1. **ADOPTION OF THE AGENDA**

   1.1 **May 17, 2019 Regular Meeting Agenda**
   That the Zero Waste Committee adopt the agenda for its regular meeting scheduled for April 12, 2019 as circulated.

2. **ADOPTION OF THE MINUTES**

   2.1 **April 12, 2019 Regular Meeting Minutes**
   That the Zero Waste Committee adopt the minutes of its regular meeting held March 7, 2019 as circulated.

3. **DELEGATIONS**

   3.1 **Sam Scoten, CEO and Director, CheckSammy**
   Subject: CS Reuse Program

4. **INVITED PRESENTATIONS**

5. **REPORTS FROM COMMITTEE OR STAFF**

   5.1 **Solid Waste Energy Policy**
   *Designated Speaker: Sarah Wellman, Senior Engineer, Solid Waste Services*
   That the GVS&DD Board:
   a) approve the *Solid Waste Energy Policy*; and
   b) direct staff to prepare a business case, including a recommended ownership model, for a district energy system using heat from the Waste-to-Energy Facility.

   5.2 **2018 Disposal Ban Program Update**
   *Designated Speaker: Brandon Ho, Senior Project Engineer, Solid Waste Services*
   That the Zero Waste Committee receive for information the report dated May 7, 2019, titled “2018 Disposal Ban Program Update”.

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

May 15, 2019

Zero Waste Committee
5.3 Update on Metro Vancouver’s Engagement with the Love Food Hate Waste Canada Campaign  
*Designated Speaker: Larina Lopez, Division Manager, Corporate Communications, External Relations*  
That the Zero Waste Committee receive for information the report dated April 27, 2019, titled “Update on Metro Vancouver’s Engagement with the Love Food Hate Waste Canada Campaign.”

5.4 Manager’s Report  
*Designated Speaker: Paul Henderson, General Manager, Solid Waste Services*  
That the Zero Waste Committee receive for information the report dated May 9, 2019, titled “Manager’s Report”.

6. INFORMATION ITEMS

6.1 Correspondence re Bylaw 181 Update and Commercial Waste Hauler Licensing Bylaw Overview addressed to The Honourable George Heyman dated April 15, 2019.

6.2 Correspondence re 2018 Zero Waste Conference from Mayor Malcolm Brodie, City of Richmond dated February 16, 2019.

6.3 Metro Vancouver Odour Management Communication and Engagement Strategy

6.4 Correspondence re Vancouver Landfill Technical Liaison Committee from Mayor George V. Harvie, City of Delta dated May 6, 2019.

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 May 17, 2019 pursuant to the *Community Charter* provisions, Section 90 (2) (b) as follows:

   “90 (2) A part of a council meeting must be closed to the public if the subject matter being considered relates to one or more of the following:
   
   (b) the consideration of information received and held in confidence relating to negotiations between the municipality and a provincial government or the federal government or both, or between a provincial government or the federal government or both and a third party”.
10. **ADJOURNMENT/CONCLUSION**

That the Zero Waste Committee adjourn/conclude its regular meeting of May 17, 2019.

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**Membership:**

| Froese, Jack (C) - Langley Township | Fathers, Helen - White Rock | Martin, Gayle - Langley City |
| Hodge, Craig (VC) - Coquitlam       | Fry, Pete - Vancouver       | Morden, Mike - Maple Ridge   |
| Calendino, Pietro - Burnaby        | Little, Mike - North Vancouver District | Steves, Harold - Richmond |
| Cameron, Craig - West Vancouver    | Madsen, Hunter - Port Moody | Trentadue, Mary - New Westminster |
| Elford, Doug - Surrey              |                            |                             |
Minutes of the Regular Meeting of the Metro Vancouver Regional District (MVRD) Zero Waste Committee held at 9:03 a.m. on Friday, April 12, 2019 in the 28th Floor Committee Room, 4730 Kingsway, Burnaby, British Columbia.

MEMBERS PRESENT:
Chair, Mayor Jack Froese, Langley Township
Vice Chair, Councillor Craig Hodge, Coquitlam
Councillor Pietro Calendino, Burnaby
Councillor Craig Cameron, West Vancouver (arrived at 9:06 a.m.)
Councillor Doug Elford, Surrey
Councillor Helen Fathers, White Rock
Councillor Pete Fry, Vancouver (arrived at 9:10 a.m.)
Councillor Hunter Madsen, Port Moody
Councillor Gayle Martin, Langley City (arrived at 9:25 a.m.)
Mayor Mike Morden, Maple Ridge (arrived at 9:07 a.m.)
Councillor Harold Steves, Richmond
Councillor Mary Trentadue, New Westminster

MEMBERS ABSENT:
Mayor Mike Little, North Vancouver District

STAFF PRESENT:
Paul Henderson, General Manager, Solid Waste Services
Carol Mason, Chief Administrative Officer
Janis Knaupp, Legislative Services Coordinator, Board and Information Services

1. **ADOPTION OF THE AGENDA**

1.1 **April 12, 2019 Regular Meeting Agenda**

It was **MOVED** and **SECONDED**
That the Zero Waste Committee adopt the agenda for its regular meeting scheduled for April 12, 2019 as circulated.

CARRIED
2. **ADOPTION OF THE MINUTES**

2.1 **March 7, 2019 Regular Meeting Minutes**

*It was MOVED and SECONDED*  
That the Zero Waste Committee:  
a) correct the minutes of its regular meeting held March 7, 2019, on page 6,  
under Item 5.1, by replacing the phrase “Mayor Elford” with the phrase  
“Councillor Elford”; and  
b) adopt the minutes as corrected.  

**CARRIED**

3. **DELEGATIONS**

3.1 **Helmut Blanken, HBHE Consulting, Duncan**  
Helmut Blanken spoke to the Committee about how mechanical biological  
treatment technology is being used to maximize resource recovery and minimize  
greenhouse gas (GHG) emissions.

The delegation extended an invitation to Metro Vancouver to visit a mechanical  
and biological treatment facility in Germany to get more information on this  
technology and how it can be used to reduce GHGs.

9:06 a.m. Councillor Cameron arrived at the meeting.  
9:07 a.m. Mayor Morden arrived at the meeting.

In response to questions, the delegation informed members about waste  
processing practices in Germany.

9:10 a.m. Councillor Frye arrived at the meeting.

In response to questions, staff informed members about the status of the Mixed  
Waste Processing Pilot.

Presentation material titled “Mechanic Biological Treatment Minimize Waste  
Disposal and GHG Emissions” is retained with the April 12, 2019 Zero Waste  
Committee agenda.

4. **INVITED PRESENTATIONS**  
No items presented.
5. REPORTS FROM COMMITTEE OR STAFF

5.1 Recycling Update
Report dated April 4, 2019 from Andrew Doi, Environmental Planner, Solid Waste Services, providing an update on recycling markets and Extended Producer Responsibility programs.

Members were provided with a presentation on Extended Producer Responsibility (EPR) programs and the Integrated Solid Waste and Resource Management Plan. In response to questions, members were informed about efforts to work with the Province and Recycling Council of BC to develop an EPR program for mattresses and large furniture, and ongoing related studies including benefits of EPR.

9:25 a.m. Councillor Martin arrived at the meeting.

Comments were offered about the need for a national strategy on cigarette butts.

Request of Staff
Staff was requested to investigate the feasibility of engaging with the Union of BC Municipalities, and the Federation of Canadian Municipalities, on the potential for a national Extended Producer Responsibility strategy on cigarette butts.

In request to further questions, members were informed about EPR programs for gypsum and construction materials, and packaging and printed paper, and recycling activities within Metro Vancouver and to international markets.

Request of Staff
Staff was requested to report back to the Zero Waste Committee on the status of plastics recycling in the region when reporting back with the biennial report on waste composition on garbage.

Presentation materials titled “Recycling Update” is retained with the April 11, 2019 Zero Waste Committee.

It was MOVED and SECONDED
That the GVS&DD Board receive for information the report dated April 4, 2019, titled “Recycling Update”.

CARRIED

5.2 Acceptance of Health Care Facility Waste at Metro Vancouver Transfer Stations
Report dated February 27, 2019 from Jenny Tough, Senior Project Engineer, Solid Waste Services, updating the GVS&DD Board on the acceptance of health care facility waste at Metro Vancouver transfer stations.
It was MOVED and SECONDED 
That the GVS&DD Board receive for information the report dated February 27, 2019, titled “Acceptance of Health Care Facility Waste at Metro Vancouver Transfer Stations”.

CARRIED

5.3 Asset Management for Solid Waste Services Policy
Report dated April 4, 2019 from Chris Allan, Director, Solid Waste Operations, Solid Waste Services, seeking the Zero Waste Committee’s endorsement of the Asset Management for Solid Waste Services Policy to establish asset management principles and a framework to balance asset performance, risk and cost to support the long-term provision of Solid Waste Services.

It was MOVED and SECONDED
That the Zero Waste Committee endorse the Asset Management for Solid Waste Services Policy as presented in the attached report dated April 4, 2019, titled “Asset Management for Solid Waste Services Policy”.

CARRIED

5.4 Reallocation of Capital Funds for Transfer Station Compactor Replacements
Report dated April 4, 2019 from Lynne Vidler, Senior Project Engineer, Solid Waste Services, seeking GVS&DD Board approval to reallocate capital funds approved for a Surrey Transfer Station compactor, in the amount of $2,000,000, towards the purchase of a compactor at the replacement Coquitlam Transfer Station.

It was MOVED and SECONDED
That the GVS&DD Board authorize reallocation of 2019 capital funds originally approved for a Surrey Transfer Station compactor to the purchase of a compactor for the replacement Coquitlam Transfer Station.

