

**METRO VANCOUVER REGIONAL DISTRICT
Zero Waste Committee**

REGULAR MEETING

Friday, October 14, 2022

9:15 a.m.

**Meeting conducted in person/electronically pursuant to the Procedure Bylaw
28th Floor Boardroom, 4515 Central Boulevard, Burnaby, British Columbia**

Webstream available at <http://www.metrovanancouver.org>

A G E N D A¹

1. ADOPTION OF THE AGENDA

1.1 October 14, 2022 Regular Meeting Agenda

That the Zero Waste Committee adopt the agenda for its regular meeting scheduled for October 14, 2022 as circulated.

2. ADOPTION OF THE MINUTES

2.1 September 9, 2022 Regular Meeting Minutes

That the Zero Waste Committee adopt the minutes of its regular meeting held September 9, 2022 as circulated.

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3. DELEGATIONS

4. INVITED PRESENTATIONS

5. REPORTS FROM COMMITTEE OR STAFF

5.1 2023 – 2027 Financial Plan – Consolidated Overview

Verbal Update

Designated Speakers: Jerry W. Dobrowolny, Commissioner/Chief Administrative Officer, and Dean Rear, Chief Finance Officer/General Manager, Financial Services

5.2 2023 – 2027 Financial Plan – Solid Waste Services

That the Zero Waste Committee endorse the 2023 – 2027 Financial Plan for Solid Waste Services as presented in the report dated October 7, 2022, titled “2023 – 2027 Financial Plan – Solid Waste Services”, and forward it to the Metro Vancouver Board Budget Workshop on October 19, 2022 for consideration.

pg. 8

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

5.3 GVS&DD Tipping Fee and Solid Waste Disposal Regulation Amendment Bylaw No. 361, 2022 pg. 28

That the GVS&DD Board:

- a) approve the following amendments to the Tipping Fee Bylaw effective January 1, 2023:
 - I. increase garbage tipping fees by \$6 per tonne to:

Municipal garbage	\$127
Up to .99 tonne	\$161
1 to 7.99 tonnes	\$139
8 tonnes and over	\$113
 - II. increase construction and demolition processing residual waste by \$20 per tonne to \$150 per tonne;
 - III. increase the generator levy by \$5 per tonne to \$59 per tonne;
 - IV. increase the following rates by approximately 5%:
 - i. special handle waste to \$268 per tonne
 - ii. source-separated organic waste, green waste, and clean wood to \$107 per tonne
 - iii. surcharge for loads containing banned materials to \$69 per load
 - V. increase municipal organics by \$2 per tonne to \$110 per tonne;
 - VI. discontinue the surcharge of \$4 per tonne for loads originating from Maple Ridge; and
 - VII. definition changes to municipal garbage, municipal organics, recyclable paper and source-separated organic waste.
- b) give first, second and third reading to *Greater Vancouver Sewerage and Drainage District Tipping Fee and Solid Waste Disposal Regulation Amendment Bylaw No. 361, 2022*; and
- c) pass and finally adopt *Greater Vancouver Sewerage and Drainage District Tipping Fee and Solid Waste Disposal Regulation Amendment Bylaw No. 361, 2022*.

5.4 Award of a Contract Resulting from Request for Proposal (RFP) No. 22-066: Professional Engineering Services for the Waste-to-Energy Facility District Energy System Project pg. 50

That the GVS&DD Board:

- a) approve award of a contract in the amount of up to \$4,999,500 (exclusive of taxes) to Kerr Wood Leidal Associates Ltd., resulting from Request for Proposal No. 22-066: Professional Engineering Services for the Waste-to-Energy Facility District Energy System Project, subject to final review by the Commissioner; and
- b) authorize the Commissioner and the Corporate Officer to execute the required documentation once the Commissioner is satisfied that award should proceed.

5.5 Solid Waste Services Capital Program Expenditure Update to August 31, 2022 pg. 54

That the Zero Waste Committee receive for information the report dated October 5, 2022, titled "Solid Waste Services Capital Program Expenditure Update to August 31, 2022".

- 5.6 2022 Single-Use Item Reduction "What's Your Superhabit?" Campaign Results** pg. 61
That the Zero Waste Committee receive for information the report dated October 7, 2022, titled "2022 Single-Use Item Reduction "What's Your Superhabit?" Campaign Results".

- 5.7 Manager's Report** pg. 71
That the Zero Waste Committee receive for information the report dated October 6, 2022, titled "Manager's Report".

6. INFORMATION ITEMS

- 6.1 Sewage and Waste Heat Recovery Bylaw No. 357, 2022** pg. 75

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 Zero Waste Committee close its regular meeting scheduled for October 14, 2022 pursuant to the *Community Charter* provisions, Section 90 (1) (e) 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."

10. ADJOURNMENT/CONCLUSION

That the Zero Waste Committee adjourn/conclude its regular meeting of October 14, 2022.

Membership:

Froese, Jack (C) – Langley Township
Hodge, Craig (VC) – Coquitlam
Calendino, Pietro – Burnaby
Elford, Doug – Surrey

Fry, Pete – Vancouver
Little, Mike – North Vancouver District
Martin, Gayle – Langley City
McDonald, Bruce – Delta

Morden, Mike – Maple Ridge
Steves, Harold – Richmond
Vagramov, Rob – Port Moody

**METRO VANCOUVER REGIONAL DISTRICT
ZERO WASTE COMMITTEE**

Minutes of the Regular Meeting of the Metro Vancouver Regional District (MVRD) Zero Waste Committee held at 9:15 a.m. on Friday, September 9, 2022 in the 28th Floor Boardroom, 4515 Central Boulevard, Burnaby, British Columbia.

MEMBERS PRESENT:

Chair, Mayor Jack Froese, Langley Township
 Vice Chair, Councillor Craig Hodge*, Coquitlam
 Councillor Pietro Calendino*, Burnaby
 Councillor Doug Elford*, Surrey
 Mayor Mike Little*, North Vancouver District
 Councillor Gayle Martin*, Langley City
 Councillor Bruce McDonald*, Delta
 Mayor Mike Morden*, Maple Ridge (arrived at 9:39 a.m.)
 Councillor Harold Steves*, Richmond

MEMBERS ABSENT:

Councillor Pete Fry, Vancouver
 Mayor Rob Vagramov, Port Moody

STAFF PRESENT:

Paul Henderson, General Manager, Solid Waste Services
 Natalia Melnikov, Legislative Services Coordinator, Board and Information Services

1. ADOPTION OF THE AGENDA

1.1 September 9, 2022 Regular Meeting Agenda

It was MOVED and SECONDED

That the Zero Waste Committee adopt the agenda for its regular meeting scheduled for September 9, 2022 as circulated.

CARRIED

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

2. ADOPTION OF THE MINUTES

2.1 July 15, 2022 Regular Meeting Minutes

It was MOVED and SECONDED

That the Zero Waste Committee adopt the minutes of its regular meeting held July 15, 2022 as circulated.

CARRIED

3. DELEGATIONS

No items presented.

4. INVITED PRESENTATIONS

No items presented.

5. REPORTS FROM COMMITTEE OR STAFF

5.1 Innovation and Continuous Improvement

Report dated August 31, 2022, from Paul Henderson, General Manager, Solid Waste Services, providing the Zero Waste Committee with an update on some of the completed, ongoing, and future continuous improvement and innovation initiatives in Solid Waste Services.

It was MOVED and SECONDED

That the Zero Waste Committee receive for information the report dated August 31, 2022, titled "Innovation and Continuous Improvement".

CARRIED

5.2 2021 Integrated Solid Waste and Resource Management Plan Biennial Report Feedback

Report dated August 24, 2022, from Terry Fulton, Senior Project Engineer, Zero Waste Implementations, Solid Waste Services, providing the Zero Waste Committee with the feedback received on the 2021 Biennial Report on the *Integrated Solid Waste and Resource Management Plan*.

It was MOVED and SECONDED

That the Zero Waste Committee receive for information the report dated August 24, 2022, titled "2021 Integrated Solid Waste and Resource Management Plan Biennial Report Feedback".

CARRIED

5.3 Waste-to-Energy Facility Environmental Monitoring and Reporting 2021 Update

Report dated August 31, 2022, from Brent Kirkpatrick, Lead Senior Engineer, Solid Waste Operations, Solid Waste Services, providing the Zero Waste Committee with an annual overview of the Waste-to-Energy Facility's environmental

monitoring program and implementation of Provincial Operational Certificate requirements.

It was MOVED and SECONDED

That the Zero Waste Committee receive for information the report dated August 31, 2022, titled “Waste-to-Energy Facility Environmental Monitoring and Reporting 2021 Update.”

CARRIED

5.4 Illegal Dumping and Gypsum Management Update

Report dated August 31, 2022, from Adriana Velázquez, Senior Project Engineer, and John Ho, Project Engineer, Solid Waste Services, providing the Zero Waste Committee with an update on the regional illegal dumping and gypsum management trends, costs and programs.

Discussion ensued regarding illegal waste dumping during construction and challenges with gypsum disposal.

Request of Staff

Staff were requested to report back on overall gypsum management in the region, including regulatory framework for contractors.

It was MOVED and SECONDED

That the Zero Waste Committee receive for information the report dated August 31, 2022, titled “Illegal Dumping and Gypsum Management Update”.

CARRIED

5.5 Manager’s Report

Report dated September 1, 2022, from Paul Henderson, General Manager, Solid Waste Services, providing the Zero Waste Committee with an update on the Central Surrey Recycling and Waste Centre opening (with a ribbon cutting on September 8 and opening to the public on September 9), Solid Waste and Recycling Industry Advisory Committee discussion topics, and the Bylaw Notice Authority report that went to the September Finance Committee seeking the GVS&DD and GVWD Boards’ approval.

Vice Chair Hodge provided an overview of the recent Solid Waste and Recycling Industry Advisory Committee meeting.

Chair Froese provided the Zero Waste Committee with an update on the Canada-wide regulations for labelling and tracking of recyclable and compostable plastics and the 2022 Zero Waste Conference to be held on September 28 and 29.

Members were shown a Metro Vancouver video on the 2022 Zero Waste Conference, which is not retained with the agenda.

9:39 a.m. Mayor Morden arrived at the meeting.

It was MOVED and SECONDED

That the Zero Waste Committee receive for information the report dated September 1, 2022, 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 Zero Waste Committee close its regular meeting scheduled for September 9, 2022 pursuant to the *Community Charter* provisions, Section 90 (1) (e) as follows:

"90 (1) A part of a 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 [drainage] district".

CARRIED

10. ADJOURNMENT/CONCLUSION

It was MOVED and SECONDED

That the Zero Waste Committee adjourn its regular meeting of September 9, 2022.

CARRIED

(Time: 9:40 a.m.)

Natalia Melnikov,
Legislative Services Coordinator

Jack Froese, Chair

55117857 FINAL

To: Zero Waste Committee

From: Paul Henderson, General Manager, Solid Waste Services

Date: October 7, 2022 Meeting Date: October 14, 2022

Subject: **2023 - 2027 Financial Plan – Solid Waste Services**

RECOMMENDATION

That the Zero Waste Committee endorse the 2023 – 2027 Financial Plan for Solid Waste Services as presented in the report dated October 7, 2022, titled “2023 – 2027 Financial Plan – Solid Waste Services”, and forward it to the Metro Vancouver Board Budget Workshop on October 19, 2022 for consideration.

EXECUTIVE SUMMARY

The 2023 - 2027 Metro Vancouver Financial Plan has been prepared following direction received at the April 14, 2022 Metro Vancouver Board Budget Workshop. This has resulted in a plan that maintains the goals and objectives of Metro Vancouver while removing the use of financial levers that were put in place during the COVID-19 pandemic. Further, this budget represents a pause to assess the implications of the rapidly evolving macro economic environment and to undertake strategic planning with the incoming Board of Directors. The increase in Metro Vancouver’s overall consolidated household impact for 2023 is projected to be 4.5%, down from the 10.1% projected for 2023 in the prior financial planning cycle.

The planned 2023 garbage tipping fees increase of \$6 per tonne, is \$1 less than the prior budget cycle projected increase. The per household cost is \$65 per household, up from \$63 in 2022. Key budget drivers for 2023 include new operating costs associated with the completion of the United Boulevard and Central Surrey recycling and waste centres as well as increased contingency disposal costs.

Priorities for the Solid Waste function include the solid waste management plan update as well as continued progress towards zero waste and a circular economy, greenhouse gas emission reduction, and customer service enhancement and monitoring.

PURPOSE

To present the 2023 – 2027 Financial Plan for Solid Waste Services for consideration by the Committee.

BACKGROUND

Metro Vancouver’s annual budget process includes the development of detailed annual budgets and the updating of five-year financial plans for each of the four Metro Vancouver legal entities (Metro Vancouver Regional District, Metro Vancouver Housing Corporation, Greater Vancouver Water District and Greater Vancouver Sewerage and Drainage District).

On April 14, 2022 a Metro Vancouver Board Budget Workshop was held with the objective to seek direction for the preparation of the 2023 - 2027 Financial Plan. The workshop outlined the principles that guide the work of Metro Vancouver as an organization, the current 2022 - 2026 Financial Plan, the implications of the COVID-19 pandemic, the tools that can be used to make budget adjustments, and a proposed approach for the 2023 - 2027 Financial Plan.

Given the challenges being observed coming out of the COVID-19 pandemic, this budget represents a pause for Metro Vancouver and focuses on maintaining the existing goals and objectives of Metro Vancouver and Solid Waste Services. Staff will undertake strategic planning with the incoming Board of Directors, re-evaluate current plans under this leadership, and assess the implications of the rapidly evolving macro environment.

Key highlights of the overall Metro Vancouver 2023 proposed budget are as follows:

- A reduction of \$22 million of the total 2023 Metro Vancouver proposed operating budget compared to that previously projected for 2023
- Maintained or increased contribution to capital and reserves for key functions
- Reduced capital cash flow for 2023 and 2024
- Real reduction of household impact, \$33 less than that previously projected for 2023

This report focuses on Solid Waste Services and presents the 2023 annual budget and the updated five-year plan for the years 2023 to 2027 for Committee consideration.

SOLID WASTE SERVICES PROGRAM

Solid Waste Services, within the Greater Vancouver Sewerage and Drainage District (GVS&DD), provides waste reduction and recycling planning, zero waste implementation, and solid waste facility operations.

Solid Waste Services works collaboratively with member jurisdictions to provide waste management services to the region's 2.7 million people. The system is comprised of recycling and waste centres and a waste-to-energy facility that handles approximately 1,000,000 metric tonnes of waste annually. In addition, the City of Vancouver owns and operates the Vancouver South Transfer Station and Vancouver Landfill, facilities that are integrated into the regional solid waste system.

Solid Waste Services initiatives are guided by direction provided in the *2019 – 2022 Board Strategic Plan*, and the *Integrated Solid Waste and Resource Management Plan*, specifically:

Board Strategic Plan:

- Reduce waste, increase recycling, and increase recovery of materials and energy from remaining waste. Dispose of residuals in a cost effective and environmentally sustainable manner.
- Develop and implement financial plans and policies that reflect a commitment to sound financial management and long-term planning, in consideration of current and future ratepayers.

- Strengthen awareness and engagement with the public, members, other orders of government, and key stakeholders on a range of initiatives that will reduce waste generated in the region.

Integrated Solid Waste and Resource Management Plan:

- Goal 1 - Minimize waste generation
- Goal 2 - Maximize reuse, recycling & material recovery
- Goal 3 - Recover energy from waste stream after material recovery
- Goal 4 - Dispose of all waste in landfill after recycling & energy recovery

WORK PLAN PERFORMANCE INDICATORS

High-level performance indicators have been developed across the organization to evaluate trends, determine key actions for the coming year, and to assist in long-term planning. The 2023 Work Plans for Solid Waste Services are presented in this report. Within the Solid Waste Services Work Plans, four performance indicators have been developed and are being tracked. These include:

- Annual waste flows in Metro Vancouver system (tonnes);
- Availability of the Waste-to-Energy Facility and recycling and waste centres (percent);
- Recycling rate (percent of solid waste diverted from final disposal); and
- Waste disposed per capita (tonnes/capita).

The trend in these performance measures show a slight increase in waste quantities projected for 2022 compared to 2021. Metro Vancouver's recycling and waste centres and Waste-to-Energy Facility have high customer availability (>99%). The recycling rate is currently at 64%, approximately twice the Canadian average. Waste disposed per capita is currently at 0.45 tonnes, compared to the Canadian average of 0.69 tonnes.

CONTINUOUS IMPROVEMENT

Solid Waste Services regularly implements continuous improvement initiatives. Some recent initiatives include:

- Opening two new recycling and waste centres;
- Innovative stakeholder and community engagement;
- Waste to energy / district energy agreement with River District Energy;
- Lease agreement termination for the closed Coquitlam Recycling and Waste Centre saving \$800,000 annually.

New or continuous improvement initiatives for 2023 include:

- New weighscale system software replacement;
- North Surrey and Langley recycling depot development;
- Zero waste / circular economy community actions.

2023 BUDGET AND 2023 - 2027 FINANCIAL PLAN

The five-year financial plans for this cycle have been updated to address five central themes identified by the Metro Vancouver Board in its Strategic Plan to guide the development of plans and budgets.

The five themes are as follows:

- Financial Sustainability
- Environmental Sustainability
- System Stewardship
- Regulatory and Legislative Environment
- Regional Growth

Each Metro Vancouver function has an Annual Work Plan that includes strategic directions, performance indicators and key actions to guide the work for the coming year. Each function also has a “What’s Happening” summary that highlights the program activities for the next five years.

The 2023 – 2027 Solid Waste Services Financial Plan is included as Attachment 1. The 2023 Annual Work Plan for Solid Waste Services presented in this report is included in Attachment 3 and the “What’s Happening” highlights for the years 2023 - 2027 are included in Attachment 4.

Operating Budget Highlights

The Solid Waste Services operating budget is separated into operating programs and funding required to support the expanding capital program (debt service and contribution to capital). It is proposed to increase by \$10.4 million in 2023 for a total budget of \$133.4 million (Attachment 1). This increase is primarily a result of new operating costs associated with United Boulevard and Central Surrey recycling and waste centres. Contingency disposal costs are also higher with additional waste requiring disposal at remote disposal sites.

