Phase 1) and integrated pilot (Phase 2) are key next steps in scaling up the technology to leverage existing digesters and biogas cleanup facilities at WWTPs. The value proposition of generating green hydrogen from waste streams and using waste carbon dioxide to produce more RNG provides an opportunity for accelerating the transition to a low-carbon economy.

#### Tangible Benefits and Outcomes:

The hydrogen system increases RNG production at WWTPs and produces green hydrogen as tangible benefits. The outcomes of this project will enable Metro Vancouver to determine whether to move to the next step of piloting the fully integrated hydrogen system, and ultimately how to implement the hydrogen system at full scale in its facilities to produce additional RNG and green hydrogen in support of corporate and regional climate goals. The following are outcomes for Phase 1:

- Detailed design and construction of the trial hydrogen injection system.
- Testing and sampling program to evaluate system effectiveness, including the shift in the microbial community and the amount of additional RNG generated.
- Small-scale test of hydrogen production from ammonia.
- Business case and life-cycle analysis of financial and environmental benefits for full-scale implementation.
- Recommendations for Phase 2.

#### Members and other Partners:

Liquid Waste Services staff will lead the project, with collaboration among several divisions. A consulting engineering team will support design, construction and operation. Metro Vancouver will work with an external lab to perform DNA extraction and sequencing from sludge samples. Metro Vancouver will partner with the University of British Columbia Life Sciences Institute (LSI) Bioinformatics Facility to analyze the microbial DNA sequencing results.

To: Liquid Waste Committee

From: Erin Rennie, Senior Planner, Regional Planning and Housing Services

Date: February 13, 2023 Meeting Date: March 15, 2023

Subject: **Metro 2050 Climate Policy Enhancement Study – Project Initiation**

---

At its meeting on February 10, 2023 the Metro Vancouver Regional Planning Committee received the attached report, titled “Metro 2050 Climate Policy Enhancement Study” for information. The report describes the objectives, scope, process, and timeline for the Metro 2050 Climate Policy Enhancement Study and describes how it will be closely coordinated with the development of the Climate 2050 Land Use and Urban Form Roadmap.

The Study has been initiated in response to the following March 25, 2022 MVRD Board resolution: (Reference 1)

*Given the urgent need to respond to climate change and prepare for extreme weather events, direct staff to undertake work and engagement with an aim to proposing an early amendment to Metro 2050 post-adoption to strengthen climate action language and policy including the intent to improve integration of climate action into other Metro 2050 priorities.*

At its May 27, 2022 meeting the MVRD Board received a report titled “Process to Consider Stronger Climate Action Language and Policy for Metro 2050” (Reference 2). In that report staff indicated that, in response to the March 25, 2022 direction, “The [Metro 2050 climate enhancement] work will be led by the Regional Planning Committee as per their terms of reference, however, other standing committees including the Climate Action Committee, Parks Committee and Liquid Waste Committee will be provided opportunity to provide input and feedback.”

### Attachment

Metro 2050 Climate Policy Enhancement Study – Project Initiation, Regional Planning Committee, dated January 16, 2023

### References

1. [Consideration of Metro Vancouver Regional District Regional Growth Strategy Bylaw No. 1339, 2022, a bylaw to adopt Metro 2050, Staff Report, March 9, 2022](#)
2. [Process to Consider Stronger Climate Action Language and Policy for Metro 2050, Staff Report, Regional Planning Committee, on May 19, 2022](#)

To: Regional Planning Committee

From: Erin Rennie, Senior Planner, Regional Planning and Housing Services

Date: January 16, 2023 Meeting Date: February 10, 2023

Subject: **Metro 2050 Climate Policy Enhancement Study – Project Initiation**

---

## RECOMMENDATION

That the Regional Planning Committee receive for information the report dated January 16, 2023 titled “Metro 2050 Climate Policy Enhancement Study – Project Initiation”.