CARRIED

5.5 Waste-to-Energy Facility 2018 Financial Update
Report dated April 4, 2019 from Brent Kirkpatrick, Lead Senior Engineer, Solid Waste Services, providing a 2018 financial update for the Metro Vancouver Waste-to-Energy Facility located in the City of Burnaby.

It was MOVED and SECONDED
That the GVS&DD Board receive for information the report dated April 4, 2019, titled “Waste-to-Energy Facility 2018 Financial Update”.

CARRIED

5.6 Status of Solid Waste Services Capital Expenditures to December 31, 2018
Report dated April 5, 2019 from Lynne Vidler, Senior Project Engineer, Solid Waste Services, providing an update on the status of utilities capital expenditures for Solid Waste Services for the year ending December 31, 2018.
Members were provided with a presentation on the status of Solid Waste Services capital expenditures highlighting current projects. A video presentation was also provided which is not retained with the agenda.

Presentation material titled “Capital Expenditure Summary” is retained with the April 11, 2019 Zero Waste Committee agenda.

It was MOVED and SECONDED
That the GVS&DD Board receive for information the report dated April 5, 2019, titled “Status of Solid Waste Services Capital Expenditures to December 31, 2018”.  CARRIED

5.7 Abandoned Waste – 2019 Waste in its Place Regional Campaign Update

Report dated March 19, 2019 from Larina Lopez, Division Manager, Corporate Communications, External Relations, providing an update on the 2019 Waste in its Place regional campaign.

Members were provided with a presentation on the Waste in its Place regional campaign. A video presentation provided is not retained with the agenda.

Members requested data on municipal use of regional zero waste campaign materials broken down by jurisdiction.

Request of Staff
Staff was requested to include data on municipal use of regional zero waste campaign materials as part of future zero waste campaign reports, for the Committee’s information.

Presentation material titled “Waste in its Place Regional Campaign” is retained with the April 11, 2019 Zero Waste Committee agenda.

It was MOVED and SECONDED
That the MVRD Board receive for information the report dated March 19, 2019, titled “Abandoned Waste – 2019 Waste in its Place Regional Campaign Update.”  CARRIED

5.8 National Zero Waste Council 2018 Update


Members were updated on efforts by the National Zero Waste Council Plastics Advisory Committee to address problematic plastic types including cigarette butts discussed as part of Item 5.1 of the agenda. Members were informed that the Panel believes a ban on plastic cigarette butts is a better option than an EPR program.
In response to questions, members were informed about funding for the National Zero Waste Council (NZWC) including Metro Vancouver contributions and efforts to secure project funding from other sources.

**It was MOVED and SECONDED**
That the MVRD Board receive for information the report dated April 4, 2019, titled “National Zero Waste Council 2018 Update.”

**CARRIED**

**5.9 Board Appointment and Rescindments of Bylaw Enforcement Officers**
Report dated April 3, 2019 from Rick Laird, Environmental Control Officer, Environmental Regulation and Enforcement, Planning and Environment, seeking that the GVS&DD Board appoint and rescind appointments of Metro Vancouver employees as GVS&DD Board-designated officers.

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

a) pursuant to *Greater Vancouver Sewerage and Drainage District Municipal Solid Waste and Recyclable Material Regulatory Bylaw*:
   i. rescind the appointments of the following persons as officers: Lynne Bosquet, Donna Hargreaves, Alex Clifford, and Jeff Gogol; and
   ii. appoint the following Metro Vancouver employee as an officer: Permitting and Enforcement Officer, Brian Kerin; and

b) pursuant to the *Offence Act* appoint the following Metro Vancouver employee for the purpose of serving summons under section 28 of the *Offence Act* for alleged violations under the *Greater Vancouver Sewerage and Drainage District Municipal Solid Waste and Recyclable Material Regulatory Bylaw*:
   Permitting and Enforcement Officer, Brian Kerin.

**CARRIED**

**5.10 Manager’s Report**

Chair Froese updated members on his attendance at the 2019 Biocycle Conference in Oregon, USA.

**It was MOVED and SECONDED**
That the Zero Waste Committee receive for information the report dated April 4, 2019, titled “Manager’s Report.”

**CARRIED**
6. INFORMATION ITEMS

6.1 Correspondence re Single-Use Item Reduction Approach addressed to The Honourable George Heyman and The Honourable Selina Robinson dated March 13, 2019

Correspondence dated March 13, 2019 addressed to the Honourable George Heyman, Minister of Environment and Climate Change Strategy, and The Honourable Selina Robinson, Minister of Municipal Affairs and Housing, from Sav Dhaliwal, Chair, Metro Vancouver Board, regarding single-use item reduction approach.

It was MOVED and SECONDED
That the Zero Waste Committee receive for information the following Information Item:
6.1 Correspondence re Single-Use Item Reduction Approach addressed to The Honourable George Heyman and The Honourable Selina Robinson dated March 13, 2019

CARRIED

7. OTHER BUSINESS
No items presented.

8. BUSINESS ARISING FROM DELEGATIONS
No items presented.

9. RESOLUTION TO CLOSE MEETING
No items presented.

10. ADJOURNMENT/CONCLUSION

It was MOVED and SECONDED
That the Zero Waste Committee conclude its regular meeting of April 12, 2019.

CARRIED
(Time: 10:51 a.m.)

____________________________   __________________________
Janis Knaupp,      Jack Froese, Chair
Legislative Services Coordinator
Look Familiar?

It’s ok, we park our cars in the driveway too!

Zero Waste Committee
Check Sammy is an app-based, peer-to-peer listing service where neighbors can post and find free items. The app allows people to quickly and easily gift unwanted items, by connecting those goods with the people who need them most.

Check Sammy offers a convenient delivery services, taking out the toughest part of traditional listing sites and apps.

CS Reuse Program

Decrease landfill! Offering home owners the ability to gift-cycle unwanted consumer items typically accumulated over time. High capacity bins are dropped off for you to fill which are automatically picked up 48 hours later with all proceeds going to the Salvation Army.

We accept: clothing, shoes, books, toys, sports equipment, small electronics, kitchenware, houseware, linens, tools, garden equipment, small furniture.

Recycle/Waste Removal
As a peer-to-peer network, we all have the power to do our part to decrease landfill. However, if some items are unable to find a new home, CS Recycle's on demand network of professional, screened recyclers can assist. Receive instant quotes, view ratings and reviews, book a time convenient for you and you're done! Convenient, fast and easy.

Order Today!
Visit the reuse page www.checksammy.com/reuse or call 1-800-260-2737
To: Zero Waste Committee

From: Sarah Wellman, Senior Engineer, Solid Waste Services

Date: May 7, 2019

Meeting Date: May 17, 2019

Subject: Solid Waste Energy Policy

RECOMMENDATION
That the GVS&DD Board:
 a) approve the Solid Waste Energy Policy; and
 b) direct staff to prepare a business case, including a recommended ownership model, for a district energy system using heat from the Waste-to-Energy Facility.

PURPOSE
The purpose of this report is to seek GVS&DD Board approval of the proposed Solid Waste Energy Policy and recommend preparing a business case for a district heating system for the Waste-to-Energy Facility.

BACKGROUND
Metro Vancouver facilities processing municipal solid waste or recyclable materials may have the potential to generate energy.

The proposed Solid Waste Energy Policy outlined in this report establishes a process for evaluating projects that generate energy and/or greenhouse gas emission reductions from municipal solid waste or recyclable material at Metro Vancouver facilities. The Solid Waste Energy Policy is based on principles outlined in the Liquid Waste Heat Recovery Policy. The most recent version of the Liquid Waste Heat Recovery Policy clarified carbon credit allocation and was approved by the Board on May 25, 2018.

Currently, there is an opportunity to utilize heat from the Metro Vancouver Waste-to-Energy Facility in a district energy system, which would result in a reduction in greenhouse gas emissions compared to heating with natural gas and increase energy recovery from the Waste-to-Energy Facility. This report seeks approval of the Solid Waste Energy Policy to provide a framework for considering solid waste energy projects and recommends proceeding with a business case for a district heating system for the Waste-to-Energy Facility.

SOLID WASTE ENERGY POLICY AND CARBON CREDIT ALLOCATION
The purpose of the Solid Waste Energy Policy is to establish criteria for the development of Metro Vancouver energy projects from municipal solid waste or recyclable material. Solid waste energy projects can displace the use of fossil fuels and reduce greenhouse gas emissions.
Benefits associated with greenhouse gas reductions (such as carbon offset credits) will be allocated on a case-by-case basis, in accordance with the costs and risks incurred by the parties involved in developing the project.

Available carbon credits from a solid waste energy project that have been allocated to Metro Vancouver will be distributed as follows:

(Step 1) Five percent will be allocated to the jurisdiction in which the solid waste facility is located;
(Step 2) Carbon credits will be retained by Metro Vancouver up to the amount needed for the Metro Vancouver solid waste function to achieve carbon neutrality in a given year; and
(Step 3) Excess carbon credits will be allocated to member jurisdictions based on their financial contribution to the Metro Vancouver solid waste system in the previous year.

Rights of Way and Collaboration Agreement
If heat distribution networks are to be installed in public streets, Metro Vancouver will enter into an agreement with the host jurisdiction. The agreement would require approval by the Board, and would define:

• opportunities for host jurisdiction ownership of infrastructure;
• opportunities for use of energy within the host jurisdiction and energy allocation approach in the event there is not sufficient energy to meet all potential energy use demands;
• other host jurisdiction obligations and benefits beyond those identified in the Solid Waste Energy Policy;
• access and rights of way; and
• other relevant issues related to the project.