The 2023 operating budget includes the following key actions:

- Review and update of the region’s solid waste management plan to advance zero waste and the circular economy;
- Continue to enhance customer service and monitoring including investigating continuous feedback mechanisms;
- Alternative fuel and recyclable recovery procurement;
- Asset management program, including data validation and program guideline development;
- Support for behavior change programs for textiles, single-use items, seasonal wastes, food wastes, illegal dumping, and the Zero Waste Conference;
- Expand reuse events at recycling and waste centres and repair events in partnership with member jurisdictions; and
- Support the National Zero Waste Council including work on implementing the Circular Economy and Zero Plastics Waste.

Highlights of contracts and consulting projects anticipated to be undertaken in 2023 to respond to work plan requirements within the operating budget include the following:

- Langley Recycling and Waste Centre recycling depot design
- Waste-to-Energy Facility district energy design
- Waste-to-Energy Facility ambient air monitoring review

- Solid waste management plan engagement activities
- Residual garbage management options review
- Alternative fuel and recyclables recovery
- Waste composition analysis

Over the next five years, the Solid Waste Services budget is expected to increase an average of \$9.1 million or 6.5% per year. Of this overall increase, funding related to the expanding capital program (debt servicing and contribution to the capital) is increasing \$2.6 million per year on average over the next five years leaving the operating programs which are increasing, on average, by \$6.5 million per year, roughly at the rate of inflation plus increases for new facilities/service levels.

Capital Budget Highlights

The Solid Waste Services capital budget for 2023 approval is \$266.6 million (Attachment 2). This amount includes all capital projects underway or planned in 2023. The capital program is funded by long-term debt and planned contribution to capital from the annual operating budget as available.

The projected capital cash flow for 2023 – 2027 totals \$244.5 million, an average of \$48.9 million per year. The largest five projects (each over \$10 million) make up approximately 66% of the capital spending over the next five years. There are 41 projects on the 5-year capital plan.

The capital program over the next five years is largely driven by the need to replace aging Waste-to-Energy Facility infrastructure and enhance recycling services at the recycling and waste centres. The addition of biosolids management at the Waste-to-Energy Facility and the alternative fuel and recyclables recovery project are expected to increase beneficial use of waste materials and reduce greenhouse gas emissions. Waste-to-Energy Facility acid gas reduction upgrades have been deferred consistent with the requirements of the amended Waste-to-Energy Facility Operational Certificate to allow additional ambient air monitoring to compare ambient concentrations to dispersion modelling results and ambient air quality objectives. Data collected to date show ambient concentrations of hydrogen chloride and sulfur dioxide are less than 8% of ambient air quality objectives, and well below modelling results. Work on the development of a new western region recycling and waste centre has been deferred to match current expectations with respect to timing for the construction of that facility.

The following key projects are included in the five-year plan:

- Alternative Fuel and Recyclables Recovery Centre
- North Surrey and Langley Recycling and Waste Centre Recycling Depots
- Waste-to-Energy Facility District Energy
- Waste-to-Energy Facility Biosolids Management
- Waste-to-Energy Facility Acid Gas Reduction

2023 – 2027 Tipping Fee Projections

The following table shows the tipping fee projections based on the required revenue to offset expected expenditures. Tipping fees for 2023 and 2024 are increasing by \$6 and \$7 per tonne respectively. Requirements for 2025 and beyond will be reviewed during future budget processes with the goal of reducing tipping fee increases where possible.

The 2023 tipping fee was projected to increase by \$7 per tonne in the previous cycle. All other years match previous cycle projections, and 2027 tipping fees are projected to increase by \$8 per tonne.

Projected Tipping Fees for Municipal Solid Waste (\$/tonne)	2022	2023	2024	2025	2026	2027
Municipal Tipping Fee	\$121	\$127	\$134	\$141	\$148	\$156
Small Vehicles (0-1t)	\$155	\$161	\$168	\$175	\$182	\$190
Medium Vehicles (1-8t)	\$133	\$139	\$146	\$153	\$160	\$168
Large Vehicles (>8t)	\$107	\$113	\$120	\$127	\$134	\$142

Waste Flows

With garbage tipping fees being the primary revenue source for the Solid Waste function, waste flow projections are the key driver for annual budget projections. Projections for 2022 are currently estimated at approximately 1,040,000 tonnes, slightly higher than 2021 actuals. The increase in tonnage in 2022 is due in part to increasing waste flow as a result of population growth as well as the disposal of construction and demolition facility residuals delivered to the Vancouver Landfill, material not typically delivered to the regional system. The waste flow for 2023 is budgeted at 915,000 tonnes.

Reserve Funds

There are no proposed applications of reserve funding in the 2023 - 2027 Financial Plan.

The 2023 – 2027 Projected Reserves for Solid Waste Services is included in Attachment 5.

APPROVAL PROCESS

The proposed 2023 - 2027 Financial Plan and Annual Work Plans for Solid Waste Services are presented for consideration and endorsement before being forwarded to the Board for consideration.

The next steps of the process are:

- The 2023 - 2027 Financial Plan and Annual Work Plan will be presented for consideration at the Metro Vancouver Board Budget Workshop on October 19, 2022.
- The Greater Vancouver Sewerage and Drainage District Board will consider adoption of the 2023 Budget and endorsement of the 2023 - 2027 Financial Plan on October 28, 2022.

ALTERNATIVES

1. That the Zero Waste Committee endorse the 2023 - 2027 Financial Plan for Solid Waste Services as presented in the report dated October 7, 2022, titled “2023 - 2027 Financial Plan – Solid Waste Services”, and forward it to the Metro Vancouver Board Budget Workshop on October 19, 2022 for consideration.
2. That the Zero Waste Committee make recommendations and endorse an amended 2023 - 2027 Financial Plan for Solid Waste Services and forward the amended Financial Plan to the Metro Vancouver Board Budget Workshop on October 19, 2022 for consideration.

FINANCIAL IMPLICATIONS

If the Greater Vancouver Sewerage and Drainage District Board approves the 2023 Budget and endorses the Five-Year Financial Plan for Solid Waste Services, as presented under Alternative 1, in 2023 the revenue from tipping fees for the system will increase by \$9.0 million (8.0%) to \$121.9 million which will generate the majority of the \$133.4 million in total revenue required to offset projected expenditures. This represents a \$2 or 3.8% increase in the cost to the average regional household to \$65 (2022 - \$63).

Over the term of the five-year plan, the annual tipping fee revenue is projected to increase by an average of \$8.2 million per year to provide the required revenue to offset projected expenditures. It is anticipated that the cost to the average regional household over the next five years will rise from \$65 in 2023 to \$78 in 2027 representing an average annual increase of approximately \$3 per household.

Under Alternative 2, the Committee may wish to consider recommending amendments to the 2023 Budget and Five-Year Financial Plan for Solid Waste Services for consideration at the Metro Vancouver Board Budget Workshop. Any changes to the plan may have an impact on the Solid Waste Services Financial Plan.

SUMMARY / CONCLUSION

The 2023 Budget and Five-Year Financial Plan for Solid Waste Services has been prepared following direction received at the April 14, 2022 Metro Vancouver Board Budget Workshop and to respond to direction provided in the *Board Strategic Plan* and support the *Integrated Solid Waste and Resource Management Plan*. It is presented to Committee and Board members to provide overview information on activities and financial impacts for the years 2023 to 2027 for Solid Waste Services.

The presentation of the 2023 Budget and Five-Year Financial Plan for Solid Waste Services provides the opportunity for Metro Vancouver to share with its member jurisdictions the proposed capital projects and operating programs, and the financial impact of these projects, over the next five years. The financial plan illustrates how Metro Vancouver proposes to pay for Solid Waste Services investments that are required to maintain our assets and respond to our region’s growing population. It is intended to be used as a guiding document for member jurisdictions in the development of their five-year financial plans and includes projections on household impact to demonstrate how the plan

will remain affordable for Metro Vancouver residents while keeping pace with our critical infrastructure requirements.

Staff recommend endorsing the 2023 – 2027 Budget and Five-Year Financial Plan and Annual Work Plans for Solid Waste Services as presented under Alternative 1.

Attachments:

1. 2023 – 2027 Solid Waste Financial Plan
2. 2023 – 2027 Capital Programs and Project Total – Solid Waste Services
3. 2023 Solid Waste Work Plans
4. 2023 – 2027 “What’s Happening”
5. 2023 – 2027 Projected Reserves – Solid Waste

GREATER VANCOUVER SEWERAGE AND DRAINAGE DISTRICT
SOLID WASTE SERVICES
2023 BUDGET REVIEW
2023-2027 FINANCIAL PLAN

	2022 BUDGET	2023 BUDGET	% CHANGE	2024 FORECAST	% CHANGE	2025 FORECAST	% CHANGE	2026 FORECAST	% CHANGE	2027 FORECAST	% CHANGE
REVENUES											
Solid Waste Tipping Fees	\$ 112,909,870	\$ 121,921,930	8.0%	\$ 129,029,184	5.8%	\$ 137,969,863	6.9%	\$ 146,011,531	5.8%	\$ 153,818,262	5.3%
Energy Sales	6,401,758	5,900,000		6,254,000		6,504,160		6,699,285		6,900,263	
Other External Revenues	3,679,379	5,569,809		7,183,189		7,382,530		7,546,682		7,716,108	
TOTAL REVENUES	<u>\$ 122,991,007</u>	<u>\$ 133,391,739</u>	8.5%	<u>\$ 142,466,373</u>	6.8%	<u>\$ 151,856,553</u>	6.6%	<u>\$ 160,257,498</u>	5.5%	<u>\$ 168,434,633</u>	5.1%
EXPENDITURES											
Operating Programs:											
Solid Waste Operations											
Allocated Quality Control	\$ 17,582	\$ 20,107		\$ 20,946		\$ 23,259		\$ 25,189		\$ 25,179	
Ashcroft Ranch	862,263	862,425		428,125		408,426		326,075		245,093	
Engineers in Training	124,066	89,668		92,306		94,783		97,321		99,927	
Landfills	25,778,096	28,131,613		29,276,269		32,208,158		33,926,731		35,158,021	
Contribution to Reserve – Landfills	5,715,630	5,723,220		5,655,120		5,160,900		5,094,630		5,179,270	
Recycling and Waste Centre	39,877,587	44,524,742		47,154,032		49,867,644		52,104,018		54,490,126	
Waste to Energy Facility	24,897,642	26,251,301		28,924,926		31,941,703		32,805,694		33,665,020	
	<u>97,272,866</u>	<u>105,603,076</u>	8.6%	<u>111,551,724</u>	5.6%	<u>119,704,873</u>	7.3%	<u>124,379,658</u>	3.9%	<u>128,862,636</u>	3.6%
Solid Waste Planning											
Policy and Facility Development	624,289	591,574		607,098		621,590		636,373		651,554	
Zero Waste Implementation	2,308,441	2,455,259		2,184,302		2,228,792		2,273,202		2,318,816	
Programs and Public Involvement	764,836	828,368		847,429		695,184		713,260		731,712	
	<u>3,697,566</u>	<u>3,875,201</u>	4.8%	<u>3,638,829</u>	(6.1%)	<u>3,545,566</u>	(2.6%)	<u>3,622,835</u>	2.2%	<u>3,702,082</u>	2.2%
Administration and Department Support	656,133	703,540	7.2%	724,744	3.0%	743,201	2.5%	762,989	2.7%	781,763	2.5%
Environmental Regulation and Enforcement	1,418,683	1,631,268	15.0%	1,687,587	3.5%	1,728,965	2.5%	1,643,729	(4.9%)	1,683,554	2.4%
Allocation of Centralized Support Costs	5,056,849	5,693,279	12.6%	6,266,161	10.1%	6,109,564	(2.5%)	5,774,325	(5.5%)	5,593,346	(3.1%)
Total Operating Programs	<u>108,102,097</u>	<u>117,506,364</u>	8.7%	<u>123,869,045</u>	5.4%	<u>131,832,169</u>	6.4%	<u>136,183,536</u>	3.3%	<u>140,623,381</u>	3.3%
Allocation of Project Delivery Cost	425,090	345,469	(18.7%)	375,687	8.7%	397,231	5.7%	410,318	3.3%	414,466	1.0%
Debt Service	10,440,429	10,819,361	3.6%	14,573,009	34.7%	19,392,101	33.1%	22,506,570	16.1%	25,941,031	15.3%
Contribution to Reserve	4,023,391	4,720,545	17.3%	3,648,632	(22.7%)	235,052	(93.6%)	1,157,074	390.0%	1,455,755	25.8%
TOTAL EXPENDITURES	<u>\$ 122,991,007</u>	<u>\$ 133,391,739</u>	8.5%	<u>\$ 142,466,373</u>	6.8%	<u>\$ 151,856,553</u>	6.6%	<u>\$ 160,257,498</u>	5.5%	<u>\$ 168,434,633</u>	5.1%

GREATER VANCOUVER SEWERAGE AND DRAINAGE DISTRICT
CAPITAL PORTFOLIO
SOLID WASTE SERVICES
2023 CAPITAL BUDGET AND 2023-2027 CAPITAL PLAN

	CAPITAL BUDGET FOR APPROVAL	2023 CAPITAL CASH FLOW	2024 CAPITAL CASH FLOW	2025 CAPITAL CASH FLOW	2026 CAPITAL CASH FLOW	2027 CAPITAL CASH FLOW	2023 TO 2027 TOTAL CAPITAL CASH FLOW	ACTIVE PHASE	PRIMARY DRIVER
CAPITAL EXPENDITURES									
Landfills									
Alternative Fuel and Recyclables Recovery Centre	\$ -	\$ -	\$ -	\$ -	\$ 1,500,000	\$ 20,000,000	\$ 21,500,000	Not Started	Opportunity
Coquitlam Landfill East Closure	5,000,000	2,150,000	1,750,000	1,100,000	-	-	5,000,000	Construction	Resilience
Coquitlam Landfill Gas Collection Upgrades	8,100,000	2,000,000	-	-	-	-	2,000,000	Multiple	Maintenance
Coquitlam Landfill Lot 3 Development	5,000,000	50,000	-	-	-	-	50,000	Construction	Resilience
Coquitlam Landfill Pump Station Upgrade	3,400,000	1,100,000	1,000,000	800,000	-	-	2,900,000	Construction	Maintenance
Coquitlam Landfill: Leachate Collection System Grade Realignment	1,000,000	850,000	-	-	-	-	850,000	Construction	Resilience
Total Landfills	\$ 22,500,000	\$ 6,150,000	\$ 2,750,000	\$ 1,900,000	\$ 1,500,000	\$ 20,000,000	\$ 32,300,000		
Recycling and Waste Centres									
Central Surrey Recycling and Waste Centre	50,300,000	200,000	-	-	-	-	200,000	Construction	Growth
Langley Recycling Depot Development	5,500,000	3,050,000	2,250,000	-	-	-	5,300,000	Construction	Upgrade
Maple Ridge Recycling and Waste Centre Upgrades	2,000,000	1,800,000	-	-	-	-	1,800,000	Construction	Maintenance
North Shore Recycling and Waste Centre Compactor Replacement	-	-	-	2,500,000	-	-	2,500,000	Not Started	Maintenance
North Surrey Recycling and Waste Centre Compactor Replacement	3,000,000	3,000,000	-	-	-	-	3,000,000	Construction	Maintenance
North Surrey Recycling Depot Development	25,500,000	3,050,000	2,250,000	-	-	-	5,300,000	Construction	Upgrade
Weigh Scale Replacement	3,000,000	1,000,000	2,000,000	-	-	-	3,000,000	Construction	Maintenance
Total Recycling and Waste Centres	\$ 89,300,000	\$ 12,100,000	\$ 6,500,000	\$ 2,500,000	\$ -	\$ -	\$ 21,100,000		
Waste To Energy Facilities									
Acid Gas Reduction	2,000,000	-	2,800,000	7,750,000	30,000,000	6,500,000	47,050,000	Design	Upgrade
Air System Piping Replacement	300,000	300,000	-	-	-	-	300,000	Construction	Maintenance
Biosolids Processing	22,500,000	2,200,000	8,100,000	8,000,000	3,700,000	-	22,000,000	Construction	Resilience
Boiler and APC Roof Replacement	1,750,000	100,000	650,000	1,000,000	-	-	1,750,000	Construction	Maintenance
Bottom Ash Crane Replacement	1,400,000	800,000	500,000	-	-	-	1,300,000	Construction	Maintenance
Bottom Ash Processing	6,800,000	200,000	-	-	-	-	200,000	Construction	Opportunity
Carbon Silo Replacement	-	-	-	-	-	2,400,000	2,400,000	Not Started	Maintenance
Compressed Air System Replacement	3,000,000	1,500,000	-	-	-	-	1,500,000	Construction	Maintenance
Electrical Transformers Replacement	5,000,000	4,500,000	300,000	-	-	-	4,800,000	Construction	Maintenance
Fabric Filter Hopper and Pulse Header Refurbishment	2,150,000	1,500,000	-	-	-	-	1,500,000	Construction	Maintenance
Feed Hopper/Chute	2,600,000	50,000	-	-	-	-	50,000	Construction	Maintenance
Feedwater Pump Replacement	1,000,000	50,000	-	-	-	-	50,000	Construction	Maintenance
Fire Suppression System	1,400,000	500,000	500,000	400,000	-	-	1,400,000	Construction	Maintenance
Fly Ash Silo Refurbishment	1,000,000	500,000	400,000	-	-	-	900,000	Construction	Maintenance
Generation Bank Replacement	9,000,000	100,000	5,900,000	3,000,000	-	-	9,000,000	Construction	Maintenance
Lime Silo Replacement	-	-	-	-	-	3,600,000	3,600,000	Not Started	Maintenance
Primary Economizer Replacement	7,000,000	3,000,000	-	-	-	-	3,000,000	Construction	Maintenance

**GREATER VANCOUVER SEWERAGE AND DRAINAGE DISTRICT
CAPITAL PORTFOLIO
SOLID WASTE SERVICES
2023 CAPITAL BUDGET AND 2023-2027 CAPITAL PLAN**