---

## EXECUTIVE SUMMARY

In response to Board direction, staff have initiated a *Metro 2050* Climate Policy Enhancement Study to identify possible amendments to the current climate action policies and new ones that could be added to *Metro 2050* after it is adopted, via an amendment, to enhance the regional growth strategy’s climate resilience. As both relate to climate action in the region, this Study is being closely coordinated with the development of the *Climate 2050* Land Use and Urban Form Roadmap. To further coordinate these processes, Metro Vancouver staff have hosted two joint workshops in early 2023, one in person and one online. The workshops were attended by member jurisdiction staff as well as invited experts who provided input on how to refine a list of potential new or amended climate policies and actions. Next steps include reviewing the workshop data and developing draft recommendations for *Metro 2050* and the Land Use and Urban Form Roadmap.

## PURPOSE

To provide the Regional Planning Committee and MVRD Board with an update on the *Metro 2050* Climate Policy Enhancement Study and to offer an opportunity for member jurisdictions to have input into the scope of the Study.

## BACKGROUND

At its meeting on March 25, 2022, while considering first and second readings on the *Metro 2050* bylaw (Reference 1), the MRVD Board passed the following resolution:

*Given the urgent need to respond to climate change and prepare for extreme weather events, direct staff to undertake work and engagement with an aim to proposing an early amendment to Metro 2050 post-adoption to strengthen climate action language and policy including the intent to improve integration of climate action into other Metro 2050 priorities.*

At its May 27, 2022 meeting the MVRD Board received a report titled “Process to Consider Stronger Climate Action Language and Policy for Metro 2050” (Reference 2). That report recommended a high-level process for how staff would respond to the March 25, 2022 Board direction, including a proposal to develop policy ideas and new directions for enhancing the climate policy actions in *Metro 2050*, and to bring them forward for consideration by the Regional Planning Committee and MVRD Board as a possible Type 3 minor amendment bylaw to *Metro 2050* after it is adopted. This report provides

greater detail on that process as well as an update on work completed to date, and the opportunity to engage on the scope of work and next steps.

Although *Metro 2050* has not been fully adopted at the time of writing this report, staff are proceeding with engagement and policy analysis on *Metro 2050's* draft climate policies so that the MVRD Board can consider amendment options shortly after adoption per its direction.

### **Metro 2050 and Climate Action**

*Metro 2050* sets out a 30-year vision for how the region will manage and accommodate projected growth and change while fostering sustainable land uses, urban form, and mobility for future generations. *Metro 2040*, adopted in 2011, remains in place until *Metro 2050* is adopted. *Metro 2040* and *Metro 2050* contain regional greenhouse gas (GHG) emission reduction targets that align with the global targets set by the Intergovernmental Panel on Climate Change as well as a number of strategies and policies that support GHG reduction, zero emission practices, and resilience to natural and climate hazards. *Metro 2050* builds on the policy actions of *Metro 2040* by embedding climate policy across all five goal areas of the regional growth strategy. This approach was developed through the extensive research and engagement as part of the *Metro 2040* Climate and Natural Hazards Policy Review, the recommendations of which were endorsed by the MVRD Board at its April 9, 2021 meeting (Reference 3).

While *Metro 2050* does contain stronger climate policy language than *Metro 2040*, given the rapidly evolving nature of the global climate crisis and the impacts seen in this region, the MVRD Board directed staff to explore how *Metro 2050* could be further enhanced to reduce GHG emissions and improve regional resilience.

### **Land Use, GHG Reduction, and Resilience**

Through the regional growth strategy, Metro Vancouver and its member jurisdictions are working to reduce GHGs and store carbon by focusing growth in a network of transit-oriented urban centres, and building compact, complete communities that offer amenities close to home. This focused growth has three key GHG emission reduction benefits:

- first, it reduces development pressures in areas that naturally store carbon (such as the region's agricultural and natural areas);
- second, it reduces emissions by supporting more sustainable, low carbon transportation options such as walking, cycling, and public transit and by reducing the distances people typically have to drive for essential trips; and
- third, it tends to encourage multi-unit development forms which are, on average, more energy efficient than single-detached homes.