Business Case and Ownership Models
A business case will be completed for any solid waste energy project. The business case would define expected project costs and revenues, and risks and benefits including GHG emission reduction benefits.

There are many different ownership models for district energy systems in the Lower Mainland, including fully private systems, fully public systems, and concession models where the community retains title over the utility’s assets and enters into a long-term contract with an operator to design, build, finance, and operate the utility. Selecting an ownership model is a key element of developing a business case for a district heating system because it helps define project costs and allocate risks and benefits.

In 2016, Metro Vancouver engaged a consultant to conduct a technical, environmental, and economic assessment of a potential district energy project using heat from the Waste-to-Energy Facility. Greenhouse gas emission reductions for a district energy project using heat at the Waste-to-Energy Facility could range from 8,000 to 70,000 tonnes of CO2e per year, depending on the size of the project. The estimated capital cost of the equipment for a 50 MW system was $7.5M. Estimated costs for the transmission and distribution systems to service potential large scale developments
within an approximately 8 km radius of the Waste-to-Energy Facility were between $58.2M and $117.1M. The estimated energy rate at the property line for each development was $60/MWh, for an average user rate of $128/MWh, which is competitive compared to a business as usual cost of $100 - $170/MWh. These cost estimates would be updated as part of a more detailed business case.

ALTERNATIVES
1. That the GVS&DD Board:
   a) approve the Solid Waste Energy Policy; and
   b) direct staff to prepare a business case, including a recommended ownership model, for a district energy system using heat from the Waste-to-Energy Facility.
2. That the Zero Waste Committee receive the report dated May 7, 2019, titled “Solid Waste Energy Policy” and provide alternate direction to staff.

FINANCIAL IMPLICATIONS
If the Board approves Alternative 1, individual solid waste energy projects would be considered based on the financial and environmental benefits of the project, including avoided greenhouse gas emissions. As per the Carbon Price Policy, the carbon price of $150 per tonne of CO2e will be used in the life cycle analysis to calculate the value of applicable GHG emissions associated with the project. A business case including recommended ownership model for a district heating system from the Waste-to-Energy facility would be developed and provided to the Board for consideration.

Under Alternative 2, solid waste energy projects would continue to be considered on a case-by-case basis, and a business case for district heating at the Waste-to-Energy Facility would not be pursued at this time.

SUMMARY / CONCLUSION
The proposed Solid Waste Energy Policy establishes criteria for the development of energy projects at Metro Vancouver facilities that manage municipal solid waste or recyclable materials, and outlines a process for allocation of greenhouse gas reduction benefits. District heating from the Waste-to-Energy Facility would increase energy recovery and reduce greenhouse gas emissions.

Staff recommend Alternative 1, that the Board approve the Solid Waste Energy Policy and direct staff to proceed with a business case including determining the recommended ownership model for a district heating system for the Waste-to-Energy Facility. The business case, including the proposed ownership model, would be brought back to the Board for consideration.

Attachment
Solid Waste Energy Policy (Doc # 24957377)
SOLID WASTE ENERGY POLICY

Effective Date: Click or tap to enter a date.
Approved By: GVS&DD Board

PURPOSE
To establish criteria for development of GVS&DD energy projects from municipal solid waste or recyclable material. The Policy applies to projects at GVS&DD facilities.

DEFINITIONS
“Solid Waste Energy” refers to energy or material produced through GVS&DD municipal solid waste or recyclable material management projects including but not limited to waste-to-energy, anaerobic digestion, material recovery or other technologies that generate electricity, fuel, recyclables, or heat; and

“Energy User” refers to a third party accessing Solid Waste Energy from GVS&DD facilities. An Energy User may be a member municipality or other entity.

POLICY
Metro Vancouver is committed to pursuing strategies and actions that mitigate climate change. Energy generation projects that displace the use of fossil fuels result in a reduction in regional greenhouse gas emissions. Recovering energy from the solid waste system contributes to GVS&DD’s Integrated Solid Waste and Resource Management Plan goal of recovering energy from the waste stream after recycling.

This Policy enables expedient access to Solid Waste Energy where technically and financially feasible. This Policy applies to situations where external parties request Solid Waste Energy from GVS&DD’s solid waste system and where GVS&DD offers Solid Waste Energy to interested external parties.

Allocation of Solid Waste Energy
GVS&DD will allocate access to Solid Waste Energy through competitive processes or other processes approved by the Board.

Host Jurisdiction Collaboration
The GVS&DD will work collaboratively with the host jurisdiction in the development of a Solid Waste Energy project. For Solid Waste Energy Projects that require the installation and operation of energy distribution networks in public streets and consequently require approval for the installation of the networks, the GVS&DD will enter into an agreement with the host jurisdiction, defining:

• opportunities for host jurisdiction ownership of infrastructure;
• opportunities for use of energy within the host jurisdiction, and energy allocation approach in the event there is not sufficient energy to meet all potential energy use demands;
• other host jurisdiction obligations and benefits beyond those identified in this Policy;
• access and rights of way and any other use of public lands; and
• other relevant issues related to the project.

The agreement will be subject to GVS&DD Board approval.

Ownership and Responsibilities
The boundaries of responsibility for Solid Waste Energy equipment and infrastructure are primarily tied to property ownership and will be defined in a contract between GVS&DD and the Energy User(s). GVS&DD will own and be responsible for Solid Waste Energy equipment and related infrastructure installed within its GVS&DD facilities, except in cases where ownership by an external party is deemed preferable to the GVS&DD.

GVS&DD may own energy distribution infrastructure outside the property line of a GVS&DD facility where ownership of the offsite infrastructure:
• enhances opportunities to utilize the energy from the facility;
• ensures more equitable distribution of energy to potential users;
• increases opportunities for funding partnerships;
• simplifies regulatory requirements to the benefit of the project; or
• provides other benefits to the project and/or the GVS&DD.

Cost Recovery/Business Casing
Solid Waste Energy projects may require capital investment by GVS&DD and may require ongoing operations and maintenance by GVS&DD. GVS&DD does not seek to profit from Solid Waste Energy projects but will recover the costs, including lost revenues, incurred in providing Solid Waste Energy to external parties over the life of the project through energy fees paid by the external entities.

GVS&DD staff will evaluate Solid Waste Energy projects using established life cycle cost analysis and options analysis frameworks and will consider each project on a case-by-case basis. Benefits considered will include the value of avoided greenhouse gas emissions, as established in the Carbon Price Policy. A third party comprehensive business case, including economic, environmental and social factors along with analysis of project risks and risk allocation will be completed for any proposed Solid Waste Energy project.

A contract with each Energy User will be established for each project that assigns the costs, benefits and risks between GVS&DD, the Energy User and other funding sources.

Environmental Attributes
Benefits associated with greenhouse gas reductions (such as carbon offset credits) and the costs of administering those benefits will be allocated on a case-by-case basis, in accordance with the costs and risks incurred by the parties involved in developing each Solid Waste Energy project.
Carbon credits will be allocated to the host jurisdiction as a project proponent for contributions to the project that can be financially valued. In recognition of the important role of the host and of impacts that cannot be valued financially, the host jurisdiction will receive 5% of the credits allocated to GVS&DD for the initial term of the agreement for the sale of energy. The host jurisdiction shall be deemed the GVS&DD member municipality where the GVS&DD facility generating the Solid Waste Energy is located even if Solid Waste Energy is used in more than one municipality.

Carbon credits from GVS&DD Solid Waste Energy projects that have been allocated to GVS&DD as a project proponent will be retained by GVS&DD, up to the amount needed for GVS&DD Solid Waste function to be carbon neutral in a given year. If the GVS&DD Solid Waste function achieves carbon neutrality in a given year, excess carbon credits will be allocated to member jurisdictions. Excess carbon credits will be allocated to member jurisdictions based on their financial contribution to the Metro Vancouver solid waste system in the previous year.

**Approvals**

Solid Waste Energy Projects and associated Agreements require GVS&DD approval.

Project development will be subject to statutory municipal approval processes.
To: Zero Waste Committee
From: Brandon Ho, Senior Project Engineer, Solid Waste Services
Date: May 7, 2019
Meeting Date: May 17, 2019
Subject: 2018 Disposal Ban Program Update

RECOMMENDATION
That the Zero Waste Committee receive for information the report dated May 7, 2019, titled “2018 Disposal Ban Program Update”.

PURPOSE
The purpose of this report is to update the Zero Waste Committee on the 2018 results of the Metro Vancouver Disposal Ban Program.

BACKGROUND
Metro Vancouver reports out annually on the Disposal Ban Program. Disposal bans help keep readily recyclable materials, as well as materials that pose operational risk and other hazards, out of the landfill, Waste-to-Energy Facility and transfer stations. Each year Disposal Ban Program reporting is included in the Zero Waste Committee workplan and as such this report is being brought forward at this time.

2018 DISPOSAL BAN PROGRAM RESULTS
The Disposal Ban Program is a key waste reduction strategy identified in the Integrated Solid Waste and Resource Management Plan. Banned materials are specified in the Greater Vancouver Sewerage and Drainage District Tipping Fee and Solid Waste Disposal Regulation Bylaw (Tipping Fee Bylaw). Loads received at Metro Vancouver and City of Vancouver disposal facilities are visually inspected for banned materials, and surcharges are levied if banned materials are present in the loads, beyond thresholds defined in the Tipping Fee Bylaw.