	CAPITAL BUDGET FOR APPROVAL	2023 CAPITAL CASH FLOW	2024 CAPITAL CASH FLOW	2025 CAPITAL CASH FLOW	2026 CAPITAL CASH FLOW	2027 CAPITAL CASH FLOW	2023 TO 2027 TOTAL CAPITAL CASH FLOW	ACTIVE PHASE	PRIMARY DRIVER
Primary Superheaters Replacement	4,000,000	100,000	2,000,000	1,000,000	900,000	-	4,000,000	Construction	Maintenance
Programmable Logic Controllers Replacement	2,000,000	500,000	500,000	500,000	-	-	1,500,000	Construction	Maintenance
Pug Mill Enclosure Ventilation System Replacement	1,000,000	500,000	500,000	-	-	-	1,000,000	Construction	Maintenance
Refuse Crane	16,800,000	4,500,000	5,300,000	5,500,000	-	-	15,300,000	Construction	Maintenance
Refuse Pit Bunker Door Replacement	600,000	200,000	-	-	-	-	200,000	Construction	Maintenance
Secondary Economizers Replacement	6,000,000	250,000	1,750,000	3,000,000	1,000,000	-	6,000,000	Construction	Maintenance
Soot Blower Piping Replacement	300,000	300,000	-	-	-	-	300,000	Construction	Maintenance
Special Handle Waste Direct Feed System	-	-	2,500,000	2,500,000	-	-	5,000,000	Not Started	Opportunity
Stack Refurbishment	350,000	350,000	-	-	-	-	350,000	Construction	Maintenance
WTE Facility District Heating	55,000,000	1,000,000	6,000,000	25,000,000	23,000,000	-	55,000,000	Construction	Resilience
WTE Facility District Heating Opportunities	2,300,000	1,600,000	-	-	-	-	1,600,000	Construction	Opportunity
Total Waste To Energy Facilities	\$ 155,250,000	\$ 24,600,000	\$ 37,700,000	\$ 57,650,000	\$ 58,600,000	\$ 12,500,000	\$ 191,050,000		
TOTAL CAPITAL EXPENDITURES	\$ 267,050,000	\$ 42,850,000	\$ 46,950,000	\$ 62,050,000	\$ 60,100,000	\$ 32,500,000	\$ 244,450,000		
CAPITAL FUNDING									
New External Borrowing	\$ 166,558,000	\$ 34,425,000	\$ 28,129,000	\$ 25,401,000	\$ 33,165,000	\$ 31,343,000	\$ 152,463,000		
Reserve	16,373,000	5,225,000	4,721,000	3,649,000	235,000	1,157,000	14,987,000		
External Funding - Interagency	84,119,000	3,200,000	14,100,000	33,000,000	26,700,000	-	77,000,000		
Total	\$ 267,050,000	\$ 42,850,000	\$ 46,950,000	\$ 62,050,000	\$ 60,100,000	\$ 32,500,000	\$ 244,450,000		
SUMMARY BY DRIVER									
Growth	\$ 50,300,000	\$ 200,000	\$ -	\$ -	\$ -	\$ -	\$ 200,000		
Maintenance	86,150,000	28,500,000	21,300,000	17,700,000	1,900,000	6,000,000	75,400,000		
Resilience	88,500,000	6,250,000	15,850,000	34,100,000	26,700,000	-	82,900,000		
Upgrade	33,000,000	6,100,000	7,300,000	7,750,000	30,000,000	6,500,000	57,650,000		
Opportunity	9,100,000	1,800,000	2,500,000	2,500,000	1,500,000	20,000,000	28,300,000		
Total	\$ 267,050,000	\$ 42,850,000	\$ 46,950,000	\$ 62,050,000	\$ 60,100,000	\$ 32,500,000	\$ 244,450,000		

SOLID WASTE SERVICES

Solid Waste Operations

Description of Services

Solid Waste Services provides waste reduction and recycling planning and solid waste facility operations to the region under the authority of the Greater Vancouver Sewerage and Drainage District (GVS&DD). Solid Waste Operations is responsible for operating an integrated solid waste management system with service delivery focused on achieving Metro Vancouver's zero waste objectives through reliable, cost-effective, safe and environmentally-sound operations. The regional solid waste system is a user pay model, primarily funded through tipping fees.

Metro Vancouver facilities include the North Shore, United Boulevard, North Surrey, Central Surrey, Maple Ridge, and Langley recycling and waste centres; and Waste-to-Energy Facility; these facilities are managed through several large contracts. Metro Vancouver also manages the closed Matsqui Transfer Station, the closed Coquitlam Landfill, and the Ashcroft Ranch.

Strategic Directions and High Level Goals Supported

Board Strategic Plan

- Continue to expand and enhance the disposal ban program
- Continue to expand recycling options at regional recycling and waste centres
- Assess the viability of implementing district heating at the Waste-to-Energy Facility

Integrated Solid Waste and Resource Management Plan

- Goal 1 - Minimize waste generation
- Goal 2 - Maximize reuse, recycling & material recovery
- Goal 3 - Recover energy from waste stream after material recovery
- Goal 4 - Dispose of all waste in landfill after recycling & energy recovery

Performance indicators

Indicator	Historical and/or Industry Benchmark	Current Performance	2023 Performance Objective
Annual solid waste flows in Metro Vancouver system (tonnes)	2021: 902,000 2020: 854,000 2019: 921,000	projected: 1,040,000	915,000
Processing Availability of the Waste-to-Energy Facility	2021: 91% 2020: 91.6% 2019: 93.1%	projected: 93%	93%
Customer availability for the Waste-to-Energy Facility	2021: 99% 2020: 99%	projected: 99%	99.0%
Customer availability for the Recycling and Waste Centres	2021: 99.9% 2020: 99.9% 2019: 99.9%	projected: 99.9%	99.9%

2023 Key Actions

General

- Asset management program development, including condition assessments and asset policy development
- Enhancement of new weigh scale software including new features for improved customer service
- Work with Properties Division on surplus land disposition Matsqui Transfer Station

Recycling and Waste Centres

- United Boulevard Recycling and Waste Centre first full year of operation
- Central Surrey Recycling and Waste Centre first full year of operation
- Recycling depots expansion design at North Surrey and Langley recycling and waste centres
- Initiating procurement for alternative fuel and recyclables recovery facility pilot targeting small vehicle waste
- North Shore organics yard upgrades
- Tipping floor repairs at North Shore and North Surrey
- North Surrey administration building refurbishment
- Recycling and waste centres buildings and assets assessment
- Assess opportunities to improve pedestrian and cyclist access

Waste-to-Energy Facility

- Complete feed hopper/feed chute, primary economizer, and feedwater pump replacement projects
- Advance refuse crane, bottom ash crane, fabric filter hopper, compressed air, and programmable logic controllers replacement projects
- Initiate design for secondary economizer, fly ash silo, pug mill enclosure ventilation system, and electrical transformer upgrade and replacement projects
- Initiate construction of biosolids processing system
- District energy system detailed design
- Bottom ash beneficial use pilot testing
- Continue 2-year study on Waste-to-Energy Facility ambient air monitoring
- Initiate procurement of new Operating and Maintenance Contract. Current contract expires in March 2025.

Landfills

- Mitigating impacts to environmental infrastructure at Coquitlam Landfill due to the Kinder Morgan Trans Mountain Pipeline Expansion project
- Ongoing environmental operations at Coquitlam Landfill (leachate and landfill gas), leachate, landfill gas, and groundwater monitoring and reporting for environmental compliance
- Complete detailed design for the east leachate pump station upgrade
- Complete detailed design for the flare station upgrade

Ashcroft Ranch

- McLean Lake Dam spillway upgrades
- Fencing replacement

SOLID WASTE SERVICES

Solid Waste Planning and Public Involvement

Description of Services

Solid Waste Services provides waste reduction and recycling planning, zero waste implementation and solid waste facility operations to the region under the authority of the Greater Vancouver Sewerage and Drainage District (GVS&DD). Solid Waste Planning and Public Involvement is responsible for:

- Technical and audience research and stakeholder engagement to develop an updated regional solid waste management plan;
- Regional waste reduction and recycling initiatives in the *Integrated Solid Waste and Resource Management Plan*, including bans, bylaws, regional policies and recycling services, etc.;
- Regional infrastructure planning and development to fulfill future needs for waste recycling, transfer and disposal; and,
- Stakeholder engagement services.

In addition, to support Metro Vancouver's commitment to protect the environment and conserve resources, Environmental Regulation and Enforcement negotiates and issues permits, orders and licenses and then promotes compliance, and enforces solid waste bylaws. According to a user-pay principle, these regulatory costs are recovered through fees.

Strategic Directions and High Level Goals Supported

Board Strategic Plan

- Expand actions that will reduce the amount of litter and waste that Metro Vancouver members manage, including strategies to reduce single-use items
- Continue to provide technical support to communication campaigns that increase diversion through source reduction, reuse, repurposing or recycling
- Research opportunities to ensure sufficient capacity in the regional recycling and waste diversion system, including assessing opportunities for organics and wood
- Identify future disposal alternatives with full life cycle, cost and greenhouse gas analyses

Integrated Solid Waste and Resource Management Plan

- Goal 1 - Minimize waste generation
- Goal 2 - Maximize reuse, recycling & material recovery
- Goal 3 - Recover energy from waste stream after material recovery
- Goal 4 - Dispose of all waste in landfill after recycling & energy recovery

Performance Indicators

Indicator	Historical and/or industry benchmark	Current performance ¹	2023 performance objective
Recycling rate (percent of solid waste diverted from final disposal)	Canadian average ² : 27.6% Metro Vancouver historical: 2019: 63% 2018: 64% 2017: 63%	64%	65%

Indicator	Historical and/or industry benchmark	Current performance ¹	2023 performance objective
Waste disposed per capita (tonnes)	Canadian average ¹ : 0.69 Metro Vancouver historical: 2020: 0.45 2019: 0.48 2018: 0.48 2017: 0.49	0.45	0.45

¹Most recent figures (2018) derived from Statistics Canada disposal & diversion tonnages

2023 Key Actions

- Solid Waste and Recycling Industry Advisory Committee support
- Stakeholder engagement for review and update of the solid waste management plan, including supporting the Public/Technical Advisory Committee
- Disposal Ban Program implementation monitoring
- Textiles, single-use items, seasonal waste, food waste, illegal dumping, and the Zero Waste Conference support
- National Zero Waste Council including work on implementing the Circular Economy
- Canada Plastic Pact support
- National Solid Waste Benchmarking Initiative and applied waste research
- Regional waste composition monitoring
- Solid waste initiatives public engagement
- Regional Food Recovery Network
- Regional Reuse and Repair events
- Alternative fuels processing pilot
- Zero waste construction certification
- Carbon capture, utilization, sequestration study
- Expansion of Recycling Depots at North Surrey and Langley Recycling and Waste Centres

Solid Waste Services

2023 to 2027 – WHAT’S HAPPENING

Below is a summary of the significant initiatives to be undertaken by Solid Waste Services over the next 5 years.

Initiative	Description	Theme
2023		
Weigh scale software replacement	Autoscale software replacement installation and customer service enhancements	System Stewardship
Asset management planning	Asset management program implementation and plan development	System Stewardship
Biosolids utilization at the Waste-to-Energy Facility	Detailed design/commence construction of biosolids utilization system	Opportunities for Innovation and Enhanced Service
Recycling and Waste Centre system evaluation	Evaluate the recycling and waste centre network and potential improvements	Addressing Regional Growth
Central Surrey Recycling and Waste Centre Operation	Central Surrey Recycling and Waste Centre operations	Addressing Regional Growth
District energy system at the Waste-to-Energy Facility	District energy system detailed design	Environmental Protection and Climate Action
Zero waste initiatives	Research on waste prevention and diversion initiatives, such as new policies, incentives, business models and regulatory measures, to move toward a circular economy	Environmental Protection and Climate Action
Bottom ash beneficial use	Pilot test for beneficial use of bottom ash	Environmental Protection and Climate Action
Alternative fuel and recyclables recovery	Alternative fuel and recyclables project procurement process	Environmental Protection and Climate Action
United Boulevard Recycling and Waste Centre Operation	United Boulevard Recycling and Waste Centre operations	Addressing Regional Growth
Langley Recycling Depot expansion	Langley Recycling and Waste Centre Recycling Depot design	Environmental Protection and Climate Action
Reuse and Repair events	Expand reuse events at recycling and waste centers and community repair events	Environmental Protection and Climate Action
Capital replacements at the Waste-to-Energy Facility	Capital replacements and upgrades, including primary and secondary economizers, generation bank, refuse crane, and bottom ash crane	System Stewardship

Solid waste management plan review	Continue review and update of the region's solid waste management plan	Environmental Protection and Climate Action
Coquitlam Landfill	Complete detailed design for the east leachate pump station upgrade	System Stewardship
Coquitlam Landfill	Complete detailed design for the flare station upgrade	System Stewardship
Waste-to-Energy Facility operating contract	Procurement for the Waste-to-Energy Facility operating and maintenance contract	System Stewardship
2024		
Capital replacements at the Waste-to-Energy Facility	Continue capital replacements and upgrades, including secondary economizers, generation bank, refuse crane, and primary superheaters	System Stewardship
Solid waste management plan review	Continue review and update of the region's solid waste management plan	Environmental Protection and Climate Action
Zero waste initiatives	Continued research and development of waste prevention and diversion initiatives, such as new policies, incentives, business models and regulatory measures, to move toward a circular economy	Environmental Protection and Climate Action
Alternative fuel and recyclables recovery	Alternative fuel and recyclables project pilot testing	Environmental Protection and Climate Action
Coquitlam Landfill closure	Close eastern area of landfill	System Stewardship
Recycling and Waste Centre expanded recycling	Recycling depot construction at the Langley and North Surrey facilities	Environmental Protection and Climate Action
North Surrey compactor replacement	Replace North Surrey Recycling and Waste Centre compactor	System Stewardship
Coquitlam Landfill	Complete detailed design for the east leachate pump station upgrade	System Stewardship
Coquitlam Landfill	Complete detailed design for the flare station upgrade	System Stewardship
District energy system at the Waste-to-Energy Facility	Construction of Phase 1 of the District Energy system, providing waste heat to River District Energy	Environmental Protection and Climate Action
Biosolids at the Waste-to-Energy Facility	Complete construction/commissioning of a biosolids receiving system at the Waste-to-Energy Facility	Opportunities for Innovation and Enhanced Service
Waste-to-Energy Facility operating	Select Operating and Maintenance Contractor for Waste-to-Energy Facility	System Stewardship

contract		
2025		
Capital replacements at the Waste-to-Energy Facility	Continue capital replacements and upgrades, including stack refurbishment and the initiation of design for the acid gas reduction system (2 years)	System Stewardship
Solid waste management plan review	Complete review and update of the region's solid waste management plan	Environmental Protection and Climate Action
Zero waste initiatives	Begin to implement and monitor the new waste prevention and diversion initiatives in the updated solid waste management plan	Environmental Protection and Climate Action
Alternative fuel and recyclables recovery	Alternative fuel and recyclables recovery facility development	Environmental Protection and Climate Action
Recycling and Waste Centre expanded recycling	New recycling depots operating at the Langley and North Surrey facilities	Environmental Protection and Climate Action
District energy system at the Waste-to-Energy Facility	Commissioning of the District Energy system	Environmental Protection and Climate Action
2026		
Capital replacements at the Waste-to Energy Facility	Continue capital replacements and upgrades, including boiler grate and feed table supports replacement project	System Stewardship
Zero waste initiatives	Implement and monitor the new waste prevention and diversion initiatives in the updated solid waste management plan	Environmental Protection and Climate Action
North Shore compactor replacement	Replace North Shore Recycling and Waste Centre compactor	System Stewardship
Alternative Fuel and Recyclables Recovery Centre Design	Begin design of the full scale Alternative Fuel and Recyclables Recovery Centre	Environmental Protection and Climate Action
2027		
Alternative Fuel and Recyclables Recovery Centre Construction	Begin construction of the full scale Alternative Fuel and Recyclables Recovery Centre	Environmental Protection and Climate Action
Western region recycling and waste centre replacement	Begin design for the western region recycling and waste centre replacement	Addressing Regional Growth
Capital replacements at the Waste-to Energy Facility	Continue capital replacements and upgrades and begin construction of the acid gas reduction system	System Stewardship
Zero waste initiatives	Continue to implement and monitor the new waste prevention and diversion initiatives in the	Environmental Protection and

	updated solid waste management plan	Climate Action
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METRO VANCOUVER DISTRICTS
2023-2027 PROJECTED RESERVES - SOLID WASTE

OPERATING RESERVES

	2022	2023				2023	2024	2025	2026	2027
	ENDING BALANCE	OPENING BALANCE	CONTRIBUTION	WITHDRAWALS	INTEREST	ENDING BALANCE	ENDING BALANCE	ENDING BALANCE	ENDING BALANCE	ENDING BALANCE
Solid Waste Services	\$ 39,997,739	\$ 39,997,739	\$ -	\$ -	\$ 799,955	\$ 40,797,694	\$ 41,613,648	\$ 42,445,921	\$ 43,294,839	\$ 44,160,736

DISCRETIONARY RESERVES

	2022	2023				2023	2024	2025	2026	2027
	ENDING BALANCE	OPENING BALANCE	CONTRIBUTION	WITHDRAWALS	INTEREST	ENDING BALANCE	ENDING BALANCE	ENDING BALANCE	ENDING BALANCE	ENDING BALANCE
Solid Waste Services										
Solid Waste General Reserve	\$ 18,408,289	\$ 18,408,289	\$ -	\$ -	\$ 368,166	\$ 18,776,455	\$ 19,151,984	\$ 19,535,024	\$ 19,925,724	\$ 20,324,239
Landfill Post Closure Reserve	11,533,419	11,533,419	-	-	230,668	11,764,088	11,999,369	12,239,357	12,484,144	12,733,827
Total	\$ 29,941,709	\$ 29,941,709	\$ -	\$ -	\$ 598,834	\$ 30,540,543	\$ 31,151,354	\$ 31,774,381	\$ 32,409,868	\$ 33,058,066

To: Zero Waste Committee

From: Allen Jensen, Senior Project Engineer, Solid Waste Services

Date: October 6, 2022 Meeting Date: October 14, 2022

Subject: **GVS&DD Tipping Fee and Solid Waste Disposal Regulation Amendment Bylaw No. 361, 2022**

RECOMMENDATION

That the GVS&DD Board

a) approve the following amendments to the Tipping Fee Bylaw effective January 1, 2023:

- I. increase garbage tipping fees by \$6 per tonne to:

Municipal garbage	\$127
Up to 0.99 tonne	\$161
1 to 7.99 tonnes	\$139
8 tonnes and over	\$113
 - II. increase construction and demolition processing residual waste by \$20 per tonne to \$150 per tonne;
 - III. increase the generator levy by \$5 per tonne to \$59 per tonne;
 - IV. increase the following rates by approximately 5%:
 - i. special handle waste to \$268 per tonne
 - ii. source-separated organic waste, green waste, and clean wood to \$107 per tonne
 - iii. surcharge for loads containing banned materials to \$69 per load
 - V. increase municipal organics by \$2 per tonne to \$110 per tonne;
 - VI. discontinue the surcharge of \$4 per tonne for garbage loads originating from Maple Ridge; and
 - VII. definition changes to municipal garbage, municipal organics, recyclable paper and source-separated organic waste.
- b) give first, second and third reading to *Greater Vancouver Sewerage and Drainage District Tipping Fee and Solid Waste Disposal Regulation Amendment Bylaw No. 361, 2022*; and
- c) pass and finally adopt *Greater Vancouver Sewerage and Drainage District Tipping Fee and Solid Waste Disposal Regulation Amendment Bylaw No. 361, 2022*.
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EXECUTIVE SUMMARY

The *Greater Vancouver Sewerage and Drainage District Tipping Fee and Solid Waste Disposal Regulation Bylaw No. 306, 2017* (Tipping Fee Bylaw) sets rates and requirements at Metro Vancouver solid waste facilities.