Where and how the region accommodates growth also determines the degree to which residents, businesses, and infrastructure are exposed to the physical risks associated with climate change and natural hazards, such as from the risk of the flooding of rivers and rising sea levels. To improve resilience, the draft *Metro 2050* includes:



- Land use policies and actions that discourage new growth in at-risk areas, which can limit the exposure and protect existing communities from risks; and
- Land use policies that protect natural areas and other important lands that are essential to buffering communities from climate risks.

While a regional growth strategy is one critical policy instrument for supporting the reduction of regional GHGs and improving resilience, it must work in concert with the other governmental plans, policies, as well as the mitigation and adaptation actions taken by organizations and individuals.

### **How do Metro 2050 and Climate 2050 work together?**

Though *Metro 2050* and *Climate 2050* will be distinct plans with their own scopes and objectives, they are intended to be mutually-supportive, with policies and actions that are complementary and focused on common objectives.

*Metro 2050*, a regional growth strategy developed under the *Local Government Act*, must be accepted by all affected local governments. It defines actions and directions for Metro Vancouver member jurisdictions and TransLink. The key implementation tool for member jurisdiction actions is the regional context statement. This process necessitates a high degree of consensus across the regional federation.

Alternatively, *Climate 2050*, the regional climate action strategy, is endorsed by the MVRD Board and is ambitious, comprehensive, and intended to guide climate change policy and action for all stakeholders in the region over the next 30 years. It comprises of a series of ten “Roadmaps” organized by topic area. The *Climate 2050* Land Use and Urban Form (LUUF) Roadmap is currently under development and will include content related to land use planning, urban form, and growth management.

All of the current and planned *Climate 2050* Roadmaps will reflect both current policies and new directions to set a path toward a resilient, low carbon region. In addition to actions for Metro Vancouver, TransLink, and member jurisdictions, the Roadmaps identify actions for senior levels of government and other key non-governmental partners. The *Climate 2050* Roadmaps are intended to encourage, not require, the actions of member jurisdictions and other organizations. For this reason, some of the more ambitious land use and growth management climate actions will likely be more appropriate to include in the Roadmaps rather than the regional growth strategy.

### **METRO 2050 CLIMATE POLICY ENHANCEMENT STUDY**

The purpose of the Study is to implement the MVRD Board’s direction and bring forward options for an amendment(s) to *Metro 2050* for consideration. The primary objectives are to: identify potential amendments to *Metro 2050*’s climate-related policies and actions that would contribute to lowering community GHG emissions and improve resilience to the impacts of climate change. A secondary objective is to: coordinate with the actions being developed for related content in *Climate 2050* Roadmaps, in particular in the draft *Climate 2050* LUUF Roadmap.

The expected deliverables will be a list of potential climate policy ideas for engagement with member jurisdictions, First Nations, and regional stakeholders, and consideration by the MVRD Board. Should

the Board move forward with proposed enhancements to the policy actions of *Metro 2050*, a Type 3 amendment bylaw would be prepared for consideration (approval of which requires a 50%+1 weighted vote).

### **Timeline and Status Update**

The *Metro 2050* Climate Policy Enhancement Study will proceed according to the following timeline:

- Phase 1: Background Review and Early Engagement (Q2/3 2022)
- Phase 2: Develop, Refine, and Organize Ideas (Q4 2022)
- Phase 3: Engage with Stakeholders and Subject Matter Experts (Q1/2 2023)
- Phase 4: Prepare Recommendations (Q2/3 2023)
- Phase 5: Type 3 Amendment (Q4 2023) \*should the Board direct staff to proceed with an amendment to *Metro 2050*

Most tasks outlined in Phases 1 and 2 have been completed. Staff have reviewed and compiled a comprehensive list of potential climate action policies from the *Metro 2040* Climate Change and Natural Hazards Policy Review, the completed *Climate 2050* Roadmaps, and all comments related to climate action submitted on the draft *Metro 2050* in Q3 / Q4 of 2021. These policy actions have been reviewed internally and the top policy ideas have been selected for engagement in Phase 3, which is currently underway.