Over 50 materials are included in the program with inspections occurring regularly at all Metro Vancouver and City of Vancouver facilities. Metro Vancouver reports annually on program results by inspection rates, surcharged materials, surcharge rates by company/municipality and other program information. 2018 banned materials are listed in attachment 1.

Table 1 provides multi-year data on the Disposal Ban Program. In 2018, 188,135 or 25% of garbage loads were inspected. About 9% or 16,707 loads contained banned materials, with surcharge notices being issued to 3,554 loads representing a surcharge rate of 1.9%, consistent with previous years. In the remaining 13,153 loads, the banned materials were observed, but not disposed. These materials are typically dropped off for recycling at the transfer station rather than disposed. The inspectors’ interactions with customers help prevent banned materials from being disposed and inspectors provide alternative recycling options to customers.
Table 1: Inspection Statistics for Metro Vancouver and City of Vancouver Solid Waste Facilities

<table>
<thead>
<tr>
<th>Year</th>
<th>Garbage Loads</th>
<th>Loads Inspected</th>
<th>Inspection Rate</th>
<th>Loads with Banned Materials but not Disposed (no surcharge notice issued)</th>
<th>Surcharge Notices Issued</th>
<th>Surcharge Rate(1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>756,426</td>
<td>180,530</td>
<td>24%</td>
<td>16,424</td>
<td>3,430</td>
<td>1.9%</td>
</tr>
<tr>
<td>2017</td>
<td>748,994</td>
<td>220,624</td>
<td>29%</td>
<td>20,549</td>
<td>4,138</td>
<td>1.9%</td>
</tr>
<tr>
<td>2018</td>
<td>741,600</td>
<td>188,135</td>
<td>25%</td>
<td>13,153</td>
<td>3,554</td>
<td>1.9%</td>
</tr>
</tbody>
</table>

1. Surcharge rate equals the number of surcharge notices divided by the number of inspected loads.

Results by Material Type
Table 2 shows the distribution of banned materials in surcharged loads. Over the last 3 years, electronic waste, including household electronic goods such as vacuums, microwaves, audio systems, televisions, computers and printers, has consistently had the highest number of surcharge notices. However, the trend in surcharge notices issued for electrical waste has decreased from 35% in 2016 to 25% in 2018. Corrugated cardboard made up 19% of the surcharge notices in 2018, up from 10% in 2016.

Mattresses, gypsum and clean wood accounted for 16%, 10% and 6% of surcharge notices in 2018, respectively. Improper gypsum disposal continues to be a challenge in the region due to more stringent recycling requirements and associated costs, especially for used gypsum.

Due to limited capacity at composting facilities within the region, the clean wood and food waste disposal ban surcharges were relaxed at the Waste-to-Energy Facility for three months in early 2018. The clean wood disposal ban was relaxed for all facilities at the end of 2018 due to challenges recycling construction and demolition waste in the region.

An expanded polystyrene packaging disposal ban was introduced in January, 2018 with surcharges beginning in July. Loads containing over 20% of expanded polystyrene packaging are issued a surcharge of 100% of the applicable tipping fee. Expanded polystyrene packaging accounted for 1% of surcharge notices in 2018. Other banned materials listed in Table 2 remained stable and individually accounted for 5% or less of total surcharge notices.

Table 2: Summary of Materials Contained in Surcharged Loads at Metro Vancouver and City of Vancouver Solid Waste Facilities

<table>
<thead>
<tr>
<th>Material</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electronic Waste</td>
<td>35%</td>
<td>28%</td>
<td>25%</td>
</tr>
<tr>
<td>Cardboard</td>
<td>10%</td>
<td>16%</td>
<td>19%</td>
</tr>
<tr>
<td>Mattresses</td>
<td>16%</td>
<td>17%</td>
<td>16%</td>
</tr>
<tr>
<td>Gypsum</td>
<td>9%</td>
<td>9%</td>
<td>10%</td>
</tr>
<tr>
<td>Clean Wood</td>
<td>5%</td>
<td>7%</td>
<td>6%</td>
</tr>
<tr>
<td>Tires</td>
<td>5%</td>
<td>5%</td>
<td>5%</td>
</tr>
<tr>
<td>Other Banned Materials</td>
<td>4%</td>
<td>4%</td>
<td>4%</td>
</tr>
<tr>
<td>Large Objects</td>
<td>4%</td>
<td>2%</td>
<td>4%</td>
</tr>
<tr>
<td>Paint (Includes empty containers)</td>
<td>5%</td>
<td>5%</td>
<td>3%</td>
</tr>
<tr>
<td>Food Waste</td>
<td>2%</td>
<td>3%</td>
<td>2%</td>
</tr>
<tr>
<td>Green Waste</td>
<td>2%</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>Expanded Polystyrene Packaging</td>
<td>N/A</td>
<td>N/A</td>
<td>1%</td>
</tr>
<tr>
<td>Oil (Includes containers and filters)</td>
<td>2%</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>Recyclable Containers</td>
<td>0.8%</td>
<td>0.5%</td>
<td>1%</td>
</tr>
<tr>
<td>Recyclable Paper</td>
<td>0.2%</td>
<td>0.5%</td>
<td>1%</td>
</tr>
</tbody>
</table>
Results by Customer Type
Table 3 summarizes the number of inspections and surcharge notices by customer type (e.g., commercial, municipal and cash customers). The surcharge rate for commercial loads is higher than other customer types due to the types of materials and how they are collected. Cash customers, normally driving small hand-unloaded vehicles, are able to separate and recycle banned materials more easily, while banned items in commercial loads cannot typically be reloaded into garbage trucks for safety and operational reasons.

<table>
<thead>
<tr>
<th>Customer Type</th>
<th>Inspections</th>
<th>Surcharge Notices</th>
<th>Surcharge Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commercial</td>
<td>62,273</td>
<td>2,905</td>
<td>4.7%</td>
</tr>
<tr>
<td>Municipal</td>
<td>12,585</td>
<td>293</td>
<td>2.3%</td>
</tr>
<tr>
<td>Cash Customers</td>
<td>113,277</td>
<td>356</td>
<td>0.3%</td>
</tr>
<tr>
<td>Totals</td>
<td>188,135</td>
<td>3,554</td>
<td>1.9%</td>
</tr>
</tbody>
</table>

Dispute Resolution
Customers may dispute a surcharge within 30 days of it being issued by completing a dispute form. There were seventeen surcharge disputes in 2018 related to corrugated cardboard, expanded polystyrene packaging, electronics, gypsum, clean wood, mattresses, paint and dusty loads. Nine surcharge notices were rescinded as summarized in Table 4.

<table>
<thead>
<tr>
<th>Year</th>
<th>Surcharge Disputes Received</th>
<th>Surcharge Notices Rescinded</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>78</td>
<td>3</td>
</tr>
<tr>
<td>2017</td>
<td>49</td>
<td>7</td>
</tr>
<tr>
<td>2018</td>
<td>17</td>
<td>9</td>
</tr>
</tbody>
</table>

Hauler Surcharge Information
The surcharge amount for each hauler with total surcharges exceeding $500 is shown in attachment 2 (excludes City of Vancouver solid waste facilities). The hauler surcharge rate is the number of surcharge notices divided by the estimated number of inspections for each hauler.

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

FINANCIAL IMPLICATIONS
In 2018, total surcharge revenue was $337,213, with $319,680 from Metro Vancouver solid waste facilities and $17,533 from City of Vancouver solid waste facilities. The total program expenditures in 2018 were $661,898.

SUMMARY
The Disposal Ban Program is a key waste reduction strategy identified in the Integrated Solid Waste and Resource Management Plan. In 2018, 188,135 loads were inspected, 16,707 loads were found to contain banned materials and 3,554 surcharge notices were issued. The Disposal Ban Program remains an effective tool to encourage waste reduction and diversion.

Attachments
1. 2018 Banned Materials
2. 2018 Solid Waste Surcharge Information at Metro Vancouver Facilities
# 2018 Banned Materials

## Banned Hazardous and Operational Materials
($65 surcharge on any single item plus the costs of remediation and clean-up)

<table>
<thead>
<tr>
<th>Agricultural Waste</th>
<th>Hazardous Waste</th>
</tr>
</thead>
<tbody>
<tr>
<td>Automobile Parts</td>
<td>Inert Fill Materials</td>
</tr>
<tr>
<td>Barrels or Drums (205 L or greater)</td>
<td>Liquids or Sludge</td>
</tr>
<tr>
<td>Creosote Treated Wood</td>
<td>Mattresses</td>
</tr>
<tr>
<td>Dead Animals</td>
<td>Oversize Objects</td>
</tr>
<tr>
<td>Dusty or Odourous</td>
<td>Personal Hygiene Products over 10% of the load</td>
</tr>
<tr>
<td>Excrement</td>
<td>Propane Tanks</td>
</tr>
<tr>
<td>Flammable Materials</td>
<td>Toxic Plants</td>
</tr>
<tr>
<td>Gypsum</td>
<td>Wire, Hosing, Rope or Cable longer than 1 m</td>
</tr>
</tbody>
</table>

## Banned Recyclable Materials
(50% surcharge on Items above the threshold)

5% threshold on any combination of the following:
- Beverage containers
- Other recyclable plastic, glass, metal, and composite material containers
- Corrugated cardboard
- Recyclable paper
- Green waste
- Clean Wood