This report proposes an increase to the 2023 garbage tipping fees of \$6 per tonne, or between a 3.9% and 5.6% increase depending on the load weight. The proposed tipping fee increase is \$1 per tonne less than projected for 2023 in the 2022 – 2026 financial plan. The report proposes increasing the fees for source-separated organic waste, green waste, and clean wood by 5% to \$107 per tonne and

increasing municipal organics fee by \$2 to \$110 per tonne. The report proposes an increase to the construction and demolition processing residual waste fee of \$20 to \$150 per tonne, an increase to the generator levy of \$5 per tonne to \$59 per tonne, the discontinuation of the \$4 per tonne surcharge for loads originating from Maple Ridge, and the discontinuation of the disposal ban for waxed cardboard. No changes are proposed for mattresses or new and used gypsum. Changes will be effective January 1, 2023.

PURPOSE

To seek Board approval to amend the Tipping Fee Bylaw.

BACKGROUND

The current Tipping Fee Bylaw is a consolidation of *Greater Vancouver Sewerage and Drainage District Tipping Fee and Solid Waste Disposal Regulation Bylaw No. 306, 2017* and a series of subsequent amendment bylaws.

This report proposes a number of amendments to the Tipping Fee Bylaw that would be effective January 1, 2023, including an increase in garbage tipping fees and the generator levy.

Garbage Tipping Fees

All garbage tipping fee weight categories are proposed to increase by \$6 per tonne or from 3.9% to 5.6% depending on the load weight. A \$6 per tonne increase in garbage tipping fees is \$1 per tonne less than the 2023 projections presented in the report titled, "2022 – 2026 Financial Plan – Metro Vancouver Districts and Housing Corporation", approved by the Board in October 2021.

Construction and Demolition Processing Residual Waste

To align with the City of Vancouver's Solid Waste Bylaw No. 8417, a new rate for residual waste received from construction and demolition waste processing facilities was added to the Tipping Fee Bylaw in June 2022 at \$130 per tonne. This rate was set based on Metro Vancouver's average cost of processing garbage. The new rate was also implemented to reduce variations in the quantities of this waste received for effective contingency disposal planning. The quantities of construction and demolition processing residual waste received continues to be quite variable; therefore, it's proposed to increase the rate by \$20 to \$150 per tonne to ensure cost recovery for the material and allow optimization of contingency disposal planning.

Generator Levy

The generator levy is the fixed costs of the region's recycling and waste centre network and solid waste planning and is incorporated into the garbage tipping fee for waste disposed at Metro Vancouver and City of Vancouver facilities. If a hauler delivers residential or commercial/institutional waste to another facility, the hauler is obligated to remit the generator levy to Metro Vancouver. The generator levy ensures that all waste generators contribute to the fixed costs of the regional solid waste system. The proposed increase in the generator levy of \$5 per tonne to \$59 per tonne is driven by an increase in costs related to the development of the United Boulevard and Central Surrey recycling and waste centres.

General Rate Increases

For rates impacted only by inflation, an approximately 5% increase in the rates is proposed to reduce the potential requirement for large step increases in the future. The following rates are proposed to increase:

- source-separated organic waste, green waste and clean wood by \$5 per tonne to \$107 per tonne;
- special handle waste fee by \$13 per tonne to \$268 per tonne;
- surcharge rate for loads containing any Hazardous and Operational Impact Materials or Product Stewardship Materials by \$3 to \$69 per load; and
- municipal organics by \$2 to \$110 per tonne to match the rate in the agreements with the three north shore municipalities to process their municipally collected source-separated organics.

Surcharge for Maple Ridge Garbage Loads

It is proposed that garbage loads originating from Maple Ridge and deposited at GVS&DD recycling and waste centres no longer be assessed a surcharge of \$4 per tonne. Historically, Metro Vancouver has collected these funds and remitted them to Maple Ridge to help fund recycling programs and the recycling depot in that community. Under the recycling depot funding strategy approved by the Board in April 2021, Metro Vancouver provides financial support for municipal recycling depots through contribution agreements, which includes the recycling depot in Maple Ridge. The agreement specifically includes elimination of the \$4 per tonne surcharge.

Change in Definitions

The proposed change to the definitions for municipal garbage and municipal organics is to clarify that loads of municipal solid waste and source-separated organic waste collected from local government owned premises by municipal contractors receive the same rate as those collected by local government.

It is proposed to discontinue the disposal ban for waxed cardboard by changing the definition of recyclable paper to include an exclusion for paper that is coated with plastic and changing the definition of source-separated organic waste to not include paper that is covered or infused with wax. Several years ago, the paper/cardboard manufacturing industry switched from infused wax (e.g. paraffin) to a plastic (i.e. polyethylene) coating which is no longer accepted by processors for composting or recycling due to the challenge with separating the plastic from the paper.

Mattress and Gypsum Fees

Consistent with feedback received at the September Zero Waste Committee to reduce potential for illegal dumping, no changes in rates are proposed for mattresses, and used or new gypsum.

ALTERNATIVES

1. That the GVS&DD Board
 - a) approve the following amendments to the Tipping Fee Bylaw effective January 1, 2023:
 - i. increase garbage tipping fees by \$6 per tonne to:

Municipal garbage	\$127
Up to 0.99 tonne	\$161

- | | | |
|--|-------------------|-------|
| | 1 to 7.99 tonnes | \$139 |
| | 8 tonnes and over | \$113 |
- II. increase construction and demolition processing residual waste by \$20 per tonne to \$150 per tonne;
 - III. increase the generator levy by \$5 per tonne to \$59 per tonne;
 - IV. increase the following rates by approximately 5%:
 - i. special handle waste to \$268 per tonne
 - ii. source-separated organic waste, green waste, and clean wood to \$107 per tonne
 - iii. surcharge for loads containing banned materials to \$69 per load
 - V. increase municipal organics by \$2 per tonne to \$110 per tonne;
 - VI. discontinue the surcharge of \$4 per tonne for garbage loads originating from Maple Ridge; and
 - VII. definition changes to municipal garbage, municipal organics recyclable paper and source-separated organic waste.
- b) give first, second and third reading to *Greater Vancouver Sewerage and Drainage District Tipping Fee and Solid Waste Disposal Regulation Amendment Bylaw No. 361, 2022*; and
 - c) pass and finally adopt *Greater Vancouver Sewerage and Drainage District Tipping Fee and Solid Waste Disposal Regulation Amendment Bylaw No. 361, 2022*.
2. That the GVS&DD Board receive the report dated October 6, 2022, titled “*GVS&DD Tipping Fee and Solid Waste Disposal Regulation Amendment Bylaw No. 361, 2022*” and provide alternate direction to staff.

FINANCIAL IMPLICATIONS

If the Board approves Alternative 1, changes described in this report will take effect January 1, 2023, with notification to solid waste system users following approval of the bylaw. The Metro Vancouver solid waste function operates on a cost-recovery basis, with tipping fees funding over 90% of the Solid Waste Services budget, including the operation of the regional solid waste system and Metro Vancouver zero waste planning initiatives. The garbage tipping fee is based on several factors including anticipated volume of waste received at regional solid waste facilities and system operating costs. The value of the generator levy is based on a variety of cost elements and contributes to the fixed costs of the region's recycling and waste centre network and solid waste planning (including waste reduction and recycling planning). The proposed garbage tipping fee and generator levy increases are required to balance the Solid Waste Services budget proposed for 2023.

If the Board does not approve the proposed changes to the Tipping Fee Bylaw, 2022 garbage tipping fees and the generator levy will remain in place and changes proposed in this report would not be implemented. If the garbage tipping fees and generator levy are not changed, the Solid Waste Services financial plan proposed for the next five years would need revision and the Solid Waste Services budget for 2023 would need to be adjusted prior to consideration by the Board.

CONCLUSION

Garbage tipping fees are proposed to increase by \$6 per tonne for all weight categories to recover costs and balance the Solid Waste Services budget proposed for 2023. The proposal to increase the generator levy by \$5 per tonne ensures that all generators in the region contribute to the fixed costs of the region's recycling and waste centre network and solid waste planning. Staff recommend Alternative 1, that the Board amend the Tipping Fee Bylaw.

Attachments:

1. GVS&DD Tipping Fee and Solid Waste Disposal Regulation Amendment Bylaw 361, 2022 – Amends Bylaw 306, 2017
2. Blackline Version Proposed Changes to GVS&DD Tipping Fee and Solid Waste Disposal Regulation Bylaw No. 306, 2017

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**GREATER VANCOUVER SEWERAGE AND DRAINAGE DISTRICT
BYLAW NO. 361, 2022**

A Bylaw to amend Greater Vancouver Sewerage and Drainage District Tipping Fee and Solid Waste Disposal Regulation Bylaw No. 306, 2017

WHEREAS:

- A. The Greater Vancouver Sewerage and Drainage District (the "GVS&DD") Board (the "Board") adopted the "Greater Vancouver Sewerage and Drainage District Tipping Fee and Solid Waste Disposal Regulation Bylaw No. 306, 2017", as amended, a Bylaw to establish a scale of fees, levies and charges for services rendered by the GVS&DD and for the use of any of the GVS&DD's waste disposal facilities; and
- B. The Board wishes to amend the "Greater Vancouver Sewerage and Drainage District Tipping Fee and Solid Waste Disposal Regulation Bylaw No. 306, 2017".

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 Tipping Fee and Solid Waste Disposal Regulation Amendment Bylaw No. 361, 2022".

Effective Date

- 2. This bylaw comes into force and takes effect on January 1, 2023.

Amendment of Bylaw

- 3. "Greater Vancouver Sewerage and Drainage District Tipping Fee and Solid Waste Disposal Regulation Bylaw No. 306, 2017" is hereby amended as follows:

- (a) In section 3.1 the definition of "Municipal Garbage" is hereby deleted and replaced with the following:

"Municipal Garbage" means:

- (i) Loads that contain any Municipal Solid Waste collected from single family residences, whether or not mixed with other types of Municipal Solid Waste, and collected by local government, their contractors or by entities contracting directly with individual households where such collection occurs on a regular basis (typically: weekly, every two weeks or monthly); or
- (ii) Loads of Municipal Solid Waste collected exclusively from local government owned premises, such as parks, streets or public buildings, and collected by local government or their contractors;

- (b) In section 3.1 the definition of “Municipal Organics” is hereby deleted and replaced with the following:

"Municipal Organics" means:

- (i) curbside-collected Source-Separated Organic Waste, collected from single family residences by local government or their contractors where such collection occurs on a regular basis (typically: weekly, every two weeks or monthly); or
- (ii) Source-Separated Organic Waste collected exclusively from local government owned premises, such as parks, streets or public buildings, and collected by local government or their contractors;

- (c) In section 3.1 the definition of “Recyclable Paper” is hereby deleted and replaced with the following:

"Recyclable Paper" means Municipal Solid Waste manufactured from thin sheets from wood pulp or other fibrous substances that may be converted into reusable materials and includes newspapers and inserts, magazines, telephone directories, catalogues, office papers, envelopes, boxboard, paper bags and mail, but excludes photographic paper, carbon paper, tissue paper, paper napkins or towels, and paper that is adhered to or coated with plastic or metal;

- (d) In section 3.1 the definition of “Source-Separated Organic Waste” is hereby deleted and replaced with the following:

"Source-Separated Organic Waste" means unpackaged Food Waste, Green Waste, Clean Wood, Recyclable Paper that has been soiled by or comingled with food residue, or carbon paper, tissue paper, paper napkins or towels, or any combination thereof and does not contain more than 0.05% (by wet weight) of any other type of Refuse;

- (e) Section 5.1 is hereby deleted and replaced with the following:

5.1 Every person who generates Municipal Solid Waste within the geographic area of the GVS&DD must pay the Generator Levy in the amount of \$59/tonne with respect to all Municipal Solid Waste which that person generates as follows:

- (a) to the GVS&DD at a Solid Waste Facility in accordance with section 5.2;
- (b) to the City of Vancouver at a Vancouver Disposal Site as part of the applicable tipping fee at that site; or

(c) to a Waste Hauler that picks up their Municipal Solid Waste.

(f) Table 1 of Schedule "B" is hereby deleted and replaced with Table 1 of Schedule "B" that is attached to and forms part of this bylaw.

(g) Table 3 of Schedule "B" is hereby deleted and replaced with Table 3 of Schedule "B" that is attached to and forms part of this bylaw.

(h) Table 4 of Schedule "B" is hereby deleted and replaced with Table 4 of Schedule "B" that is attached to and forms part of this bylaw.

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

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

Sav Dhaliwal, Chair

Chris Plagnol, Corporate Officer

Schedule B

**Table 1-Tipping Fees for Garbage, Construction and Demolition Processing Residual Waste and Special Handle Waste
(including the Generator Levy and the Disposal Rate)**

	Net Weight	North Shore Recycling and Waste Centre	North Surrey Recycling and Waste Centre	United Boulevard Recycling and Waste Centre	Central Surrey Recycling and Waste Centre	Maple Ridge Recycling and Waste Centre	Langley Recycling and Waste Centre	Waste-to- Energy Facility
Municipal Garbage	All Loads	\$127/tonne	\$127/tonne	\$127/tonne	\$127/tonne	\$127/tonne	\$127/tonne	\$127/tonne
All Garbage other than Municipal Garbage	0 to 0.99 tonnes	\$161/tonne ¹	\$161/tonne ¹	\$161/tonne ¹	\$161/tonne ¹	\$161/tonne ¹	\$161/tonne ¹	\$161/tonne ¹
	1.0 to 7.99 tonnes	\$139/tonne ²	\$139/tonne ²	\$139/tonne ²	\$139/tonne ²	\$139/tonne ²	\$139/tonne ²	\$139/tonne ²
	8.0 tonnes or more	\$113/tonne	\$113/tonne	\$113/tonne	Not accepted.	Not accepted.	Not accepted.	\$113/tonne
Construction and Demolition Processing Residual Waste	All Loads	\$150/tonne	\$150/tonne	\$150/tonne	Not accepted.	Not accepted.	Not accepted.	\$150/tonne
Minimum Tipping Fee for Garbage and Construction and Demolition Processing Residual Waste (as applicable)	Minimum Tipping Fee during Peak Hours	\$20/Load	\$20/Load	\$20/Load	\$10/Load	\$10/Load	\$10/Load	\$10/Load
	Minimum Tipping Fee outside of Peak Hours	\$10/Load	\$10/Load	\$10/Load	\$10/Load	\$10/Load	\$10/Load	\$10/Load
Special Handle Waste	All Loads	Not accepted.	Not accepted.	Not accepted.	Not accepted.	Not accepted.	Not accepted.	\$268/tonne \$50 minimum.

¹To a maximum of \$139 per Load.

²To a maximum of \$904 per Load.

Schedule B

Table 3 – Recycling Fees for materials dropped off in designated Recycling Areas

	North Shore Recycling and Waste Centre	North Surrey Recycling and Waste Centre	United Boulevard Recycling and Waste Centre	Central Surrey Recycling and Waste Centre	Maple Ridge Recycling and Waste Centre	Langley Recycling and Waste Centre	Waste-to-Energy Facility
Municipal Organics	\$110/tonne, \$10 minimum	Not accepted.	Not accepted.	Not accepted.	Not accepted.	Not accepted.	Not accepted.
Source- Separated Organic Waste	\$107/tonne, \$10 minimum	\$107/tonne, \$10 minimum	\$107/tonne, \$10 minimum	\$107/tonne, \$10 minimum	\$107/tonne, \$10 minimum	\$107/tonne, \$10 minimum	Not accepted.
Green Waste	\$107/tonne, \$10 minimum	\$107/tonne, \$10 minimum	\$107/tonne, \$10 minimum	\$107/tonne, \$10 minimum	\$107/tonne, \$10 minimum	\$107/tonne, \$10 minimum	Not accepted.
Clean Wood	\$107/tonne, \$10 minimum	\$107/tonne, \$10 minimum.	\$107/tonne, \$10 minimum	\$107/tonne, \$10 minimum	\$107/tonne, \$10 minimum	\$107/tonne, \$10 minimum.	Not accepted.
Gypsum – New: less than ½ tonne	\$150/tonne, \$10 minimum	\$150/tonne, \$10 minimum	\$150/tonne, \$10 minimum	\$150/tonne, \$10 minimum	\$150/tonne, \$10 minimum	\$150/tonne, \$10 minimum	Not accepted.
Gypsum – Used: less than ½ tonne	\$200/tonne, \$10 minimum	\$200/tonne, \$10 minimum	\$200/tonne, \$10 minimum	\$200/tonne, \$10 minimum	\$200/tonne, \$10 minimum	\$200/tonne, \$10 minimum	Not accepted.
Mattresses	\$15 per Mattress	\$15 per Mattress	\$15 per Mattress	\$15 per Mattress	\$15 per Mattress	\$15 per Mattress	Not accepted.