### **ENGAGEMENT**

Because of content alignment and to maximize efficiency and avoid engagement fatigue, the *Metro 2050* Climate Policy Enhancement Study and the *Climate 2050* LUUF Roadmap project teams have prepared a joint engagement plan. This engagement plan has the following two stages.

#### **Stage 1: Gathering and Refining Climate Action Ideas Specific to Land Use Planning (Q1 2023)**

This included two workshops (an in person and virtual option) held early in 2023 to gather and refine ideas about how to advance climate action through land use and growth management planning. Attendees included staff from member jurisdictions, regional agencies, climate experts, local environmental non-governmental organizations, youth, local First Nations, senior government staff, and others. The events included invited speakers who provided an overview of the key policy levers for addressing climate change through an Official Community Plan, regional growth strategy, or through other land use and growth management tools and practices. The policy idea shortlist developed by Metro Vancouver staff was presented and workshopped, and the input received will be analyzed and used to prepare recommendations for consideration by the Regional Planning Committee and MVRD Board. Additional meetings will be offered to any workshop invitees on request. When the Roadmap's recommendations have been drafted and are ready for Committee consideration, staff will coordinate a joint meeting of the Climate Action and Regional Planning Committees for this work and the draft LUUF Roadmap.

#### **Stage 2: Separate Comment Referral on Draft Recommendations (Q2/3 2023)**

The draft policy recommendations for *Metro 2050* will subsequently be shared with those who attended the workshops for any additional written comments. Those comments will be incorporated into staff's final recommendations.

Separately, staff will also be developing a draft version of the *Climate 2050* Land Use and Urban Form Roadmap for feedback. More information on the Roadmap can be found in the accompanying staff report also on the February 2023 Regional Planning Committee meeting agenda.

### **Committee and Board Engagement Approach**

For the *Metro 2050* Climate Policy Enhancement Study, the Regional Planning Committee will provide direction on this project and will be updated and provided opportunities for input at regular intervals. Reports will also be forwarded to the Climate Action, Liquid Waste, and Regional Parks Committees for information.

Given that the Land Use and Urban Form Roadmap is a *Climate 2050* initiative, the Climate Action Committee will provide direction on that project and will be updated and provided opportunities for input at regular intervals. Reports will also be forwarded to the Regional Planning, Liquid Waste, and Regional Parks Committees for input and information.

### **First Nations Engagement**

Local First Nations were invited to participate in the two workshops, to meet directly with project staff, and to provide written input on the draft lists of actions and policies. Metro Vancouver has offered participation funding to support First Nations' involvement. At the time of writing this report, the Squamish Nation, Matsqui First Nation, and Musqueam Indian Band staff have responded to Metro Vancouver's invitation to participate and have expressed interest in meeting directly with project staff to provide feedback.

### **ALTERNATIVES**

This is an information report no alternatives are presented.

### **FINANCIAL IMPLICATIONS**

The Climate Action and Land Use Engagement Workshops required approximately \$1,000 from the Board-approved 2023 Regional Planning budget. The First Nations Participation Agreements will also have budget implications, which will depend on the level of participation by First Nations. Aside from those costs, the work is being completed by Metro Vancouver staff.

### **CONCLUSION**

At the MVRD Board's direction, staff have initiated a *Metro 2050* Climate Policy Enhancement Study. This is being closely coordinated with the *Climate 2050* Land Use and Urban Form Roadmap. The Study will look at opportunities to enhance the policies in *Metro 2050* to reduce Greenhouse Gas Emissions and to improve resilience to the impacts of climate change, and present recommendations to the MVRD Board for a potential amendment(s) to *Metro 2050* following its adoption. An engagement plan has been developed and involves holding two workshops in early 2023, as well as the opportunity to provide written comments once the draft recommendations are prepared. Members of the Regional Planning Advisory Committee were invited to provide input on the scope, engagement plan, and policy content of this study, and to attend the workshops.