25% threshold on food waste

## Banned Recyclable Materials
(100% surcharge on Items above the threshold)

20% threshold on expanded polystyrene packaging

## Banned Product Stewardship Materials
($65 surcharge on any single item)

<table>
<thead>
<tr>
<th>Antifreeze and Containers</th>
<th>Paint and Paint Containers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electronics and Electrical Products</td>
<td>Pesticides</td>
</tr>
<tr>
<td>Gasoline</td>
<td>Pharmaceutical Products and Medications</td>
</tr>
<tr>
<td>Lead-Acid Batteries</td>
<td>Solvents and Flammable Liquids</td>
</tr>
<tr>
<td>Lubricating Oil and Containers</td>
<td>Tires</td>
</tr>
<tr>
<td>Oil, Oil Filters, Oil Containers</td>
<td></td>
</tr>
</tbody>
</table>

Zero Waste Committee
<table>
<thead>
<tr>
<th>Hauler (MV facilities)</th>
<th>Surcharge Amount*</th>
<th>Hauler Surcharge Rate**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Action Environmental Services Inc.</td>
<td>$ 972</td>
<td>5%</td>
</tr>
<tr>
<td>B.C. Industrial Containers</td>
<td>$ 520</td>
<td>26%</td>
</tr>
<tr>
<td>Canada Minibins Ltd.</td>
<td>$ 3,640</td>
<td>3%</td>
</tr>
<tr>
<td>Cascades Recovery Plus</td>
<td>$ 1,333</td>
<td>3%</td>
</tr>
<tr>
<td>City of Burnaby</td>
<td>$ 10,276</td>
<td>5%</td>
</tr>
<tr>
<td>City of Coquitlam</td>
<td>$ 1,430</td>
<td>3%</td>
</tr>
<tr>
<td>City of Langley</td>
<td>$ 694</td>
<td>6%</td>
</tr>
<tr>
<td>City of New Westminster</td>
<td>$ 1,105</td>
<td>4%</td>
</tr>
<tr>
<td>City of Port Coquitlam</td>
<td>$ 1,950</td>
<td>8%</td>
</tr>
<tr>
<td>City of Surrey</td>
<td>$ 10,259</td>
<td>5%</td>
</tr>
<tr>
<td>Cloverdale Fuel Ltd.</td>
<td>$ 1,205</td>
<td>20%</td>
</tr>
<tr>
<td>District of North Vancouver</td>
<td>$ 1,201</td>
<td>1%</td>
</tr>
<tr>
<td>Four Season Roofing and Disposal Lt.</td>
<td>$ 583</td>
<td>8%</td>
</tr>
<tr>
<td>Great West Disposal</td>
<td>$ 1,185</td>
<td>14%</td>
</tr>
<tr>
<td>Halton Recyling Ltd.</td>
<td>$ 13,455</td>
<td>6%</td>
</tr>
<tr>
<td>Mack Kirk Roofing &amp; Sheet Metal Ltd.</td>
<td>$ 785</td>
<td>3%</td>
</tr>
<tr>
<td>Maple Leaf Disposal Ltd.</td>
<td>$ 2,933</td>
<td>3%</td>
</tr>
<tr>
<td>Metro Disposal</td>
<td>$ 797</td>
<td>1%</td>
</tr>
<tr>
<td>Mini-Load Disposal</td>
<td>$ 2,530</td>
<td>9%</td>
</tr>
<tr>
<td>MT Disposal King Ltd.</td>
<td>$ 2,914</td>
<td>16%</td>
</tr>
<tr>
<td>NSD Disposal Ltd.</td>
<td>$ 5,835</td>
<td>9%</td>
</tr>
<tr>
<td>Orgaworld Canada Ltd.</td>
<td>$ 1,934</td>
<td>4%</td>
</tr>
<tr>
<td>Providence Health Care</td>
<td>$ 561</td>
<td>3%</td>
</tr>
<tr>
<td>Revolution Resource Recovery Inc.</td>
<td>$ 25,111</td>
<td>7%</td>
</tr>
<tr>
<td>RJ Disposal Ltd.</td>
<td>$ 860</td>
<td>6%</td>
</tr>
<tr>
<td>Segal Disposal</td>
<td>$ 628</td>
<td>9%</td>
</tr>
<tr>
<td>SF Disposal Queen</td>
<td>$ 970</td>
<td>8%</td>
</tr>
<tr>
<td>Smithrite Disposal Ltd.</td>
<td>$ 40,637</td>
<td>5%</td>
</tr>
<tr>
<td>Super Save Disposal Inc.</td>
<td>$ 27,366</td>
<td>5%</td>
</tr>
<tr>
<td>Urban Impact Recycling Ltd.</td>
<td>$ 737</td>
<td>1%</td>
</tr>
<tr>
<td>Vancouver Coastal Health</td>
<td>$ 10,343</td>
<td>15%</td>
</tr>
<tr>
<td>Waste Connections of Canada</td>
<td>$ 45,201</td>
<td>9%</td>
</tr>
<tr>
<td>Waste Control Services Inc.</td>
<td>$ 9,843</td>
<td>4%</td>
</tr>
<tr>
<td>Waste Management of Canada Corporation</td>
<td>$ 55,903</td>
<td>9%</td>
</tr>
<tr>
<td>Wescan Disposal</td>
<td>$ 1,256</td>
<td>3%</td>
</tr>
<tr>
<td>Yellow Fence Rentals Inc.</td>
<td>$ 3,203</td>
<td>33%</td>
</tr>
</tbody>
</table>

* Does not include haulers with surcharge amounts less than $500.

** Hauler surcharge rate is equal to the number of surcharges divided by the estimated number of inspections for each hauler. The estimated inspection rate is assumed to be equal to the overall inspection rate for that category of customer.

### 2018 Solid Waste Surcharge Summary

<table>
<thead>
<tr>
<th>2018 Solid Waste Surcharge Summary</th>
<th>Surcharge Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metro Vancouver Facilities ($ 319,680)</td>
<td></td>
</tr>
<tr>
<td>- Commercial</td>
<td>$ 269,594</td>
</tr>
<tr>
<td>- Municipal</td>
<td>$ 27,498</td>
</tr>
<tr>
<td>- Cash Customers</td>
<td>$ 22,588</td>
</tr>
<tr>
<td>City of Vancouver Facilities</td>
<td>$ 17,533</td>
</tr>
<tr>
<td>Total</td>
<td>$ 337,213</td>
</tr>
</tbody>
</table>
To: Zero Waste Committee

From: Larina Lopez, Division Manager, Corporate Communications, External Relations

Date: April 30, 2019

Meeting Date: May 17, 2019

Subject: Update on Metro Vancouver’s Engagement with the Love Food Hate Waste Canada Campaign

**RECOMMENDATION**
That the Zero Waste Committee receive for information the report dated March 27, 2019, titled “Update on Metro Vancouver’s Engagement with the Love Food Hate Waste Canada Campaign.”

**PURPOSE**
To update the Committee on Metro Vancouver’s engagement with the Love Food Hate Waste Canada behaviour change campaign.

**BACKGROUND**
Metro Vancouver launched a Love Food Hate Waste campaign in May 2015. The campaign was licensed from Waste and Resources Action Programme UK. The objective of the campaign was to prevent avoidable household food waste. Over three years, Metro Vancouver took the campaign to such a level that it became the basis for a national campaign – Love Food Hate Waste Canada – launched by the National Zero Waste Council in July 2018 (Reference 1).

This report provides an update on the past year of Metro Vancouver’s engagement with the Love Food Hate Waste Canada behaviour change campaign, as identified in the 2019 Zero Waste Committee Work Plan.

**LOVE FOOD HATE WASTE CANADA (LFHW)**
The Love Food Hate Waste Canada campaign (Reference 2) was launched in July 2018 by the National Zero Waste Council. This involved adapting Metro Vancouver’s Love Food Hate Waste regional campaign to one relevant to audiences across Canada, including translation into French. The launch involved simultaneous events in Montreal, Toronto and Metro Vancouver with nine partners: the cities of Toronto, Vancouver, and Victoria, Capital Regional District, Metro Vancouver, RECYC-QUÉBEC, Province of British Columbia, Sobeys, and Walmart.

Love Food Hate Waste Canada is a bilingual campaign that uses digital media (including social media), conventional media, and activations in grocery stores and public events in communities across Canada. In moving to a national platform, the impact of the campaign to reduce household food waste will be improved by multiple partners communicating the same messages about the value of reducing food waste and the relatively easy steps households can adopt in buying and storing food and in preparing meals that will make a positive difference. As the campaign grows, it will continue to engage more and more partners across Canada.
Highlights from year one of Love Food Hate Waste Canada include:

- Summer promotion featuring stats about food waste in Canada (Attachment 1)
- Fall promotion featuring tips to use up all the food you buy, including native content with Chatelaine Magazine (Attachment 2)
- Seasonal social media posts, with themes such as “Summer BBQs” and “Thanksgiving”
- The campaign was featured at Metro Vancouver’s Zero Waste Conference, including a special presentation by celebrity chef Bob Blumer who has become an ambassador for the campaign.

As a campaign partner, Metro Vancouver is part of a national media buy that promotes the above elements. Metro Vancouver also activates the campaign regionally through outreach events. In 2018/2019, the LFHW outreach team was at 13 event days throughout the region, including farmers markets, the Vancouver Landfill Open House, Port Moody Car Free Day, PNE “Agriculture in the City”, the UBC Apple Festival, and the Zero Waste Conference.

Several Metro Vancouver members use the campaign materials in their own communities, and the City of Vancouver has become a partner in the national Love Food Hate Waste Canada campaign.

**Plans for 2019-2020**

The national Love Food Hate Waste Canada campaign continues to build momentum and Metro Vancouver will continue to be a partner in the national campaign, including participation in national ad buys and amplifying the national campaign through the creative materials and targeted outreach events throughout the region.