Schedule B

Table 4 - Surcharges

Loads containing Recyclable Materials other than Food Waste or Expanded Polystyrene Packaging that exceeds either 5% of the total weight of the Load or 5% of the total volume of the Load (section 5.7)	50% of the applicable Tipping Fee
Loads containing Contaminated Recyclable Paper that exceeds either 5% of the total weight of the Load or 5% of the total volume of the Load (section 5.8)	50% of the applicable Tipping Fee
Loads containing Expanded Polystyrene Packaging that exceeds either 20% of the total weight of the Load or 20% of the total volume of the Load (section 5.9)	100% of the applicable Tipping Fee
Loads containing Food Waste that exceeds either 25% of the total weight of the Load or 25% of the total volume of the Load (section 5.10)	50% of the applicable Tipping Fee
Loads of Municipal Organics or Source-Separated Organic Waste containing more than 0.05% (by wet weight) of any other type of Refuse (section 5.11)	\$50 per Load
Loads containing any Hazardous and Operational Impact Materials or Product Stewardship Materials (section 5.12)	\$69 per Load plus any remediation or clean-up costs
Unsecured Loads (section 5.13)	50% of the applicable Tipping Fee to a maximum of \$50.00

TIPPING FEE AND SOLID WASTE REGULATION BYLAW

THIS IS A CONSOLIDATION, FOR REFERENCE PURPOSES, OF:

- “Greater Vancouver Sewerage and Drainage District Tipping Fee and Solid Waste Disposal Regulation Bylaw No. 306, 2017
(Adopted October 27, 2017). Effective date January 1, 2018.
- “Greater Vancouver Sewerage and Drainage District Tipping Fee and Solid Waste Disposal Regulation Amendment Bylaw No. 308, 2017”
(Adopted November 24, 2017). Effective date January 1, 2018.
- “Greater Vancouver Sewerage and Drainage District Tipping Fee and Solid Waste Disposal Regulation Amendment Bylaw No. 312, 2018”
(Adopted February 23, 2018).
- “Greater Vancouver Sewerage and Drainage District Tipping Fee and Solid Waste Disposal Regulation Amendment Bylaw No. 323, 2018”
(Adopted October 26, 2018).
- “Greater Vancouver Sewerage and Drainage District Tipping Fee and Solid Waste Disposal Regulation Amendment Bylaw No. 330, 2019”
(Adopted November 1, 2019). Effective date January 1, 2020.
- “Greater Vancouver Sewerage and Drainage District Tipping Fee and Solid Waste Disposal Regulation Amendment Bylaw No. 336, 2020”
(Adopted February 28, 2020). Effective date March 1, 2020.
- “Greater Vancouver Sewerage and Drainage District Tipping Fee and Solid Waste Disposal Regulation Amendment Bylaw No. 341, 2020”
(Adopted October 30, 2020). Effective date January 1, 2021
- “Greater Vancouver Sewerage and Drainage District Tipping Fee and Solid Waste Disposal Regulation Amendment Bylaw No. 348, 2021”
(Adopted May 28, 2021). Effective date June 1, 2021

- “Greater Vancouver Sewerage and Drainage District Tipping Fee and Solid Waste Disposal Regulation Amendment Bylaw No. 350, 2021”.
(Adopted October 29, 2021). Effective date January 1, 2022
- “Greater Vancouver Sewerage and Drainage District Tipping Fee and Solid Waste Disposal Regulation Amendment Bylaw No. 354, 2022”.
(Adopted April 29, 2022). Effective date June 1, 2022

As of June 1, 2022

- “Greater Vancouver Sewerage and Drainage District Tipping Fee and Solid Waste Disposal Regulation Amendment Bylaw No. XXX, 2022”.
(Adopted October 28, 2022). Effective date January 1, 2023

As of January 1, 2023

COPIES OF THE ORIGINAL BYLAWS MAY BE INSPECTED AT
BOARD AND INFORMATION SERVICES, METRO VANCOUVER

"Greater Vancouver Sewerage and Drainage District Act" or the **"Act"** means the *Greater Vancouver Sewerage and Drainage District Act* S.B.C. 1956 c. 59;

Replaced by Bylaw 323, 2018

"Green Waste" means Municipal Solid Waste that comprises vegetative matter resulting from gardening, landscaping or land clearing that is capable of being composted and includes grass, shrub and tree branches, grass sod, flowers, weeds, leaves, vegetable stalks, brush and tree stumps with a maximum diameter of 30 centimetres and maximum length of 120 centimetres, but excludes Snow Flocked or Frosted Trees, Toxic Plants, Clean Wood, Food Waste and Agricultural Waste;

Added by Bylaw 308, 2017

"GVS&DD" means the Greater Vancouver Sewerage and Drainage District;

"Gypsum" means Municipal Solid Waste that comprises board made of several plies of fiberboard, paper or felt bonded to a hardened gypsum plaster core that is also known as drywall and includes gypsum board that has been painted or covered in wallpaper;

"Gypsum – New" means Gypsum date stamped 1990 or newer that has not been previously installed and does not contain tape, paint or drywall mud;

"Gypsum – Used" means Gypsum without a date stamp, Gypsum that is date stamped before 1990, or Gypsum that contains tape, paint or drywall mud;

"Hazardous and Operational Impact Materials" means the classes of Refuse listed in Schedule "C";

"International Waste" means Municipal Solid Waste originating from outside of Canada, but excludes Refuse from cruise ships from the United States;

"Load" means a quantity of Municipal Solid Waste that is or was contained within a single vehicle attending at a Solid Waste Facility;

"Manager" means the person appointed to the position of General Manager, Solid Waste Services from time to time and includes any person appointed or designated to act in his or her place;

"Mattresses" means Municipal Solid Waste that comprises a case of canvas or other heavy cloth stuffed with wool, cotton, other fibers or similar material, with or without coiled springs, that was used as a bed or as support for a bed;

"Municipal Garbage" means:

- (i) Loads that contain any Municipal Solid Waste collected from single family residences, whether or not mixed with other types of Municipal Solid

Waste, and collected by local government, their contractors or by entities contracting directly with individual households where such collection occurs on a regular basis (typically: weekly, every two weeks or monthly); or

- (ii) Loads of Municipal Solid Waste collected ~~by local government staff exclusively~~ from local government owned premises, such as parks, streets or public buildings, and collected by local government or their contractors;

Added by Bylaw 350, 2021

"Municipal Organics" means:

- (i) curbside-collected Source-Separated Organic Waste, collected from single family residences by local government or their contractors where such collection occurs on a regular basis (typically: weekly, every two weeks or monthly); or
- (ii) Source-Separated Organic Waste collected ~~by local government staff exclusively~~ from local government owned premises, such as parks, streets or public buildings, and collected by local government or their contractors;

Added by Bylaw 336, 2020

"MVRD" means the Metro Vancouver Regional District;

Replaced by Bylaw 350, 2021.

"Mixed Municipal Solid Waste" means Refuse that originates from residential, commercial or institutional sources, or any combination of waste or Refuse from these sources and other sources, but does not include Source-Separated Recyclable Material or Construction and Demolition Waste;

"Municipal Solid Waste" means Refuse that originates from residential, light industrial, commercial, institutional, demolition, land clearing or construction sources or Refuse specified to be included in the GVS&DD's solid waste management plan pursuant to the *Environmental Management Act*;

"Noxious Weeds" means the weeds designated as noxious weeds in Part I and Part II of Schedule A of the Weed Control Regulation, B.C. Reg. 143/2011 but excludes Giant Hogweed (*Heracleum Mantegazzianum*) and Spurge Laurel (*Daphne Laureola*);

Added by Bylaw 336, 2020

"Out of Region Waste" means Municipal Solid Waste that is originating from outside the geographic area of the MVRD but is not International Waste;

"Peak Hours" means from 10:00 am to 2:00 pm on Monday to Friday, excluding statutory holidays;

"Personal Hygiene Products" means personal care products such as diapers, feminine

hygiene products and incontinence products;

Added by Bylaw 354, 2022.

"Private Construction and Demolition Waste Processing Facility" means a facility that holds a valid and subsisting licence to receive Construction and Demolition Waste pursuant to *Greater Vancouver Sewerage and Drainage District Solid Waste and Recyclable Material Regulatory Bylaw 181, 1996*, as amended or replaced from time to time;

"Product Stewardship Materials" means the classes of Refuse listed in Schedule "E";

Added by Bylaw 312, 2018

"Qualified Private Facility" means a facility that:

- (i) manages Mixed Municipal Solid Waste;
- (ii) reduces the total weight of incoming Mixed Municipal Solid Waste by at least 25%, calculated monthly, as a result of resource recovery or the production of fuel at the facility, provided always that any material delivered to a landfill, including material used for roads or for alternative daily cover, is included in the calculation as waste disposed from the facility; and
- (iii) operates in full compliance with all applicable laws, including holding a valid and subsisting license to manage Mixed Municipal Solid Waste pursuant to *Greater Vancouver Sewerage and Drainage District Solid Waste and Recyclable Material Regulatory Bylaw 181, 1996*, as amended or replaced from time to time;

"Quarter" means, within any calendar year, the three month period from January 1 to March 31, April 1 to June 30, July 1 to September 30, or October 1 to December 31;

"Recyclable Materials" means the classes of Refuse listed in Schedule "D";

"Recycling Area" means those parts of a Solid Waste Facility or Vancouver Disposal Site designated for Green Waste, Source-Separated Organic Waste, Clean Wood, Gypsum, Mattresses and the specific materials, substances and objects that comprise Recyclable Materials and Product Stewardship Materials;

Replaced by Bylaw 350, 2021

"Recycling Fee" the recycling fee charged by the GVS&DD for Green Waste, Municipal Organics, Source-Separated Organic Waste, Clean Wood, Gypsum, Mattresses and the specific materials, substances and objects that comprise Recyclable Materials dropped off in the designated Recycling Area at a Solid Waste Facility, as set out in Table 3 of Schedule "B" of this Bylaw;

Replaced by Bylaw 323, 2018

"Recyclable Paper" means Municipal Solid Waste manufactured from thin sheets from wood pulp or other fibrous substances that may be converted into reusable materials and includes newspapers and inserts, magazines, telephone directories, catalogues, office

papers, envelopes, boxboard, paper bags and mail, but excludes photographic paper, carbon paper, tissue paper, paper napkins or towels, and paper that is adhered to or coated with plastic or metal;

"Recycling Regulation" means the *Recycling Regulation*, B.C. Reg. 449/2004 adopted pursuant to the *Environmental Management Act*;

"Refuse" means discarded or abandoned materials, substances or objects;

"Regional Services Rate" means the fee charged by the GVS&DD for solid waste management related services that the GVS&DD provides for the benefit of the entire area of the GVS&DD including, but not limited to, system analysis and planning, regulation and enforcement, demolition, land clearing and construction waste management, recycling and sustainability initiatives and administration;

"Snow Flocked or Frosted Tree" means a natural tree that has received an application of a substance that looks like artificial snow.

Amended by Bylaw 350, 2021.

"Solid Waste Facility" means any of the Municipal Solid Waste disposal facilities listed in Schedule "A";

"Source-Separated Organic Waste" means unpackaged Food Waste, Green Waste, Clean Wood, Recyclable Paper that has been soiled by or comingled with food residue, or carbon paper, tissue paper, paper napkins or towels ~~or paper that is covered or infused with wax~~, or any combination thereof and does not contain more than 0.05% (by wet weight) of any other type of Refuse;

Added by Bylaw 308, 2017. Replaced by Bylaw 312, 2018

"Source-Separated Recyclable Material" means EMA Recyclable Material that has been separated from Municipal Solid Waste by the waste generator at the point of generation for the purposes of recycling;

Replaced by Bylaw 330, 2020

"Special Handle Waste" means Out of Region Waste, International Waste and Municipal Solid Waste that requires immediate destruction or is designated for product destruction by a regulatory agency;

"Surcharge" means the amount charged by the GVS&DD, in addition to the applicable Tipping Fee, for disposing of Banned Materials at a Solid Waste Facility, as set out in Table 4 of Schedule "B" of this Bylaw;

Replaced by Bylaw 306, 2017, Replaced by Bylaw 354, 2022.

"Tipping Fee" means the fee charged by the GVS&DD for disposing of Garbage, Construction and Demolition Processing Residual Waste or Special Handle Waste at a Solid Waste Facility, as set out in Table 1 of Schedule "B" of this Bylaw, and which includes the Disposal Rate and

generation per 12-month period; or

(b) by the Board for quantities greater than 1,500 tonnes per waste generator at the point of generation per 12-month period;

- 4.4 No person shall dispose of any Loads that emit odours, fumes or particulate matter (such as dust) that cause or are capable of causing material discomfort to a person at a Solid Waste Facility, except that where expressly authorized by the Manager such Loads may be disposed of at the Waste-to-Energy Facility.
- 4.5 No person shall dispose of any Loads dominated by oily materials, substances or objects at a Solid Waste Facility, except that where expressly authorized by the Manager such Loads may be disposed of at the Waste-to-Energy Facility.
- 4.6 No person shall dispose of any Loads of Toxic Plants at a Solid Waste Facility, except that where expressly authorized by the Manager such Loads may be disposed of at the Waste to Energy Facility, double bagged and in dedicated Loads.

Added by Bylaw 323, 2018

- 4.7 Despite anything else in this Bylaw, Noxious Weeds can be disposed of as Garbage or as Green Waste;

Section 4.8 through 4.12 renumbered by Bylaw 323, 2018

- 4.8 No person shall dispose of Gypsum at a Solid Waste Facility, except Gypsum that weighs less than one half tonne may be dropped off at a designated Recycling Area.
- 4.9 No person shall dispose of Mattresses at a Solid Waste Facility, except that four or fewer Mattresses may be dropped off at a designated Recycling Area.
- 4.10 No person shall dispose of refrigerators, freezers, air conditioners, dehumidifiers, and water coolers at a Solid Waste Facility, except that four or fewer of these types of appliances may be dropped off at a designated Recycling Area.
- 4.11 No person shall scavenge or salvage any Municipal Solid Waste or Recyclable Materials from a Solid Waste Facility.
- 4.12 The Manager may prohibit a person who contravenes this Bylaw from disposing of Municipal Solid Waste at any Solid Waste Facility for such period as the Manager may determine.

Replaced by Bylaw 308, 2017. Replaced by Bylaw 323, 2018, effective January 1, 2019.

5.0 Levies, Rates and Charges

Replaced by Bylaw 350, 2021, effective January 1, 2022

- 5.1 Every person who generates Municipal Solid Waste within the geographic area of the GVS&DD must pay the Generator Levy in the amount of ~~\$54~~\$59/tonne with respect to all

Municipal Solid Waste ~~which~~ that person generates as follows:

- (a) to the GVS&DD at a Solid Waste Facility in accordance with section 5.2;
- (b) to the City of Vancouver at a Vancouver Disposal Site as part of the applicable tipping fee at that site; or
- (c) to a Waste Hauler that picks up their Municipal Solid Waste.

Replaced by Bylaw 350, 2021

5.2 Unless otherwise permitted pursuant to a written agreement between a municipality and the GVS&DD, every person who disposes of Municipal Solid Waste at a Solid Waste Facility must pay to the GVS&DD:

- (a) the applicable Tipping Fees set out in Table 1 of Schedule "B";
- (b) the Transaction Fee set out in Table 2 of Schedule "B";
- (c) the applicable Recycling Fees set out in Table 3 of Schedule "B"; and
- (d) the applicable Surcharges set out in Table 4 of Schedule "B",

and all such fees and charges must be paid before the person leaves the Solid Waste Facility.

Added by Bylaw 354, 2022. Renumbered by Bylaw 354, 2022

5.3 Every person who disposes of Construction and Demolition Processing Residual Waste at a Solid Waste Facility must pay the applicable Tipping Fee specified in Table 1 of Schedule "B" of this Bylaw and the Transaction Fee specified in Table 2 of Schedule "B" of this Bylaw.

Sections 5.4 through 5.23 renumbered by Bylaw 354, 2022

5.4 Every person who disposes of Special Handle Waste at the Waste-to-Energy Facility must pay the applicable Tipping Fee specified in Table 1 of Schedule "B" of this Bylaw and the Transaction Fee specified in Table 2 of Schedule "B" of this Bylaw.

Replaced by Bylaw 350, 2021.

5.5 Unless otherwise permitted pursuant to a written agreement between a municipality and the GVS&DD, every person who drops off a Load of Municipal Organics, Source-Separated Organic Waste, Green Waste, Clean Wood, Gypsum or Mattresses at a designated Recycling Area must pay the applicable Recycling Fee specified in Table 3 of Schedule "B" of this Bylaw.