**References**

1. [Consideration of Metro Vancouver Regional District Regional Growth Strategy Bylaw No. 1339, 2022, a bylaw to adopt Metro 2050, Staff Report, March 9, 2022](#)
2. [Process to Consider Stronger Climate Action Language and Policy for Metro 2050, Staff Report, Regional Planning Committee, May 19, 2022](#)
3. [Report dated January 6, 2021, titled “Metro 2040 Climate Change and Natural Hazards Policy Review – Recommendations” presented to the Regional Planning Committee at its regular meeting of January 14, 2021.](#)

56946594

To: Liquid Waste Committee

From: Stefanie Ekeli, Planner I, Regional Planning and Housing Services

Date: February 13, 2023 Meeting Date: March 15, 2023

Subject: **Climate 2050 Land Use and Urban Form Roadmap – Scope of Work and Project Status**

---

At its meeting on February 10, 2023 the Metro Vancouver Regional Planning Committee received the attached report, titled “Climate 2050 Land Use and Urban Form Roadmap – Scope of Work and Project Status” for information. The report describes the scope, objectives, timeline, and processes for approvals and engagement for the *Climate 2050* Land Use and Urban Form (LUUF) Roadmap and highlights how it will coordinate its development and engagement with the *Metro 2050* Climate Policy Enhancement Study that is also underway (Reference).

The *Climate 2050* Strategy is the regional climate action strategy and is organized by a series of ten Roadmaps by topic area. Regional Planning staff are leading the development of the *Climate 2050* LUUF Roadmap. It will include climate mitigation and adaptation action content related to land use planning, urban form, and growth management for the region.

The Climate Action Committee will be the lead Board standing committee on this project and will be updated and provided opportunity for input at regular intervals. Reports will be forwarded to the Regional Planning, Liquid Waste, and Regional Parks Committees for information.

#### **Attachment**

Climate 2050 Land Use and Urban Form Roadmap – Scope of Work and Project Status, Regional Planning Committee, dated January 23, 2023

#### **Reference**

[Process to Consider Stronger Climate Action Language and Policy for Metro 2050, Staff Report, Regional Planning Committee on May 19, 2022](#)

---

To: Regional Planning Committee

From: Stefanie Ekeli, Planner, Regional Planning and Housing Services

Date: January 23, 2023 Meeting Date: February 10, 2023

Subject: **Climate 2050 Land Use and Urban Form Roadmap – Scope of Work and Project Status**

---

### RECOMMENDATION

That the Regional Planning Committee receive for information the report dated January 23, 2023, titled “Climate 2050 Land Use and Urban Form Roadmap – Scope of Work and Project Status”.

---

### EXECUTIVE SUMMARY

As part of Metro Vancouver’s *Climate 2050* strategy, Metro Vancouver staff have initiated work on the draft *Climate 2050* Land Use and Urban Form Roadmap. Background work on the Roadmap began in March 2022 and engagement will occur throughout 2023. Building on the progressive climate-related policies in the draft *Metro 2050*, the *Climate 2050* Land Use and Urban Form Roadmap will outline potential regional and corporate goals, strategies, actions and performance measures for the mitigation of greenhouse gases and climate adaptation in our region.

### PURPOSE

To provide the Regional Planning Committee, Climate Action Committee, and the MVRD Board with the *Climate 2050* Land Use and Urban Form Roadmap scope of work and project status for information.

### BACKGROUND

Metro Vancouver’s *Climate 2050* Strategy is the region’s long term climate action plan, which is scoped to be ambitious, aspirational and comprehensive, and is intended to guide climate change policy and action in Metro Vancouver, both regional and corporate, over the next 30 years to 2050 (Reference 1). *Climate 2050* comprises a series of ten ‘Roadmaps’ categorized under the following issue areas: Nature and Ecosystems; Water & Wastewater Infrastructure; Human Health and Well-being; Buildings; Transportation; Waste; Industry and Business; Energy; Agriculture; and Land Use and Urban Form (Reference 2). Each Roadmap includes issue area-specific goals, strategies, actions, and performance measures for reducing emissions and improving resilience in the region. In support of *Climate 2050*, Regional Planning staff have begun preparing a Land Use and Urban Form Roadmap. The project scope and status are contained in this report.