A spring/summer campaign will launch mid-May, featuring new content around the theme of “Plan It, Use It, Eat It” done in collaboration with renowned Canadian chef Bob Blumer. This campaign will be in market until mid-June and will focus on national media, outreach and engagement with events scheduled in Toronto and Vancouver (with more still in development). Campaign partners across the country are also ramping up efforts and implementing the campaign with great success – helping to raise the profile of the campaign and reach new audiences. LFHW Canada will enter its second year on July 1 and plans are underway for another round of coordinated national action and collaboration for the fall of 2019.

**ALTERNATIVES**

This is an information report. No alternatives are presented.

**FINANCIAL IMPLICATIONS**

The 2019 budget for Metro Vancouver’s participation in the Love Food Hate Waste Canada campaign is $82,000, supported under the Zero Waste Communications Program of the 2019 General Government budget and managed by the External Relations department. Of this, $42,000 is allocated for the national membership fee and $40,000 is for regional activation.

**SUMMARY / CONCLUSION**

Metro Vancouver launched a regional Love Food Hate Waste campaign in May 2015. The objective was to prevent avoidable household food waste. Over three years, Metro Vancouver took the
campaign to such a level that it became the basis for a national campaign – Love Food Hate Waste Canada – launched in 2018 by the National Zero Waste Council, an initiative of Metro Vancouver.

Love Food Hate Waste Canada brings together nine partners: the cities of Toronto, Vancouver, and Victoria, Capital Regional District, Metro Vancouver, RECYC-QUÉBEC, Province of British Columbia, Sobeys, and Walmart. Love Food Hate Waste Canada is a bilingual campaign that uses digital media (including social media), conventional media, and activations in grocery stores and public events in communities across Canada. As a partner to a national campaign, Metro Vancouver’s efforts to reduce household food waste will be greatly enhanced by multiple partners. These partners communicate the same messages about the value of reducing food waste and the steps households can take in buying and storing food and in preparing meals that will make a positive difference. As the campaign grows, it will continue to engage more partners across Canada.

**Attachments**
1. Love Food Hate Waste Canada Summer 2018 Promotion – Creative Examples
2. Love Food Hate Waste Canada Fall 2018 Promotion – Creative Examples

**References**
1. [Media Release: National Launch of Love Food Hate Waste in Canada](#)
2. [Love Food Hate Waste Canada Website](#)

29440819
Love Food Hate Waste Canada Summer 2018 Promotion – Creative Examples

Sample Posters / Transit Shelter Ads

Screenshots from Animated Digital Banner Ad
Sample Instagram Post

Let's stop wasting food.

cosmosaudry @powdermonkey007 @tea_is_for_tanita

powdermonkey007

collenlogusto I truly love this initiative. When I first encountered it, I formed a new habit. Every Saturday I take everything out of the fridge and figure out what I can make with it. Stuff like kale and cheddar scones served with gingerly carrot and sweet potato soup; spinach and parsley pesto with pasta cooked with parsnip rinds; roasted eggplant and tomato 'caponata' with pita bread crisps ...

My family loves these one time only recipes. Then I buy my "new" groceries in Sunday. No garbage anymore. Thank you.

Zero Waste Committee
Love Food Hate Waste Canada Fall 2018 Promotion – Creative Examples

Poster

Sample Facebook Post
Screenshots from the “3 Ways to Use Leftover Chicken” Video
(Native Content produced with Chatelaine Magazine)
3 GENIUS WAYS TO USE VEGETABLE SCRAPS

Presented by Love Food Hate Waste Canada

Rich Media Ad Unit
(Native Content produced with Chatelaine Magazine)
To: Zero Waste Committee

From: Paul Henderson, General Manager, Solid Waste Services

Date: May 9, 2019

Subject: Manager’s Report

RECOMMENDATION
That the Zero Waste Committee receive for information the report dated May 9, 2019, titled “Manager’s Report”.

Residential Used Gypsum Disposal Program Update
Metro Vancouver’s residential used gypsum disposal program provides residents with safe disposal options for small quantities of used gypsum without having it tested for asbestos. Residents can drop off up to 10 bags of used gypsum per trip, up to five times per year at a fee of $200 per tonne. The used gypsum must be double-bagged and sealed in special clear “used gypsum program” bags, which are available at many home improvement retailers. Used gypsum received at Metro Vancouver’s transfer stations is sent for safe disposal at a landfill in the United States.

The program began in September 2016 at the Langley and Maple Ridge Transfer Stations and received combined, an average of 42 tonnes/month. In November 2018, the program was expanded to all of the region’s transfer stations, increasing the average monthly collection across all transfer stations to 91 tonnes/month. To date, approximately 1,700 tonnes have been collected through the program. Used gypsum is also accepted for disposal at the Vancouver Landfill. New, never installed gypsum is accepted for recycling at all Metro Vancouver transfer stations.

2019 Zero Waste Committee Work Plan
The attachment to this report sets out the Committee’s work plan for 2019. 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.
## Zero Waste Committee 2019 Work Plan

**Report Date:** May 9, 2019

### Priorities

<table>
<thead>
<tr>
<th>1st Quarter</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017 Solid Waste and Recycling - Annual Report</td>
<td>Complete</td>
</tr>
<tr>
<td>Solid Waste Regulatory Framework - Update</td>
<td>Complete</td>
</tr>
<tr>
<td>Electronic Disposal Ban Tool</td>
<td>Complete</td>
</tr>
<tr>
<td>2018 Waste Composition Monitoring Program</td>
<td>In progress</td>
</tr>
<tr>
<td>Recycling Markets Update</td>
<td>Complete</td>
</tr>
<tr>
<td>National Zero Waste Council Update</td>
<td>Complete</td>
</tr>
<tr>
<td>2018 Zero Waste Conference Results</td>
<td>Complete</td>
</tr>
<tr>
<td>2018 Create Memories Not Garbage Campaign Results</td>
<td>Complete</td>
</tr>
<tr>
<td>2018 Food Scraps Campaign Results</td>
<td>Complete</td>
</tr>
<tr>
<td>2019 Textiles Campaign Launch</td>
<td>Complete</td>
</tr>
<tr>
<td>Residential Used Gypsum Disposal Program Update</td>
<td>Complete</td>
</tr>
<tr>
<td>Customer Operational Notification</td>
<td>In progress</td>
</tr>
<tr>
<td>Asset Management Policy</td>
<td>Complete</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>2nd Quarter</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018 Disposal Ban Inspection Program</td>
<td>In progress</td>
</tr>
<tr>
<td>Coquitlam Transfer Station Replacement – Update and Operations Contract</td>
<td>Pending</td>
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<tr>
<td>Single Use Item Reduction Strategy</td>
<td>Complete</td>
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<tr>
<td>Organics Regulatory Framework and Procurement Processes</td>
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</tr>
<tr>
<td>Construction and Demolition Material Regulatory Framework</td>
<td>Pending</td>
</tr>
<tr>
<td>Transfer Station Paid Recyclables Funding Model</td>
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</tr>
<tr>
<td>Love Food Hate Waste Canada – Campaign Updates</td>
<td>In progress</td>
</tr>
<tr>
<td>2018 Waste-to-Energy Facility Financial Summary</td>
<td>Complete</td>
</tr>
<tr>
<td>2018 Waste-to-Energy Facility Environmental Performance Summary</td>
<td>Pending</td>
</tr>
<tr>
<td>Waste-to-Energy Facility Non-Ferrous Metal Recovery System</td>
<td>Complete</td>
</tr>
<tr>
<td>Solid Waste Energy Policy</td>
<td>In progress</td>
</tr>
<tr>
<td>30-Year Financial Plan: Solid Waste Scenarios</td>
<td>Pending</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>3rd Quarter</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019 Zero Waste Conference</td>
<td>Pending</td>
</tr>
<tr>
<td>Extended Producer Responsibility</td>
<td>Pending</td>
</tr>
<tr>
<td>Expanded Polystyrene Disposal Ban Implementation Progress</td>
<td>Pending</td>
</tr>
<tr>
<td>Surrey Recycling and Waste Drop-Off Facility – Construction Contract</td>
<td>Pending</td>
</tr>
<tr>
<td>Unsecured Loads Surcharge Update</td>
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Dear Minister Heyman:

Re: Bylaw 181 Update and Commercial Waste Hauler Licensing Bylaw Request for Approval

I am writing to advise you that at its March 29, 2019 regular meeting, the Board of Directors of the Greater Vancouver Sewerage and Drainage District (Metro Vancouver) adopted the following resolution with respect to two bylaws awaiting your approval:

That the GVS&DD Board:

a) receive for information the report dated March 1, 2019, titled "Bylaw 181 Update and Commercial Waste Hauler Licensing Bylaw Overview"; and

b) send a letter to the Minister of Environment and Climate Change Strategy requesting that the Minister approve the GVS&DD Commercial Waste Hauler Licensing Bylaw No. 307, 2017 and the GVS&DD Solid Waste and Recyclable Material Regulatory Amending Bylaw No. 309, 2017.

GVS&DD Commercial Waste Hauler Licensing Bylaw No. 307, 2017 (Bylaw 307) implements a commercial waste hauler licensing program that is specifically included as an action in Metro Vancouver’s Integrated Solid Waste and Resource Management Plan, and is identified as a regulatory tool available to all regional districts in the Environmental Management Act. GVS&DD Solid Waste and Recyclable Material Regulatory Amending Bylaw No. 309, 2017 (Bylaw 309) modernizes the GVS&DD Solid Waste and Recyclable Material Regulatory Bylaw No. 181, 1996, a bylaw that has not been updated for more than 20 years.