5.6 If a person attends a Solid Waste Facility with a Load that contains any combination of Source-Separated Organic Waste, Green Waste, Food Waste, Clean Wood, Gypsum, Mattresses, other Recyclable Materials and/or other Municipal Solid Waste and the person chooses not to weigh-out after dropping off each part of the Load at the designated Recycling Areas, then the person must pay to the GVS&DD the Tipping Fee for the entire Load that is based on the highest fee payable for any part of the Load, in the amounts set

SCHEDULE "B"

Replaced by Bylaw 354, 2022, effective June 1, 2022

**Table 1-Tipping Fees for Garbage, Construction and Demolition Processing Residual Waste and Special Handle Waste
(including the Generator Levy and the Disposal Rate)**

	Net Weight	North Shore Recycling and Waste Centre ¹	North Surrey Recycling and Waste Centre ¹	United Boulevard Recycling and Waste Centre ¹	Central Surrey Recycling and Waste Centre ¹	Maple Ridge Recycling and Waste Centre ¹	Langley Recycling and Waste Centre ¹	Waste-to- Energy Facility ¹
Municipal Garbage	All Loads	\$124 <u>\$127</u> /tonne	\$124 <u>\$127</u> /tonne	\$124 <u>\$127</u> /tonne	\$124 <u>\$127</u> /tonne	\$124 <u>\$127</u> /tonne	\$124 <u>\$127</u> /tonne	\$124 <u>\$127</u> /tonne
All Garbage other than Municipal Garbage	0 to .99 tonnes	\$155 <u>\$161</u> /tonne ²¹	\$155 <u>\$161</u> /tonne ²¹	\$155 <u>\$161</u> /tonne ²¹	\$155 <u>\$161</u> /tonne ²¹	\$155 <u>\$161</u> /tonne ³¹	\$155 <u>\$161</u> /tonne ²¹	\$155 <u>\$161</u> /tonne ²¹
	1.0 to 7.99 tonnes	\$133 <u>\$139</u> /tonne ⁴²	\$133 <u>\$139</u> /tonne ⁴²	\$133 <u>\$139</u> /tonne ⁴²	\$133 <u>\$139</u> /tonne ⁴²	\$133 <u>\$139</u> /tonne ⁵²	\$133 <u>\$139</u> /tonne ⁴²	\$133 <u>\$139</u> /tonne ⁴²
	8.0 tonnes or more	\$107 <u>\$113</u> /tonne	\$107 <u>\$113</u> /tonne	\$107 <u>\$113</u> /tonne	Not accepted.	Not accepted.	Not accepted.	\$107 <u>\$113</u> /tonne
Construction and Demolition Processing Residual Waste	All Loads	\$130 <u>\$150</u> /tonne	\$130 <u>\$150</u> /tonne	\$130 <u>\$150</u> /tonne	Not accepted.	Not accepted.	Not accepted.	\$130 <u>\$150</u> /tonne
Minimum Tipping Fee for Garbage and Construction and Demolition Processing Residual Waste (as applicable)	Minimum Tipping Fee during Peak Hours	\$20/Load	\$20/Load	\$20/Load	\$10/Load	\$10/Load	\$10/Load	\$10/Load
	Minimum Tipping Fee outside of Peak Hours	\$10/Load	\$10/Load	\$10/Load	\$10/Load	\$10/Load	\$10/Load	\$10/Load
Special Handle Waste	All Loads	Not accepted.	Not accepted.	Not accepted.	Not accepted.	Not accepted.	Not accepted.	\$255 <u>\$268</u> /tonne \$50 minimum.

¹~~All Loads originating from Maple Ridge will be assessed an additional fee of \$4/tonne.~~

¹²To a maximum of ~~\$133~~\$139 per Load.

²³To a maximum of ~~\$137~~\$904 per Load.

⁴~~To a maximum of \$856 per Load.~~

⁵~~To a maximum of \$888 per Load.~~

Table 3 – Recycling Fees for materials dropped off in designated Recycling Areas

	North Shore Recycling and Waste Centre	North Surrey Recycling and Waste Centre	United Boulevard Recycling and Waste Centre	Central Surrey Recycling and Waste Centre	Maple Ridge Recycling and Waste Centre	Langley Recycling and Waste Centre	Waste-to-Energy Facility
Municipal Organics	\$108 \$110/tonne, \$10 minimum	Not accepted.	Not accepted.	Not accepted.	Not accepted.	Not accepted.	Not accepted.
Source- Separated Organic Waste	\$102 \$107/tonne, \$10 minimum	\$102 \$107/tonne, \$10 minimum	\$102 \$107/tonne, \$10 minimum	\$102 \$107/tonne, \$10 minimum	\$102 \$107/tonne, \$10 minimum	\$102 \$107/tonne, \$10 minimum	Not accepted.
Green Waste	\$102 \$107/tonne, \$10 minimum	\$102 \$107/tonne, \$10 minimum	\$102 \$107/tonne, \$10 minimum	\$102 \$107/tonne, \$10 minimum	\$102 \$107/tonne, \$10 minimum	\$102 \$107/tonne, \$10 minimum	Not accepted.
Clean Wood	\$102 \$107/tonne, \$10 minimum	\$102 \$107/tonne, \$10 minimum.	\$102 \$107/tonne, \$10 minimum	\$102 \$107/tonne, \$10 minimum	\$102 \$107/tonne, \$10 minimum	\$102 \$107/tonne, \$10 minimum.	Not accepted.
Gypsum – New: less than ½ tonne	\$150/tonne, \$10 minimum	\$150/tonne, \$10 minimum	\$150/tonne, \$10 minimum	\$150/tonne, \$10 minimum	\$150/tonne, \$10 minimum	\$150/tonne, \$10 minimum	Not accepted.
Gypsum – Used: less than ½ tonne	\$200/tonne, \$10 minimum	\$200/tonne, \$10 minimum	\$200/tonne, \$10 minimum	\$200/tonne, \$10 minimum	\$200/tonne, \$10 minimum	\$200/tonne, \$10 minimum	Not accepted.
Mattresses	\$15 per Mattress	\$15 per Mattress	\$15 per Mattress	\$15 per Mattress	\$15 per Mattress	\$15 per Mattress	Not accepted.

Table 4 - Surcharges

Replaced by Bylaw 350, 2021. Amended by Bylaw 354, 2022, effective January 1, 2022

Loads containing Recyclable Materials other than Food Waste or Expanded Polystyrene Packaging that exceeds either 5% of the total weight of the Load or 5% of the total volume of the Load (section 5.7)	50% of the applicable Tipping Fee
Loads containing Contaminated Recyclable Paper that exceeds either 5% of the total weight of the Load or 5% of the total volume of the Load (section 5.8)	50% of the applicable Tipping Fee
Loads containing Expanded Polystyrene Packaging that exceeds either 20% of the total weight of the Load or 20% of the total volume of the Load (section 5.9)	100% of the applicable Tipping Fee
Loads containing Food Waste that exceeds either 25% of the total weight of the Load or 25% of the total volume of the Load (section 5.10)	50% of the applicable Tipping Fee
Loads of Municipal Organics or Source-Separated Organic Waste containing more than 0.05% (by wet weight) of any other type of Refuse (section 5.11)	\$50 per Load
Loads containing any Hazardous and Operational Impact Materials or Product Stewardship Materials (section 5.12)	\$66 \$69 per Load plus any remediation or clean-up costs
Unsecured Loads (section 5.13)	50% of the applicable Tipping Fee to a maximum of \$50.00

To: Zero Waste Committee

From: Roy Moulder, Director Procurement, Procurement and Real Estate Services
Nathan Jamieson, Senior Project Engineer, Solid Waste Services

Date: October 5, 2022 Meeting Date: October 14, 2022

Subject: **Award of a Contract Resulting from Request for Proposal (RFP) No. 22-066: Professional Engineering Services for the Waste-to-Energy Facility District Energy System Project**

RECOMMENDATION

That the GVS&DD Board:

- a) approve award of a contract in the amount of up to \$4,999,500 (exclusive of taxes) to Kerr Wood Leidal Associates Ltd., resulting from Request for Proposal No. 22-066: Professional Engineering Services for the Waste-to-Energy Facility District Energy System Project, subject to final review by the Commissioner; and
 - b) authorize the Commissioner and the Corporate Officer to execute the required documentation once the Commissioner is satisfied that award should proceed.
-

EXECUTIVE SUMMARY

In 2021, the GVS&DD Board approved proceeding with the development of the first phase of a Waste-to-Energy Facility district energy system, and Metro Vancouver entered into an agreement with River District Energy to provide energy for heat and hot water for the River District community.

A Request for Proposals No. 22-066, was issued in April 2022 for Professional Engineering Services for the Waste-to-Energy Facility district energy system development. Kerr Wood Leidal Associates Ltd. (Kerr Wood Leidal) was identified as the highest ranked proponent. Staff recommend that the Board authorize the award of a Contract for Professional Engineering Services for the Waste-to-Energy Facility District Energy System Project, in an amount of \$4,999,500 (exclusive of taxes) to Kerr Wood Leidal and authorize the Commissioner and the Corporate Officer to execute the required documentation.

Kerr Wood Leidal's proposal was the highest ranked proposal. It was the highest financial cost proposal, but provides best overall value. Kerr Wood Leidal demonstrated best value through proposing; the most experienced team on delivering district energy systems; the strongest work plan that includes steps to address anticipated project challenges; responded to all the required information requested within the RFP document; and submitting the most comprehensive pricing schedule through all anticipated phases of work.

PURPOSE

The purpose of this report is to advise the Zero Waste Committee of the results of Request for Proposal (RFP) No. 22-066: Professional Engineering Services for the Waste-to-Energy Facility district

energy system and to recommend award of the contract in the amount of up to \$4,999,500 (exclusive of taxes) to Kerr Wood Leidal.

BACKGROUND

Pursuant to the *GVS&DD Officers and Delegation Bylaw. No. 284, 2014* (Bylaw) and the *Procurement and Real Property Contracting Authority Policy* (Policy), procurement contracts which exceed a value of \$5 million require the approval of the Board of Directors. Although the value of the contract is less than \$5 million, the recommendation to award is being brought forward to the Board given the value is close to the \$5 million threshold.

This report is being brought forward to the Zero Waste Committee to consider a recommendation to the GVS&DD Board to authorize the award of a contract for the functional design review and final design basis memorandum (Phase A), detailed design and construction RFP support (Phase B) and construction engineering and post-construction services (Phase C).

WASTE-TO-ENERGY FACILITY DISTRICT ENERGY SYSTEM

Metro Vancouver's Waste-to-Energy Facility currently produces steam that is converted to electricity. A district energy system creates the opportunity to triple the energy recovery efficiency of the Waste-to-Energy Facility by using steam from the facility to provide heat and hot water to nearby residential and commercial developments. The first phase of the development of the district energy system is the construction of an energy centre at the Waste-to-Energy Facility, and an approximately 6 km transmission line from the Waste-to-Energy Facility to the River District community. The energy centre and piping systems will be sized to support future district energy systems in Burnaby and potentially New Westminster. The Waste-to-Energy Facility district energy system will ultimately produce enough energy for heat and hot water for 30,000 housing units and reduce greenhouse gas emissions by up to 45,000 tonnes per year.

On May 28, 2021, the GVS&DD and MVRD Boards approved proceeding with construction of the first phase of a district energy system for the Waste-to-Energy Facility at a cost of up to \$55 million with funding to be included in the 5-Year Financial Plan.

In December 2021, Metro Vancouver entered into an agreement with River District Energy for the supply of heat for heat and hot water for the River District community. Under that agreement, Metro Vancouver is required to complete construction of the district energy system by the end of 2025.

EVALUATION

As a result of Request for Qualifications (RFQ) No. 21-475: Professional Engineering Services for the Waste-to-Energy Facility District Energy Heating System Project, four consultants were shortlisted and invited to respond to RFP No. 22-066. RFP No. 22-066 for Professional Engineering Services for the Waste-to-Energy Facility District Energy System Project was issued in April 2022 and closed on May 31, 2022. Submissions were received from all four pre-qualified companies. Subsequently, a post-closing addendum was released to clarify the expected level of effort. Updated responses were received from all four companies. Proposal fees for each of the proponents are included in Table 1.

Table 1: Proposal Submission Pricing

Proponent (alphabetical)	Proposal Fee (Exclusive of Taxes)
Ausenco Engineering Canada Inc.	\$4,649,267.00
FVB Energy Inc.	\$4,846,560.65
Kerr Wood Leidal Associates Ltd	\$4,999,500.00
Stantec Consulting Ltd.	\$4,215,646.00

Proposals were evaluated based on 65% technical and 35% financial. The technical component of the proposals was evaluated by staff within Solid Waste Services and the financial component was evaluated by staff within the Procurement Division.

Kerr Wood Leidal's proposal was the highest ranked proposal. It was the highest financial cost proposal, but provides best overall value. Kerr Wood Leidal demonstrated best value through proposing; the most experienced team on delivering district energy systems; the strongest work plan that includes steps to address anticipated project challenges; responded to all the required information requested within the RFP document; and submitting the most comprehensive pricing schedule through all anticipated phases of work.

Negotiations were conducted with Kerr Wood Leidal. The negotiations confirmed that the scope of work required is included within Kerr Wood Leidal's proposed scope. The contract value after negotiation remains unchanged at \$4,999,500 (exclusive of taxes).

ALTERNATIVES

1. That the GVS&DD Board:
 - a) approve award of a contract in the amount of up to \$4,999,500 (exclusive of taxes) to Kerr Wood Leidal Associates Ltd., resulting from Request for Proposal No. 22-066: Professional Engineering Services for the Waste-to-Energy Facility District Energy System Project, subject to final review by the Commissioner; and
 - b) authorize the Commissioner and the Corporate Officer to execute the required documentation once the Commissioner is satisfied that award should proceed.
2. That the GVS&DD Board terminate Request for Proposal No. 22-066: Professional Engineering Services for the Waste-to-Energy Facility District Energy System Project and direct staff to report back to the GVS&DD Board with options for an alternate course of action.

FINANCIAL IMPLICATIONS

If the Board approves Alternative 1, a contract will be awarded to Kerr Wood Leidal for the amount of up to \$4,999,500 (exclusive of taxes) to complete the Professional Engineering Services for the Waste-to-Energy Facility District Energy System Project. This amount is within the budget allocated for this project.

The Board has the choice to not proceed with Alternative 1, but staff will need further direction in relation to completion of the project. Alternative 2 will result in a delay in construction of the Waste-to-Energy Facility district energy system, impacting the ability to meet Metro Vancouver's obligations

under its agreement with River District Energy to connect to the River District community by the end of 2025.

CONCLUSION

A Request for Proposals No. 22-066 was issued in April 2022 for Professional Engineering Services for the Waste-to-Energy Facility District Energy System Project and Kerr Wood Leidal Associates Ltd. was identified as the highest ranked proponent offering the best value to the organization. Based on the evaluations of the proposals, it is recommended that the GVS&DD Board authorize Commissioner and Corporate Officer to award and execute a contract to Kerr Wood Leidal Associates Ltd. in the amount of up to \$4,999,500 (exclusive of taxes).

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To: Zero Waste Committee

From: Lynne Vidler, Lead Senior Engineer, Solid Waste Services

Date: October 5, 2022 Meeting Date: October 14, 2022

Subject: **Solid Waste Services Capital Program Expenditure Update to August 31, 2022**

RECOMMENDATION

That the Zero Waste Committee receive for information the report dated October 5, 2022, titled "Solid Waste Services Capital Program Expenditure Update to August 31, 2022".

EXECUTIVE SUMMARY

The capital expenditure reporting process as approved by the Board provides for regular status reports on capital expenditures. This is the first report for 2022 which includes both the overall capital program for Solid Waste Services with a multi-year view of capital projects and the actual capital spending for the 2022 fiscal year to August 31, 2022 in comparison to the prorated annual Capital Cash Flow. In 2022, the annual capital expenditures for Solid Waste Services are \$9.1 million to-date compared to a prorated annual Capital Cash Flow of \$33.9 million. Year-end expenditures are expected to be closer to budget because a property purchase for a recycling depot at the North Surrey Recycling and Waste Centre is expected to occur in late 2022.

PURPOSE

To report on the status of the Solid Waste Services capital program and financial performance for the 2022 fiscal year to August 31, 2022.

BACKGROUND

The capital expenditure reporting process as approved by the Board provides for regular status reports on capital expenditures with interim reports sent to the Water, Liquid Waste, Zero Waste, and Performance and Audit Committees, in July and October, with a final year-end report to the Committees and the Boards in April of the following year.

This is the first report for 2022 and looks at both the overall capital program for the solid waste utility with a multi-year view of capital projects and the actual capital spending for the 2022 fiscal year to August 31, 2022 in comparison to the prorated annual Capital Cash Flow.

2022 CAPITAL EXPENDITURES

Solid Waste Capital Program Funding

The capital spending for Solid Waste Services is funded through the Solid Waste Services operating budget by a combination of contribution to capital (pay-as-you-go funding) and debt service costs, (principal and interest payments) which is generated annually from the regional ratepayers through tipping fees. As a result, the annual impact on the ratepayers is less than the level of budgeted capital expenditures.

Overall Capital Program

The overall capital program for Solid Waste Services includes capital projects that require multiple years to complete. These projects are broken down into various phases such as project definition, pre-design, detailed design and construction. The status at the completion of each phase informs appropriate costing of subsequent phases.

Table 1 in Attachment 1 provides a summary of Solid Waste Services capital expenditures for both ongoing and completed projects. Completed projects include a summary of actual spending compared to the Board approved spending limits, while the ongoing projects include a summary of projected spending to completion compared to Board approved spending limits. With the rare exception, projects tend to complete with actual spending below the approved limits predominantly due to savings on budgeted contingency amounts. The majority of projects that were not started in 2022 are not scheduled to begin until 2023 or later.

Attachment 2 provides the details behind the summary information including specific capital projects, summary financial information and notes. Attachment 3 provides additional project status information for some of the key projects.

2022 Capital Program Process

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

For January to August 2022, capital expenditures for Solid Waste Services were \$9.1 million compared to a pro-rated Capital Cash Flow of \$33.9 million, representing an expenditure rate of 27%. The underspend is primarily due longer than expected pre-construction phases for a number of Waste-to-Energy Facility projects. The pre-construction phases include detailed design and third party engineering reviews. The 2022 Cash Flow for the recycling and waste centres program includes funding for purchase of property for a recycling depot at the North Surrey Recycling and Waste Centre. Property acquisition is taking longer than planned, with the expectation that it will proceed in Q4 2022. Construction of the Central Surrey Recycling and Waste Centre began in 2020 and the facility opened on September 9, 2022. Construction of the United Boulevard Recycling and Waste Centre started in 2019 and the facility opened in March of 2022.

Table 2 in Attachment 1 provides a summary of the 2022 actual capital spending to August 31, 2022 compared to the Board approved annual Capital Cash Flow.

Capital Program Impacts from COVID-19

During these unprecedented times of health and economic uncertainty, all departments have been expected to monitor the impacts of the pandemic on their operations. This includes capital program expenditures.

Overall, the impact to Solid Waste Services' capital program has largely been schedule related, with some notable impacts to project expenditures confirmed to-date. Staff are monitoring impacts on

their projects regularly. Some impacts to project schedules or expenditures are included under the respective project section of Attachment 3.

ALTERNATIVES

This is an information report. No alternatives are presented.

FINANCIAL IMPLICATIONS

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

CONCLUSION

This is the first in a series of three reports on capital expenditures for 2022. Although the Solid Waste Services annual capital spending to August 31, 2021 shows an underspend, the variance is a result of cash flow timing. Ongoing capital projects will be monitored to ensure they remain within total project budgets.