### PROJECT DESCRIPTION

The *Climate 2050* Land Use and Urban Form (LUUF) Roadmap will set out strategies and actions that support the reduction of greenhouse gas emissions and improved regional resilience. The draft *Metro 2050*, the updated Regional Growth Strategy, will be the primary management plan for long-range land use and growth management in the region by incorporating climate action policies throughout each of its five goal areas. The LUUF Roadmap will therefore be informed by and supportive of the

principles and actions of the draft *Metro 2050*. The LUUF Roadmap may also include additional context and new climate action strategies that go beyond existing regional strategies or current management plans (e.g. ‘big moves’, ‘best practices’, ‘innovative ideas’ or ‘stretch goals’).

Additional objectives of the LUUF Roadmap are to:

1. Complement, support and reflect other relevant regional plans (i.e. *Metro 2050*, the *Clean Air Plan*, TransLink’s Regional Transportation Strategy *Transport 2050*);
2. Propose innovative, bold and exploratory land use, urban form, and growth management related actions, including ones that are less likely to appear in Metro Vancouver management plans (e.g. *Metro 2050*) due to legislative or regulatory constraints;
3. Inspire elected officials and residents with accessible and ambitious climate objectives and actions;
4. Explore and communicate the role of land use planning, growth management, and urban form practices as key levers to reducing greenhouse gas emissions, bolstering resilience to climate change impacts, and improving climate equity;
5. Build on the recommendations of the *Metro 2040* Climate and Natural Hazards Policy Review, and with the *Metro 2050* update work including the full series of previously-completed policy reviews; and
6. Leverage past and ongoing climate change policy development work and avoid conflicts and duplication of effort.

The LUUF Roadmap will outline goals, strategies, actions, and performance measures and will inform future policy work. The actions will reflect both current policies and new directions to set a path toward a resilient, low carbon region, and outline regional actions (to be led by Metro Vancouver, member jurisdictions, or other governments / organizations, and in partnership) and corporate actions (led by Metro Vancouver) based on the best ideas, approaches, and available technologies.

The final LUUF Roadmap will be provided to the Regional Planning Committee for input and information and to the Climate Action Committee for endorsement and conveyance to the MVRD Board. Implementation of all of the *Climate 2050* Roadmaps will be developed in consideration of the *Clean Air Plan*, *Metro 2050*, and other management plans and policies such as those prepared for Liquid Waste, Solid Waste, Water, and Regional Parks. For actions that are primarily the responsibility of other organizations, the Roadmap will identify key supporting, advocacy, and convening roles.

### **Project Status / Timeline**

Since March 2022, staff have been collecting and organizing ideas that will be considered for the draft LUUF Roadmap. This has included a thorough review of materials that were generated through the update of *Metro 2040* and the associated policy reviews, as well as the other *Climate 2050* discussion papers and completed Roadmaps. The LUUF Roadmap will also be informed by best practice research, interviews with industry and academic professionals and other relevant stakeholders, and engagement with Metro Vancouver standing committees including the Climate Action Committee, Regional Planning Committee, the Regional Planning Advisory Committee (RPAC), as well as the RPAC-Environment and the RPAC-Social Issues Subcommittees.

### **Climate Policy Enhancements to Metro 2050**

Staff have also been working on the Board's direction to explore strengthening climate action language and policies in *Metro 2050* as a potential early amendment after adoption (Reference 3 and 4) and to coordinate the two work programs. This approach will reduce engagement fatigue, avoid conflicts and redundancies, and ensure efficiencies and mutually-supportive policy directions. In Q1 of 2023, Metro Vancouver staff will be hosting two joint engagement workshops, one online and one in person, for the *Climate 2050* Land use and Urban Form Roadmap and the *Metro 2050* Climate Policy Enhancement Study. More information on the Study can be found in the accompanying staff report also on this meeting agenda.