With the high level of support from the Metro Vancouver Board along with support from a broad range of stakeholders including the David Suzuki Foundation, the Retail Council of Canada, the Recycling Council of British Columbia, the Solid Waste Association of North America, recycling service providers, product stewardship agencies and regional districts, we are hopeful that you will proceed with approval of Bylaw 307 and Bylaw 309.
Environmental Sustainability
Metro Vancouver requests the approval of Bylaws 307 and 309 because the adoption of these bylaws will result in direct environmental benefits to the Metro Vancouver region and the Province.

Once approved, Bylaw 307 will require every multi-family and commercial/institutional generator be provided with separate recycling and organics collection, and that the materials be managed separately following collection. This requirement aligns directly with the CleanBC goal of helping communities achieve 95% organic waste diversion. Increased recycling will also increase quantities of recyclables available to processors, providing economies of scale and driving down recycling costs.

Bylaw 309 will ensure a level playing field between technology approaches helping to advance innovative diversion options. Reporting requirements in both Bylaws 307 and 309 will improve Metro Vancouver’s ability to monitor progress in achieving waste reduction goals and assist in defining waste diversion priorities.

The proposed changes included in Bylaws 307 and 309 will provide essential tools to assist Metro Vancouver in meeting the goals of its Integrated Solid Waste and Resource Management Plan and help enable Metro Vancouver to advance innovative environmental initiatives including the recently approved mixed waste processing pilot and Waste-to-Energy Facility district heating. These initiatives have the potential to reduce greenhouse gas emissions by as much as 100,000 tonnes per year of carbon dioxide equivalent.

Cost Implications for Residents and Businesses
Questions have been raised as to whether Bylaws 307 and 309 will result in additional costs to residents and businesses, with a suggestion that these bylaws will result in a 50% increase in costs for residents and businesses in the region. The claim is not supported by rationale or data.

The only cost associated with Bylaw 307 is an annual license fee of $100 per waste hauling company plus the cost to provide recycling to those generators who currently do not receive this service. Metro Vancouver estimates that more than 80% of multi-family and commercial/institutional generators already have recycling services, including organics recycling. Therefore, additional costs would only be incurred for the less than 20% of generators that do not currently have recycling services. Over time, these costs may be offset through recycling savings and decreased garbage disposal costs as generators recycle greater volumes of material, and dispose of less waste. Costs to generators are also offset by avoided environmental costs that will be achieved from reducing the amount of waste incinerated or sent to landfill. No new costs result from Bylaw 309.

Some parties have also suggested that these bylaws will result in uncontrolled future waste tipping fees. This assertion is incorrect - tipping fees are unrelated to Bylaw 307 and 309 (which concern licensing of waste haulers and private facilities). The GVS&DD Board sets waste tipping fees by bylaw on an annual basis. Tipping fees are set based on expected costs for the subsequent year along with projected waste quantities. The process for setting tipping fees is open and transparent with proposed bylaws being considered by the Board in open meetings. Any proposed future increases in tipping fees will be considered by Metro Vancouver’s Board through the annual budget and five year
financial planning process which is considered through a series of public meetings before final adoption by the Board.

If Bylaws 307 and 309 are not approved, and the Generator Levy is not sustained, in addition to various environmental consequences, there will be economic consequences. Under this scenario, haulers would likely direct waste to private sector transfer stations to lower costs and avoid disposal bans. This has been the experience in Calgary where a private sector transfer station in an adjacent community receives commercial waste from Calgary.

A scenario where generators can direct waste to private transfer stations and avoid paying for the fixed cost of the regional system would require either dramatically scaled back regional solid waste services including waste reduction and recycling initiatives, and/or a requirement for substantial property tax contributions to support publicly-funded solid waste infrastructure. This outcome would harm residents and businesses in the region, and would not constitute the fair allocation of costs required to implement Metro Vancouver's Integrated Solid Waste Regional Management Plan.

License Terms
It has been suggested by some industry stakeholders that the Bylaw 307 hauler license term of 1 year and the Bylaw 309 maximum 10 year facility license term are unreasonable because the license term limits create uncertainty about license renewal. Metro Vancouver views the concern of these stakeholders as misplaced and unwarranted.

The hauler license will be renewed each year as long as the hauler has complied with the terms of the license, including paying all required fees and the Generator Levy and complying with data reporting requirements. The annual renewal mechanism, similar to municipal business licenses, permits Metro Vancouver to ensure that license terms are met on an ongoing basis.

The maximum 10 year facility license term in Bylaw 309 allows a scheduled review of license requirements, and enables Metro Vancouver to encourage implementation of new technologies over time. Maximum license/permit terms are in place in Alberta – 10 years, Nova Scotia – 10 years and New Brunswick – 5 years. License renewal requirements are defined in Bylaw 309 and are less onerous than the requirements for new licenses.

Competition Bureau Inquiry
As you may be aware, the federal Competition Bureau is conducting an inquiry into Metro Vancouver’s regulatory framework, which it initiated following complaints from industry participants.

We believe that the Bureau, in its inquiry, has focused on an initial basis on narrow economic concepts that do not take into account the environmental and other public interest objectives of Bylaws 307 and 309, and Metro Vancouver’s broader solid waste regulatory framework. The bylaws are designed to, and do, promote competition in the waste collection and recycling industries by ensuring a level playing field for market participants, and by lowering barriers to entry for market participants.
Metro Vancouver continues to work with the Competition Bureau. The Bureau’s processes are independent of consideration of Bylaws 307 and 309.

**Conclusion**
The bylaws before you have been developed following extensive consultation, are broadly supported, advance waste diversion, reduce greenhouse gas emissions and promote competition and innovation. Metro Vancouver’s goal is to ensure that all generators have access to recycling services and that private facilities operate with consistent regulatory requirements. This is fundamental to achieving both Metro Vancouver and CleanBC waste diversion targets.

We urge you to approve the bylaws. If you have specific concerns with respect to provisions in the bylaws, we would be happy to meet to discuss those concerns with the potential for revising the bylaws prior to your final consideration.

Thank you for your consideration of this important issue.

Yours sincerely,

Sav Dhaliwal
Chair, Metro Vancouver Board

Jack Froese
Chair, Zero Waste Committee

cc: The Honorable Selina Robinson, Minister of Municipal Affairs and Housing

Enc: Report dated March 7, 2019, titled “Bylaw 181 Update and Commercial Waste Hauler Licensing Bylaw Overview” (Doc# 28865250) Attachment not included

29130916

Zero Waste Committee
February 26, 2019

Sav Dhaliwal
Board Chair, Metro Vancouver
Metrotower III, 4730 Kingsway
Burnaby, BC V5H 0C6

Dear Mr. Dhaliwal:

Re: 2018 Zero Waste Conference

This is to advise that Richmond City Council at its Regular Council meeting held on Monday, February 25, 2019, considered the above matter and adopted the following resolution:

(1) That the report regarding “2018 Zero Waste Conference Update” dated February 1, 2019, from the Director, Public Works Operations be received for information;

(2) That letters be sent to the Board Chair of Metro Vancouver and the Federal and Provincial Ministers, Environment and Climate Change, requesting their leadership in advancing the circular economy agenda under a broad-based approach;

(3) That staff participate in regional and provincial forums relating to the circular economy agenda and report back at appropriate intervals;

(4) That staff review the City’s current purchasing practices for ways to support the circular economy; and

(5) That a more proactive approach be taken to increase awareness of the City’s commercial organics, recycling and garbage collection pilot program.

If you have any questions or require additional information, please do not hesitate to contact Suzanne Bycraft, Manager, Fleet and Environmental Programs, at 604-233-3388.

Yours truly,

Malcolm D. Brodie
Mayor
To: Zero Waste Committee

From: Paul Henderson, General Manager, Solid Waste Services

Date: May 15, 2019

Meeting Date: May 17, 2019

Subject: Metro Vancouver Odour Management Communication and Engagement Strategy

The attached report titled “Metro Vancouver Odour Management Communication and Engagement Strategy” was considered by the Climate Action Committee at its meeting of April 12, 2019 and at the MVRD Board at its April 26, 2019 meeting. The report is provided here to the Zero Waste Committee for its information.

Attachment (Doc#29697610)

“Metro Vancouver Odour Management Communication and Engagement Strategy”, dated March 22, 2019

29701020
RECOMMENDATION
That the MVRD Board endorse the communication and engagement strategy described in the report dated March 22, 2019, titled “Metro Vancouver Odour Management Communication and Engagement Strategy”.

PURPOSE
To seek Metro Vancouver Regional District (MVRD) Board endorsement of the communication and engagement strategy to increase awareness of Metro Vancouver’s enhanced framework for managing emissions of odorous air contaminants.

BACKGROUND
Managing odours has become an important priority for the region as the number of complaints about odour has increased. On July 23, 2018, the MVRD Board approved the Odour Management Policy Development Plan, presented as Reference 1. This plan was developed in response to feedback received during consultation held between February and May 2018 on enhancing Metro Vancouver’s Odour Management Framework (Reference 2). During consultation, stakeholder groups suggested that Metro Vancouver improve communications and outreach about facilities that emit odorous air contaminants and about Metro Vancouver’s odour management program. This report responds to that input and presents a communication and engagement strategy for odour management.

ODOUR MANAGEMENT COMMUNICATION AND ENGAGEMENT STRATEGY
The Communication and Engagement Strategy pursues three goals that relate to increased stakeholder understanding and participation in managing odour from facilities regulated by Metro Vancouver, and include: stakeholder awareness, ongoing collaboration with municipal staff, and enhancement of local technical capacity for odour measurement and monitoring. Consistent with the Metro Vancouver Public Engagement Policy, effective engagement will lead to effective decision-making. Staff may pursue additional engagement activities during the implementation of this strategy, based on any feedback or information received from stakeholders during the planned engagement activities. Theattachment provides a preliminary list of engagement activities and stakeholders, and the following sections describe goals and activities.