Attachments

1. Capital Expenditure Summary – Solid Waste Capital Projects
2. Detailed Solid Waste Capital Project Update – August 31, 2022
3. Solid Waste Services Capital Project Status Information

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ATTACHMENT 1**Metro Vancouver**

Capital Expenditure Summary

Solid Waste Services Capital Projects

As of August 31, 2022

Table 1 – Capital Program Summary by Status – Solid Waste Services Total

Solid Waste Services Total	Estimated Total Project Cost As of Oct 2021	Up to date Estimated Total Project Cost	Variance
Ongoing	\$ 248,560,000	\$ 256,950,000	\$ (8,390,000)
Completed	-	-	-
Not Started	271,300,000	272,200,000	(900,000)
Cancelled	-	-	-
	\$ 519,860,000	\$ 529,150,000	\$ (9,290,000)

Table 2 – August 2022 Capital Spending Summary

Solid Waste Services Total	2022 Cash Flow	Actual Expenditures to August 31, 2022	% of Annual Cash Flow
Landfills	\$ 2,350,000	\$ 244,106	10%
Recycling and Waste Centres	28,900,000	7,027,958	24%
Waste To Energy Facilities	17,750,000	1,724,370	10%
Opportunity	1,840,000	79,178	4%
	\$ 50,840,000	\$ 9,075,610	18%

Metro Vancouver
Solid Waste Services - Capital Project Update
As of August 31, 2022



Project Name	Primary Driver	Project Location	Years										Approved Capital Budget	Estimated Total Project Cost	% Complete	Comment
			2022-2026 Capital Plan													
			2022	2023	2024	2025	2026	2027	2028	2029	2030	2031				
Landfills																
Alternative Fuel and Recyclables Recovery Centre	Opportunity	Coquitlam											-	60,000,000	0%	
Coquitlam Landfill East Closure	Resilience	Coquitlam											-	5,000,000	0%	
Coquitlam Landfill Gas Collection Upgrades	Maintenance	Coquitlam											7,300,000	7,300,000	78%	
Coquitlam Landfill Lot 3 Development	Resilience	Coquitlam											5,000,000	5,000,000	90%	
Coquitlam Landfill Pump Station Upgrade	Maintenance	Coquitlam											1,600,000	1,600,000	50%	West pump complete, east pump not started
Coquitlam Landfill: Leachate Collection System Grade Realignment	Resilience	Coquitlam											200,000	1,000,000	0%	Not started, revised schedule
Total Landfills													14,100,000	79,900,000		
Recycling and Waste Centres																
Central Surrey Recycling and Waste Centre	Growth	Surrey											50,300,000	50,300,000	95%	Facility opened on September 9, 2022
Langley Recycling Depot Development	Upgrade	Langley Township											250,000	5,500,000	0%	
Maple Ridge Recycling and Waste Centre Upgrades	Maintenance	Maple Ridge											2,000,000	2,000,000	0%	
North Shore Recycling and Waste Centre Compactor Replacement	Maintenance	North Vancouver											-	2,500,000	0%	
North Surrey Recycling and Waste Centre Compactor Replacement	Maintenance	Surrey											-	2,500,000	0%	Award anticipated Q1 2023
North Surrey Recycling Depot Development	Upgrade	Surrey											20,250,000	25,500,000	0%	Land acquisition expected late 2022. Project not started
United Boulevard Recycling and Waste Centre	Growth	Coquitlam											77,600,000	77,600,000	95%	Facility opened on March 14, 2022
Western Region Recycling and Waste Centre Replacement	Resilience	Regional											-	75,000,000	0%	
Total Recycling and Waste Centres													150,400,000	240,900,000		
Waste To Energy Facilities																
Acid Gas Reduction	Upgrade	Burnaby											2,000,000	41,000,000	1%	
Air System Piping Replacement	Maintenance	Burnaby											-	300,000	0%	
Biosolids Processing	Resilience	Burnaby											1,750,000	22,500,000	2%	RFP for detailed design has been issued and closes September 30th
Boiler and APC Roof Replacement	Maintenance	Burnaby											-	1,750,000	0%	
Bottom Ash Crane Replacement	Maintenance	Burnaby											1,500,000	1,500,000	1%	Engineering study underway
Bottom Ash Processing	Opportunity	Burnaby											6,800,000	6,800,000	95%	Operational improvement modifications underway
Compressed Air System Replacement	Maintenance	Burnaby											3,000,000	3,000,000	3%	Engineering study 90% complete
Electrical Transformers Replacement	Maintenance	Burnaby											5,000,000	5,000,000	0%	Reviewing pricing for an engineering study
Fabric Filter Hopper and Pulse Header Refurbishment	Maintenance	Burnaby											2,250,000	2,250,000	5%	Consultant has been engaged for detailed design
Feed Hopper/Chute	Maintenance	Burnaby											2,600,000	2,600,000	76%	Project will be completed during 2022 fall outages in September / October
Feedwater Pump Replacement	Maintenance	Burnaby											1,000,000	1,000,000	28%	Project has been delayed due to supply chain issues. Scheduled for fall completion
Fire Suppression System	Maintenance	Burnaby											1,000,000	1,000,000	0%	RFP has closed and proposals are under review
Fly Ash Silo Refurbishment	Maintenance	Burnaby											1,000,000	1,000,000	0%	
Generation Bank Replacement	Maintenance	Burnaby											-	9,000,000	0%	
Primary Economizer Replacement	Maintenance	Burnaby											7,000,000	7,000,000	17%	Authorization has been provided to Covanta and installation will occur during the 2023 outages
Primary Superheaters Replacement	Maintenance	Burnaby											4,000,000	4,000,000	0%	
Programmable Logic Controllers Replacement	Maintenance	Burnaby											2,000,000	2,000,000	0%	Reviewing replacement pricing
Pug Mill Enclosure Ventilation System Replacement	Maintenance	Burnaby											1,000,000	1,000,000	0%	
Refuse Crane	Maintenance	Burnaby											16,800,000	16,800,000	1%	Covanta has prepared an RFQ document. Will post in September
Refuse Pit Bunker Door Replacement	Maintenance	Burnaby											600,000	600,000	0%	
Secondary Economizers Replacement	Maintenance	Burnaby											6,000,000	6,000,000	0%	
Soot Blower Piping Replacement	Maintenance	Burnaby											-	300,000	0%	
Special Handle Waste Direct Feed System	Opportunity	Burnaby											-	5,000,000	0%	
Stack Refurbishment	Maintenance	Burnaby											-	350,000	0%	
WTE Facility District Heating	Opportunity	Burnaby											55,000,000	55,000,000	0%	RFP has been posted and bids are under review
Total Waste To Energy Facilities													120,300,000	196,750,000		
Opportunity																
WTE Facility District Heating Opportunities	Opportunity	Burnaby											2,310,000	2,310,000		
Total Opportunity													2,310,000	2,310,000		
Grand Total Solid Waste Services													287,110,000	519,860,000		

* Progress status for each project will be presented in a future report.

Solid Waste Services Capital Project Status Information
August 31, 2022

The two recycling and waste centre construction projects, United Boulevard Recycling and Waste Centre and Central Surrey Recycling and Waste Centre are now complete and other major capital projects are expected to be completed within budget. Waste-to-Energy Facility projects and purchase of land for a new recycling depot at the North Surrey Recycling and Waste Centre are proceeding slower than expected and have resulted in reduced expenditures in 2022 compared to projected cash flows.

Recycling and Waste Centre Program

- The United Boulevard Recycling and Waste Centre construction started in May 2018 with site grading works. The full construction contract was awarded in December 2018. Construction is complete and the facility opened on March 14, 2022.
- The Central Surrey Recycling and Waste Centre project received rezoning and a development permit in late 2018. The construction contract was awarded in the summer of 2020. Construction was initiated in July 2020. Construction is complete and the facility opened on September 9, 2022.

Landfills Program

- Construction of Phase 2 landfill gas collection system upgrades is being completed as a part of the construction of the United Boulevard Recycling and Waste Centre. The new landfill gas infrastructure was commissioned prior to United Boulevard Recycling and Waste Centre opening.
- A landfill gas collection system upgrade is required which includes a new control room and compressor at the blower flare station. Design will be awarded via a procurement process which will be initiated after permitting requirements have been determined.
- In the leachate collection system the west pump station upgrade is operational and design for the east pump station is expected to commence in 2023 with assistance from Liquid Waste Services.
- The leachate collection system realignment/upgrade has been deferred by one year. Assessment and design is expected to begin in 2023 after procurement and award of a new 5year comprehensive environmental consulting services contract.

Waste-to-Energy Program

- The refuse crane replacement project commenced with preliminary engineering in 2019. The next phases of the project include detailed design and procurement of the major capital items.
- Covanta commenced replacement of the back-up feedwater pumps as they have reached the end of their useful life.

- The feed hopper / chute replacement project started in late 2019. Feed hopper replacement is now complete with feed chute replacement to be completed in 2022.
- Ministry of Environment and Climate Change Strategy has approved proceeding with managing up to 25,000 tonnes per year of biosolids at the Waste-to-Energy Facility. Procurement for a detailed design engineering study is ongoing and closes September 30, 2022.
- The primary economizer project commenced with engineering and procurement services on November 6, 2020. Installation of the works is expected to occur during 2023 outages.
- The compressed air system replacement project is underway, an engineering study commenced on October 18, 2021 and is 90% complete.
- The fabric filter / pulse header refurbishment project is underway, an engineering study commenced on December 2, 2021 and is 90% complete.

To: Zero Waste Committee

From: Larina Lopez, Division Manager, Corporate Communications
Alison Schatz, Sr. Communications Specialist, Corporate Communications

Date: October 7, 2022 Meeting Date: October 14, 2022

Subject: **2022 Single-Use Item Reduction "What's Your Superhabit?" Campaign Results**

RECOMMENDATION

That the Zero Waste Committee receive for information the report dated October 7, 2022, titled "2022 Single-Use Item Reduction "What's Your Superhabit?" Campaign Results".

EXECUTIVE SUMMARY

The 2022 "What's Your Superhabit?" campaign ran from May 23 to August 7, 2022. The objective was to reduce the use and disposal of single-use items among Metro Vancouver residents, particularly those aged 18–44 who are more likely to have received a single-use item in the past day. The campaign aimed to create genuine moments of celebration through an outreach and social media strategy. The campaign performed strongly with nearly 34 million total impressions, over two million reach, over 12,000 webpage visits, and over 24,000 likes, comments, and shares on social media. A post campaign survey indicated that 31% of residents reported having seen or heard the campaign and 69% of that group agree that they have reduced their use of single-use items as a result of the ads. The campaign will run again in mid-2023.

PURPOSE

To update the Committee on the results of the 2022 regional single-use item reduction campaign, "What's Your Superhabit?"

BACKGROUND

The single-use item reduction campaign is part of a suite of education, policy, regulatory, and facility investments by Metro Vancouver to reduce waste in the region. It supports the waste reduction objectives in the *Integrated Solid Waste and Resource Management Plan*. 2022 marked the second year of the campaign. This report provides an update on the results of the 2022 campaign as identified in the 2022 Zero Waste Committee Work Plan.

2022 SINGLE-USE ITEM REDUCTION CAMPAIGN

The 2022 "What's Your Superhabit?" campaign ran from May 23 to August 7, 2022. The objective was to reduce the use and disposal of single-use items among Metro Vancouver residents, particularly those aged 18–44 who are more likely to have received a single-use item in the past day. The strategy is to celebrate the everyday actions we all take to reduce single-use items. These small daily routines are "Superhabits"!

Single-use item reduction is a complex and quickly changing issue in our region. The goal with the regional single-use item reduction campaign is to support and align with members' actions. So, the campaign does not refer to any bans or bylaws, but rather focuses on voluntary actions that residents

can take to reduce single-use items. Engagement with the Metro Vancouver Board and member jurisdictions informed the selection of five items of focus for the campaign: cups, containers, bags, utensils, and straws.

The creative was the same as used in 2021. It features everyday people in powerful, superhero-like poses holding reusable items. The tone is fun and celebratory. The campaign website ([Superhabits.ca](https://superhabits.ca)) features easy tips to start a Superhabit and reduce single-use items.

The paid media strategy focused on a younger audience demographic. Tactics included social media (YouTube, Facebook, Instagram, TikTok), television PSA, radio ads and host endorsements, and digital out of home (billboards and transit shelter ads). The placements included the new LED digital billboard above the Metrotown Skytrain station entrance. Notably, no tactics that require single-use materials were included in the plan.

Outreach and Social Media Strategy

The campaign aimed to create moments of celebration through an outreach and social media strategy. We built social norms by having genuine and authentic celebrations, and amplified them to increase the campaign's reach.

- **Social media influencers.** Eight social media influencers created and shared content (videos, images) about how they reduce single-use items in their lives (see Attachment 2). The influencers came from a variety of backgrounds and had a range of interests, which helped the campaign reach a wider audience. They included three lifestyle influencers (outdoors/hiking, beauty), radio hosts (Carmen Cruz of CFOX, Alece Anderson of Rock 101, and Amy Spencer of The Beat), and drag performers (Synthia Kiss, Gia Metric).
- **Working with drag performers and Vancouver Pride.** During campaign planning, working with drag performers and Pride emerged as a natural fit: both are celebratory and inclusive, and naturally attention grabbing. In addition to working with two influencers in this category, Metro Vancouver had a booth at the Vancouver Pride Society's Sunset Beach Festival on Sunday, July 31. Residents had the chance to celebrate their Superhabits by taking a photo with drag performer Synthia Kiss at the Superhabits photo wall (see Attachment 3).
- **Contest to encourage social media sharing.** A contest to encourage the audience to share their Superhabits using the hashtag (#WhatsYourSuperhabit) was run. It was effective in growing the number of Superhabits posted on social media, thus creating social norms.
- **Celebrations in the community.** A "What's Your Superhabit?" street team visited Boundary Bay Regional Park on a busy Friday afternoon, when people typically have picnics and barbecues. The street team gave kudos to those who were using reusables by sharing their Superhabits on social media and offering them high-quality swag, like mesh produce bags.

Engagement of Metro Vancouver Members

Campaign materials were made available to all Metro Vancouver members, including social media content and co-branded assets like transit shelter ads and digital message boards. Several members used the materials on their social media channels and throughout their municipalities.

Results

Paid Media Performance

- The campaign delivered nearly 34 million impressions.
- Traditional tactics delivered over 18 million impressions across out of home (digital billboards and transit shelter ads), television, and radio.
- Digital tactics (YouTube, Facebook, Instagram, TikTok) delivered over 15 million impressions across social media, with a reach of over 2.3 million and 3,350 likes, comments and shares.
- There were over 12,000 website visits.

Social Media Influencers (Organic)

- Received over 21,000 engagements (likes, comments, and shares) on social media.
- Reach of over 280,000.
- Generated almost 30 posts using #WhatsYourSuperhabit, bringing the total up to nearly 200.

Post-Campaign Survey

A post campaign survey was conducted in August 2022.

- 31% of residents reported having seen or heard the campaign. This is a strong result and indicates the campaign was effective overall.
- 69% of those who recall the ads agree that they have reduced their use of single-use items as a result of the ads.
- 84% of those who recall the ads are able to articulate a message or idea central to the campaign.
- 61% of those who saw the advertising talked about it with others, indicating that the campaign message was shared by the audience.

ALTERNATIVES

This is an information report. No alternatives are presented.

FINANCIAL IMPLICATIONS

The 2022 single-use item reduction campaign has a budget of \$180,000, supported under the Zero Waste Communications Program of the 2022 General Government budget.

CONCLUSION

2022 was the second year of the "What's Your Superhabit" campaign, which aims to reduce the use and disposal of single-use items among Metro Vancouver residents. This campaign focused on adults aged 18–44 who are more likely to have received a single-use item in the past day. The creative was the same as in 2021, with an increased focus on celebrating everyday actions to reduce single-use. This was achieved through a social media and outreach strategy. The campaign performed strongly with nearly 34 million total impressions, over two million reach, over 12,000 webpage visits, and over 24,000 likes, comments, and shares on social media. The post campaign survey indicated that 31% of residents reported having seen or heard the campaign and 69% of that group agree that they have reduced their use of single-use items as a result of the ads. The campaign will run again in 2023, informed by learnings from 2022 and building on the long-term equity of the creative platform.

Attachments

1. "What's Your Superhabit?" Sample Creative
2. Social Media Influencers Examples
3. Photos from "What's Your Superhabit?" Booth at the Sunset Beach Festival

References

1. ["What's Your Superhabit?" Website](#)

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“WHAT’S YOUR SUPERHABIT” SAMPLE CREATIVE

Bags



Backpack



Straws



Utensils



Container



Cups



SOCIAL MEDIA INFLUENCER EXAMPLES

Synthia Kiss (@synthiakiss)



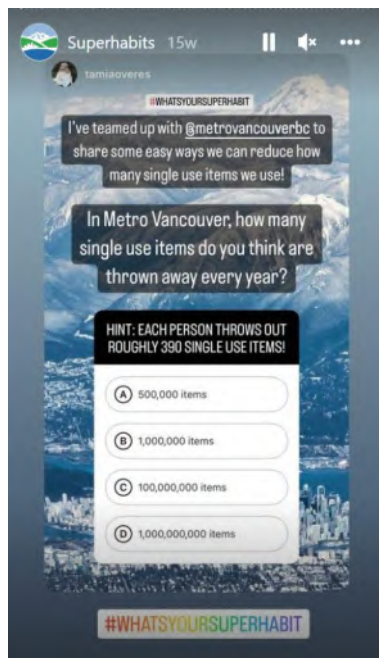
Gia Metric (@gia.metric)



Bree (@helloletsglow)



Tamia Overes (@tamiaoveres)



PHOTOS FROM "WHAT'S YOUR SUPERHABIT" BOOTH AT THE SUNSET BEACH FESTIVAL



To: Zero Waste Committee

From: Paul Henderson, General Manager, Solid Waste Services

Date: October 6, 2022 Meeting Date: October 14, 2022

Subject: **Manager's Report**

RECOMMENDATION

That the Zero Waste Committee receive for information the report dated October 6, 2022, titled "Manager's Report".