### **Committee and Board Engagement**

A report on the LUUF Roadmap scope of work was presented to the Regional Planning Advisory Committee (RPAC), comprised of municipal planning directors, at its meeting on January 20, 2023 for input and information. Given that the LUUF Roadmap is a *Climate 2050* initiative, the Climate Action Committee will be the lead Board standing committee on this project and will be updated and provided opportunities for input at regular intervals. Reports will be forwarded to the Regional Planning, Liquid Waste, and Regional Parks Committees for input and information.

For the *Metro 2050* Climate Policy Enhancement Study, the Regional Planning Committee will be the lead Board standing committee on this project and will be updated and provided opportunities for input at regular intervals. Reports on that project will be forwarded to the Climate Action, Liquid Waste, and Regional Parks Committees for information. When the Roadmap's recommendations have been drafted and ready for Committee consideration, staff will coordinate a joint meeting of the Climate Action and Regional Planning Committees for this work.

### **First Nations Engagement**

Local First Nations were invited to participate in the two workshops, meet directly with project staff, and provide written input on either the draft list of actions or the draft policies. Metro Vancouver have offered participation funding to support First Nations' involvement. At the time of writing this report, the Squamish First Nation staff responded to Metro Vancouver's invitation to participate and have expressed interest in meeting directly with project staff to provide feedback.

### **NEXT STEPS**

During the first half of 2023, staff will continue to work closely with Metro Vancouver's External Relations and Indigenous Relations staff to collect information and engage with relevant stakeholders and the region's First Nations to inform the content of the draft LUUF Roadmap. It is anticipated that a draft of the Roadmap will ready by mid-2023, and it will then be presented to the Regional Planning Committee for input and information, and then to the Climate Action Committee, for consideration and conveyance to the MVRD Board. Periodic updates on the progress of the Roadmap, as well as opportunities to review and comment, will be provided to RPAC and its subcommittees.

### **ALTERNATIVES**

This is an information report. No alternatives are presented.



## FINANCIAL IMPLICATIONS

The Climate Action and Land Use Engagement Workshops required approximately \$1,000 from the Board-approved 2023 Regional Planning budget. The First Nations Participation Agreements will also have budget implications which will depend on the level of participation by First Nations. Aside from those costs, the work is being completed by Metro Vancouver staff.

## CONCLUSION

The *Climate 2050* Land Use and Urban Form Roadmap provides the opportunity to collaborate with member jurisdictions, other regional, federal and provincial agencies, and in-region First Nations to explore new policy actions to reduce GHG emissions and improve resilience within the region. The Roadmap will outline regional and corporate land use and growth management goals, strategies, actions and performance measures for our region. Consultation on the Roadmap will continue into 2023 and will be developed closely alongside the *Metro 2050* Climate Policy Enhancement Study to reduce engagement fatigue, avoid conflicts and redundancies, and ensure efficiencies and mutually-supportive policy directions. Periodic updates on the progress of the Roadmap, as well as opportunities to review and comment, will be provided to the Climate Action Committee, Regional Planning Committee and MVRD Board.

## References

1. [Climate 2050 Metro Vancouver webpage](#)
2. [Completed Climate 2050 Discussion Papers and Roadmaps.](#)
3. [MVRD Board Meeting, March 25, 2022 titled “Consideration of Metro Vancouver Regional District Regional Growth Strategy Bylaw No. 1339, 2022, a bylaw to adopt Metro 2050”, Staff Report, March 9, 2022.](#)
4. [Regional Planning Committee Meeting, May 19, 2022 titled “Process to Consider Stronger Climate Action Language and Policy for Metro 2050”, Staff Report, April, 22, 2022.](#)

56947470