Central Surrey Recycling and Waste Centre

Central Surrey Recycling and Waste Centre opened on September 9. As part of the opening of the new facility, the City of Surrey worked with Metro Vancouver to provide free and discounted drop-off for residents at both Central Surrey and North Surrey recycling and waste centres from September 19 to October 2. Over 5,000 Surrey residents dropped off free recyclables, garbage, yard trimmings, gypsum, and mattresses. Drop-off costs were funded by the City of Surrey.

2022 Create Memories Not Garbage, Holiday Waste Reduction Campaign

In its twelfth year, the 2022 Create Memories, Not Garbage regional campaign will continue to focus on providing residents with low-waste gift and wrapping ideas to reduce unnecessary holiday waste. To reach shoppers at various stages of their shopping experience, the campaign will continue with its three-phased approach: Early Shoppers (Oct 17 – 30), Main Campaign (Oct 31 – Dec 18), and Post-Christmas Campaign (Dec 26 – Jan 8). The media promotion will focus on placements and environments where the target audience spends time — particularly when in gift-buying mode. Digital tactics will help connect our audience with the Merry Memory Maker app featuring over 200 gift ideas. Television, radio and out-of-home tactics (transit and shopping mall digital screens) will build reach and frequency for the main campaign leading up to Christmas. The Create Memories, Not Garbage promotional budget is \$139,000 and creative will be further promoted through Metro Vancouver's social media channels, website, and support from member jurisdictions. Media relations will also be engaged to further amplify the seasonal message.

Solid Waste Management Plan Public/Technical Advisory Committee Update

The second meeting of the solid waste management plan Public/Technical Advisory Committee was held on September 21, with 20 members in attendance. Staff delivered presentations on the regional recycling and waste system, solid waste and recycling data, zero waste and circular economy, and next steps for the solid waste management plan planning and engagement. Members asked questions of the presenters and shared their knowledge and enthusiasm on the topics during the discussion and feedback exercises. The Public/Technical Advisory Committee will convene next in early 2023.

Compost Quality Study Detailed Plastic Analysis

Metro Vancouver engaged Oceanwise to analyze the plastic debris from the 2021 [Metro Vancouver Compost Quality Study](#). The Compost Quality Study confirmed plastic comprised less than 0.25% of compost samples collected from retail sources in the lower mainland. The study determined that the amount of compost in the samples meets current and proposed compost quality standards for foreign matter outlined in the Province's Organic Matter Recycling Regulation (OMRR).

A [detailed plastic analysis](#) showed more than half of the plastic particles found in the compost samples were made of polyethylene, typically used in products like grocery plastic bags, with polypropylene next at 25%, commonly used in items like take-out food containers. Smaller plastic pieces were significantly more abundant and diverse, indicating that larger plastic pieces may be the main source of microplastics in the compost samples. Metro Vancouver continues to educate residents that no plastics should go in the green bin with the Food Scraps Aren't Garbage campaign. In addition, work is currently underway by the federal government to develop regulations around labelling of plastics to reduce confusion on how to dispose of them.

Single-Use Items and Personal Protective Equipment in Streetscape

In response to members' questions at the May 13, 2022 Zero Waste Committee meeting, Metro Vancouver reviewed existing waste composition studies to estimate the quantity of single-use items and personal protective equipment in streetscape receptacles. The review included nine recent studies completed by member municipalities and one study by Metro Vancouver. Single-use items, including bags, cups, straws, utensils, and takeout containers, were found to range from 6-13% in streetscape garbage receptacles compared to 3% in overall municipal solid waste. Streetscape container recycling receptacles contained 28-32% single-use items. The percentage of personal protective equipment, including masks, gloves, and disinfectant wipes, was found to be lower in streetscape receptacles (0.2 – 0.6%) compared to overall municipal solid waste (1%). Personal protective equipment data was limited to studies completed during the COVID-19 pandemic.

News Media Canada Update

In the 2017 Stewardship Plan for newspapers, News Media Canada implemented an approach involving the Government of BC and Recycle BC. News Media Canada members provide value-in-kind advertising to the Government of BC, and in return the province provides Recycle BC funding for the collection and recycling of newspapers. This arrangement was established for a term of 5 years, and is expiring in December 2022. In preparing a new Stewardship Plan for newspapers, News Media Canada identified a number of options, including a potential exemption from the extended producer responsibility regulation. During the summer of 2022, selected member jurisdictions received correspondence from community newspapers (News Media Canada members) requesting support for an exemption. Under a possible exemption, it was unclear whether newspapers would continue to be collected in the Recycle BC program. Currently, no consultation is underway for a new extended producer responsibility plan for newspapers.

Innovative Organics Processing Contractor Anaconda Systems Receives \$2 Million

Metro Vancouver entered into a contract in July 2022 with Anaconda Systems to support innovative organics processing development in the region. Anaconda recently received \$2 million in funding from Sustainable Development Technology Canada to support continued advancement of their compost technology.

Waste-to-Energy School Tour

A project is underway to update the school tours provided at the Waste-to-Energy facility. A consultant will support the creation of a new tour experience that has links to the provincial curriculum and provides place-based learning. Key themes of a new school tour include Metro Vancouver's long-term waste reduction efforts, the regional solid waste system and environmentally sustainable garbage management, and interpretive features to engage students during the tour. As part of the process elementary and secondary teachers will be engaged to ensure the tour and educational resources are relevant, engaging, and curriculum connected.

Updating the tour information and process will substantially increase the number of students provided information around Metro Vancouver's zero waste and circular economy actions and will be an important engagement mechanism in support of the solid waste management plan update.

More information will be shared with the Zero Waste Committee as the project proceeds.

2022 Zero Waste Committee Work Plan

The attachment to this report sets out the Committee's work plan for 2022. The status of work program elements is indicated as pending, in progress or complete. The listing is updated as needed to include new issues that arise, items requested by the Committee and changes in the schedule.

Attachment

Zero Waste Committee 2022 Work Plan

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Zero Waste Committee 2022 Work Plan

Report Date: September 26, 2022

Priorities

1st Quarter	Status
2021 Integrated Solid Waste and Resource Management Plan Biennial Report	Complete
Central Surrey Recycling and Waste Centre Operations Contract Award	Complete
Invited Presentation from Ocean Ambassadors on East of Seymour Zero Waste Takeout	Complete
Flood Disaster Response Solid Waste Management System Summary	Complete
National Zero Waste Council 2021 Accomplishments and 2022 Projects	Complete
2021 Zero Waste Conference	Complete
2nd Quarter	
2021 Disposal Ban Inspection Program Results	Complete
2021 Food Scraps Campaign Results	Complete
2022 Single Use Item Campaign	Complete
2021 Waste-to-Energy Facility Financial Summary	Complete
2022 Think Thrice Textiles Campaign Results	Complete
2021 Waste Composition Data	Complete
Alternative Fuel and Recyclables Recovery Procurement Contract Award	Pending
Contingency Disposal Contract Award	Pending
Love Food Hate Waste	Complete
Solid Waste Services Capital Program Expenditures Update as at December 31, 2021	Complete
Waste-to-Energy Facility – Bottom Ash Beneficial Use Pilots	Complete
3rd Quarter	
2021 Waste-to-Energy Facility Environmental Performance Summary	Complete
2022 National Zero Waste Council Projects	Pending
2022 Zero Waste Conference Update	Complete
City of Vancouver and City of Burnaby District Energy Right-of-Way Agreements	Pending
Illegal Dumping Data and Programs	Complete
Innovation and Continuous Improvement	Complete
Repair and Reuse	Complete
Solid Waste Management Plan Engagement	Complete
Solid Waste Residuals Management Options Study	Pending
Solid Waste Services Capital Program Expenditures Update as at April 30, 2022	Complete
4th Quarter	
2021 Solid Waste and Recycling Annual Report	Pending
2022 Abandoned Waste Campaign Results	Pending
2022 Create Memories Not Garbage Update	Complete
2022 Single-Use Item Campaign Results	Complete
2023-2027 Financial Plan – Solid Waste Services	In Progress
2023 Tipping Fee Bylaw Revisions	In Progress
Solid Waste Services Capital Program Expenditures Update as at August 31, 2022	In Progress

To: Zero Waste Committee

From: Jeff Carmichael, Division Manager, Liquid Waste Services

Date: September 26, 2022 Meeting Date: October 14, 2022

Subject: **Sewage and Waste Heat Recovery Bylaw No. 357, 2022**

The attached report dated September 7, 2022 titled “Sewage and Waste Heat Recovery Bylaw No. 357, 2022” was presented to the Liquid Waste Committee for consideration and recommendation at its meeting on September 21, 2022, and was approved by the GVS&DD Board at its September 23, 2022 meeting. The report is presented to the Zero Waste Committee for its information only.

Attachment

“Sewage and Waste: Heat Recovery Bylaw No. 357, 2022”, Liquid Waste Committee Report dated September 7, 2022

To: Liquid Waste Committee

From: Jeff Carmichael, Division Manager, Liquid Waste Services

Date: September 7, 2022 Meeting Date: September 21, 2022

Subject: **Sewage and Waste Heat Recovery Bylaw No. 357, 2022**

RECOMMENDATION

That the GVS&DD Board:

- a) approve the proposed Greater Vancouver Sewerage and Drainage District Sewage and Waste Heat Recovery Bylaw No. 357, 2022, as presented in the report dated September 7, 2022, titled "Sewage and Waste Heat Recovery Bylaw No. 357, 2022";
 - b) give first, second and third reading to Greater Vancouver Sewerage and Drainage District Sewage and Waste Heat Recovery Bylaw No. 357, 2022; and
 - c) pass and finally adopt Greater Vancouver Sewerage and Drainage District Sewage and Waste Heat Recovery Bylaw No. 357, 2022.
-

EXECUTIVE SUMMARY

On July 29, 2022 the GVS&DD Board approved the *Sewage and Waste Heat Recovery Policy*, which enables and provides guidance for heat recovery projects. Staff recommend that a supporting bylaw be enacted, in order to reinforce GVS&DD's authority in this regard, utilizing all tools allowed under the authority of the *GVS&DD Act*. Metro Vancouver has the opportunity to reduce greenhouse gas emissions by enabling sewer and waste heat recovery projects that provide renewable, fossil fuel-free heat to residents and businesses in the region. There is enough excess heat in the liquid waste collection system to heat 100,000 homes throughout the region, and enough heat available from the Waste-to-Energy Facility to provide for another 30,000 homes. Projects are underway and more projects of this nature are under consideration.

PURPOSE

To seek GVS&DD Board approval of a proposed Sewage and Waste Heat Recovery Bylaw No. 357, 2022 to support sewer and waste heat recovery projects.

BACKGROUND

The MVRD and GVS&DD Boards have established several policies and frameworks establishing their intent to address climate change and to encourage resource recovery.

The *Integrated Liquid Waste and Resource Management Plan* (Reference 1) identifies the strategic goal to "use waste as a resource". On June 23, 2017, the MVRD Board approved a *Carbon Price Policy* (Reference 2) for Metro Vancouver that established a value for GHG emission reductions of \$150/tonne CO₂e. On July 26, 2019, the MVRD Board approved the *Climate 2050 Strategic Framework* (Reference 3), which targets 45% reduction in GHG emission by 2030 and a climate neutral region by 2050. The *Sewage and Waste Heat Recovery Policy*, which superseded the *Liquid Waste Heat Recovery Policy* (Reference 4), was approved by GVS&DD Board on July 29, 2022.

Agreements are in place to provide heat recovered from treated sewage at the North Shore Wastewater Treatment Plant to Lonsdale Energy Corporation, and to provide heat recovered from the Waste-to-Energy Facility energy to the River District Energy development. A capital contribution toward the Sapperton District sewer heat project has been authorized by the GVS&DD Board. Several additional sewer heat recovery projects are under development or assessment.

RATIONALE AND SUPPORT FOR BYLAW

Sewage and waste heat recovery is considered to be within the scope of the *GVS&DD Act* that governs such projects and expenditures. Establishment of a supporting bylaw will reinforce GVS&DD's authority in this regard, utilizing all tools allowed under the authority of the *GVS&DD Act*.

Section 6(1) of the *GVS&DD Act*, the primary provision setting out GVS&DD's statutory purpose, incorporates by express reference a report known as the Rawn Report. The Rawn Report expressly references salvaging and recovering certain utilizable by-products from the treatment of sewage, such as reclaimed water for irrigation, digested sludge for fertilizer, and biogas for combustion as source of heat and power in internal combustion engines. While there is no express reference in the Rawn Report to salvaging heat from sewage for use as a source of heat or power, it does expressly contemplate future advances in technology, and the power to undertake sewer heat recovery projects can be reasonably and fairly implied.

Notwithstanding this, because Section 6(2) of the *GVS&DD Act* expressly contemplates bylaw sanction for any work not included in the Rawn Report, introducing this bylaw would reinforce and clarify GVS&DD's authority to undertake sewer heat recovery projects.

Sewer heat recovery also aligns directly with strategic guidance provided by the *Integrated Liquid Waste and Resource Recovery Plan*, which includes the goal of using liquid waste as a resource.

Section 7A of the *GVS&DD Act* adds the disposal of all types of waste to the objects of GVS&DD and incorporates by express reference a report known as the Bunnell Report. Because this report identifies that it may be possible in the future for state-of-the-art waste disposal incinerators to be financially dependent on revenue generated by energy sales, the power to undertake waste heat recovery projects can be reasonably and fairly implied. Notwithstanding this, because Section 7A(2) of the *GVS&DD Act* expressly contemplates bylaw sanction for any work not included in the Bunnell Report, introducing this bylaw would reinforce and clarify GVS&DD's authority to undertake waste heat recovery projects.

Waste heat recovery also aligns directly with strategic guidance provided by the *Integrated Solid Waste and Resource Management Plan*, which includes the goal of recovering energy from the waste stream after material recycling.

ALTERNATIVES

1. That the GVS&DD Board:
 - a) approve the proposed Greater Vancouver Sewerage and Drainage District Sewage and Waste Heat Recovery Bylaw No. 357, 2022, as presented in the report dated September 7, 2022, titled "Sewage and Waste Heat Recovery Bylaw No. 357, 2022";
 - b) give first, second and third reading to Greater Vancouver Sewerage and Drainage District Sewage and Waste Heat Recovery Bylaw No. 357, 2022; and
 - c) pass and finally adopt Greater Vancouver Sewerage and Drainage District Sewage and Waste Heat Recovery Bylaw No. 357, 2022.
2. That the GVS&DD Board receive for information the report dated September 7, 2022 titled "Sewage and Waste Heat Recovery Bylaw No. 357, 2022" and provide alternative direction to staff.

FINANCIAL IMPLICATIONS

There are no direct financial implications of establishing the bylaw. Any and all projects that seek GVS&DD capital investment will continue to be brought to the GVS&DD Board for consideration.

CONCLUSION

Metro Vancouver's *Climate 2050* strategy includes targets for regional GHG reductions of 45% by 2030 compared to 2010 levels, and a carbon neutral region by 2050. Metro Vancouver has the potential and opportunity to reduce GHG emissions through capital funding for projects that recover energy from liquid and solid waste systems for building heat and hot water to offset fossil fuels.

Staff recommend that a supporting bylaw be enacted, in order to reinforce and clarify GVS&DD's authority to undertake sewage and waste heat recovery activities, utilizing all tools allowed under the authority of the *GVS&DD Act*.

Staff recommend Alternative 1.

Attachment

Sewage and Waste Heat Recovery Bylaw No. 357, 2022

References

1. [Integrated Liquid Waste and Resource Management Plan](#)
2. [Carbon Price Policy](#)
3. [Climate 2050 Strategic Framework](#)
4. [Liquid Waste Heat Recovery Policy](#)

**GREATER VANCOUVER SEWERAGE AND DRAINAGE DISTRICT
BYLAW NO. 357, 2022
A Bylaw to Authorize Heat Recovery from Sewage and Waste**

WHEREAS:

- A. Pursuant to the *Greater Vancouver Sewerage and Drainage District Act* (the “**Act**”) the objects of the Greater Vancouver Sewerage and Drainage District (the “**Corporation**”) include the construction, maintenance, operation, and administration of major sewerage and drainage facilities, and facilities for the disposal of all types of waste;
- B. Pursuant to the Corporation’s approved *Integrated Liquid Waste and Resource Management Plan* and *Integrated Solid Waste and Resource Management Plan*, the Corporation seeks to recover heat energy as a resource from sewage and waste;
- C. The reports referred to in Section 6(1) and Section 7A(1) of the Act (known generally as the Rawn Report and Bunnell Report, respectively) include recovery of some utilizable by-products from the treatment of sewage and waste disposal, but do not expressly include heat recovery from sewage and waste;
- D. The Act empowers the Corporation to perform work requisite to its function but not included in the reports referred to in Section 6(1) and Section 7A(1) of the Act, but only with the sanction of a bylaw of the Board of the Corporation (the “**Board**”) passed by a majority of not less than 2/3 of the votes cast; and
- E. The Board wishes to authorize the Corporation to perform sewage and waste heat recovery work.

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 Sewage and Waste Heat Recovery Bylaw No. 357, 2022”.

Definitions and Interpretation

- 2. In this bylaw:

“**Act**” means *Greater Vancouver Sewerage and Drainage District Act*, SBC 1956, c 59;

“**Board**” means the Administration Board of the Corporation;

“**Corporation**” means Greater Vancouver Sewerage and Drainage District;

“**Facilities**” has the meaning given in the Act; and

“waste” has the meaning given in the Act.

Heat Recovery from Sewage and Waste

3. The Corporation is hereby authorized to recover heat energy from sewage and waste in the Facilities, and to undertake the construction, maintenance, operation, and administration of facilities for the recovery, generation, storage, transmission and distribution of heat energy from sewage and waste, subject to the limitations set out in the *Procurement and Real Property Contracting Authority Policy* adopted by the Board and as may be amended or replaced from time to time.

Severance

4. If any provision of this bylaw is for any reason whatsoever held to be invalid in whole or in part by a decision of a court of competent jurisdiction, the remainder of this bylaw or the remainder of a provision determined to be invalid in part shall remain in full force and effect and its validity shall not be affected by the decision.

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

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

Sav Dhaliwal, Chair

Chris Plagnol, Corporate Officer