GOAL 1: IMPROVE STAKEHOLDER AWARENESS ABOUT HOW METRO VANCOUVER MANAGES ODOUR
Metro Vancouver plans to enhance the visibility and awareness of Metro Vancouver’s Odour Management Framework and air quality program through a range of approaches. Metro Vancouver
will run a targeted communication program with stakeholders to strengthen awareness about odour detection methods and odour management, jurisdictional responsibilities, and how industry and the public can help manage odours.

Targeted Stakeholders to Engage
- General public
- Neighbourhoods that may be affected by emissions of odorous air contaminants
- Community groups and municipal advisory groups interested in emissions of odorous air contaminants
- Industries emitting odorous air contaminants
- Industry associations with an interest in odour management
- Elected officials

Methods
As the Metro Vancouver website remains a significant point of contact with the public, Metro Vancouver staff will use digital outreach to provide timely and relevant information, and could include new webpages to provide information about specific facilities associated with frequent odour complaints. The emphasis will be on presenting information, such as cumulative complaint data and summaries of compliance and enforcement actions, in accessible formats. Metro Vancouver will also ensure opportunities are provided to join the Metro Vancouver odour management mailing list.

Metro Vancouver will create comprehensive and digestible printed materials about odour monitoring and measurement as well as Metro Vancouver’s jurisdictional authority over the management of emissions of odorous air contaminants. Printed materials will include guidance about making an odour complaint online or by phone, as currently described on the Metro Vancouver website. For example, it is helpful for Metro Vancouver enforcement officers for an individual to submit a complaint as soon as possible after the odour is detected and include detailed information, such as weather conditions and how the emissions are impacting the person or their business.

Metro Vancouver staff will offer the printed materials at meetings and information sessions, including community-driven public events alongside information about other initiatives related to air quality and climate change, such as the Emotive electric vehicle campaign and woodstove exchange program, and during consultation and engagement events related to the management of air quality in the region. Metro Vancouver staff will approach municipal staff about presenting on the enhanced Odour Management Framework to interested councils and municipal community liaison groups.

Communications by facilities that generate odorous air contaminants are also an important component of the outreach activities. Through the Metro Vancouver air emission permit application process, facilities will continue to be required to notify the public of applications for permits and amendments under the BC Public Notification Regulation. Metro Vancouver will suggest that facilities emitting odorous air contaminants develop a public information website describing their odour management practices.

GOAL 2: DEVELOP MECHANISMS FOR ONGOING COLLABORATION WITH MUNICIPAL STAFF
Metro Vancouver will continue collaborating and sharing information with member jurisdictions, including providing technical guidance about the types of businesses that are likely to release odorous
air contaminants. Metro Vancouver will collaborate with municipal staff to develop mechanisms for involving businesses in early discussions about managing potential air emissions.

Targeted Stakeholders to Engage

- Municipal staff responsible for business licensing, permitting, planning or any work related to emissions of odorous air contaminants

Methods

Metro Vancouver will arrange meetings and information sessions with municipal staff to better understand the business licensing process. Metro Vancouver will also attend municipal staff meetings, such as the Environmental Managers meetings and Regional Permitting and Licensing Committee meetings, to discuss mechanisms to improve the sharing of information, with the end goal of early intervention in the business development process to reduce the compliance burden on licensed businesses. Metro Vancouver will work with municipal staff to develop ways to notify business licence applicants about their duty to apply for authorization of emissions from Metro Vancouver if their business is likely to release odorous air contaminants.

GOAL 3: INCREASE THE TECHNICAL CAPACITY FOR ODOUR MEASUREMENT AND MONITORING IN THE REGION

Metro Vancouver will approach local analytical laboratories and firms specialized in emission monitoring to explore opportunities to enhance the capacity within British Columbia to measure odorous air contaminants. Currently, air emission samples are sent to Ontario and the eastern United States for certain analyses of odorous air contaminants, including olfactometric analysis using standard protocol EN 13725. Olfactometric analysis relies on an odour panel of at least four trained members to detect a combination of odorous air contaminants using the human nose. More information about odour measurement is described on pages 4 and 5 of the Metro Vancouver Odour Management Framework, provided as Reference 2.

Targeted Stakeholders to Engage

- Laboratories that analyze air emission samples
- Laboratories in North America that evaluate odour samples using standard protocol EN 13725
- Laboratories in North America that analyse odorous air contaminants using various methods
- Consulting firms specialized in air emission sampling and on-site testing
- Academic institutions

Methods

Odours can be the result of emissions of a single odorous air contaminant, but often are due to a combination of many different odorous substances. Metro Vancouver will research and evaluate the costs and resources for a commercial laboratory to analyze individual odorous air contaminants and a laboratory that uses standard protocol EN 13725 to assess mixtures of odorous air contaminants through olfactometry. Staff will assess the costs of odour measurement and monitoring work that may be directed toward local laboratories and firms specialized in emission monitoring.

Metro Vancouver will set up meetings and information sessions with laboratories offering services for analysing samples of odorous air contaminants to understand implications of increasing services in British Columbia.
TIMELINE
Staff will begin to engage targeted stakeholders in May 2019 and continue until October 2019. Ongoing enhanced odour management communications and engagement will continue online, in updates to mailing lists, and through collaboration channels that will be developed between municipalities and Metro Vancouver.

ALTERNATIVES
1. That the MVRD Board endorse the communication and engagement strategy attached to the report dated March 22, 2019, titled “Metro Vancouver Odour Management Communication and Engagement Strategy”.

2. That the MVRD Board receive for information the report dated March 22, 2019, titled “Metro Vancouver Odour Management Communication and Engagement Strategy”, and provide alternate direction to staff.

FINANCIAL IMPLICATIONS
Under Alternative 1, internal staff resources will carry out the Odour Management Communication and Engagement Strategy. These have been approved in the program budget for 2019 and considered in 5 year financial plans. Digital and social media outreach activities have been included under the communications budget for Air Quality. Any modified resource needs that may be identified during engagement activities in 2019 would be proposed as part of the 2020 and longer term budget planning.

SUMMARY / CONCLUSION
In July 2018, the MVRD Board approved the Odour Management Policy Development Plan to enhance the management of emissions of odorous air contaminants in the Metro Vancouver region, which included initiatives related to increased communication and engagement based on feedback received during consultation. Metro Vancouver has outlined an Odour Management Communication and Engagement Strategy to raise awareness about odour management in the region and to pursue opportunities for municipal staff, local firms specialized in emission monitoring and measurement, industry, and the public to participate in enhancing odour management in the region. Staff recommend Alternative 1, to engage stakeholders between May and October 2019, while online communication and new mechanisms for collaborating with municipalities would continue on an ongoing basis.

Attachment
Preliminary List of Targeted Stakeholders and Engagement Activities for the Metro Vancouver Odour Management Communication and Engagement Strategy (Doc #29248361)

References
1. Odour Management Policy Development Plan, dated June 26, 2018

29008939
Preliminary List of Targeted Stakeholders and Engagement Activities for
the *Metro Vancouver Odour Management Communication and Engagement Strategy*

**TARGETED STAKEHOLDERS**

- Member jurisdictions
- General public
- Neighbourhoods that may be affected by emissions of odorous air contaminants
- Community groups and municipal advisory groups interested in emissions of odorous air contaminants
- Industries potentially emitting odorous air contaminants
- Industry associations with an interest in odour management
- Municipal staff
- Laboratories that analyze air emission samples
- Consulting firms specializing in air emission sampling and on-site testing
- Academic institutions

**ENGAGEMENT PLAN**

Below is the preliminary engagement plan for the *Metro Vancouver Odour Management Communication and Engagement Strategy*.

**Spring 2019**

Engage targeted stakeholders through:

- Website development
- Creation of informational materials for the public
- Initiate contact with municipal staff committees, such as the Regional Permitting and Licensing Committee, Environmental Managers Committee and advisory committees

**Summer 2019**

Engage targeted stakeholders through:

- Meetings and information sessions
  - Municipal community advisory committees
  - Municipal agricultural advisory committees
  - Municipal staff committees, such as Regional Permitting and Licensing Committee and Environmental Managers Committee
  - Displays at community events where air quality initiatives are showcased (minimum 2)
- Creation of information materials for businesses on good practices for community relations about odour management

Zero Waste Committee
Fall 2019

Engage targeted stakeholders through:

- Meetings and information sessions
  - Municipal staff committees
  - Permitting and licensing staff from interested municipalities, subject to outcomes of discussions with municipal staff committees
  - Laboratories and consulting firms
  - Community events (minimum 2)
- Research and evaluation on costs and resources for a local commercial laboratory that analyses odorous air contaminants
- Seek feedback from business improvement associations and industry on information materials for businesses

Ongoing

- Maintain Metro Vancouver webpages to provide up-to-date information on Metro Vancouver’s odour management program
- Encourage businesses that potentially generate odorous air contaminants to develop a public information website describing odour management practices
- Develop methods with municipal staff to notify business licence applicants about potential requirements to seek authorization of emissions from Metro Vancouver through an air emission permit or regulation
May 6, 2019

Mayor Jack Froese, Chair
Metro Vancouver Zero Waste Committee
4730 Kingsway, Metrotower III
Burnaby, BC V5H 0C6

Dear Chair Froese and committee members,

Re: Vancouver Landfill Technical Liaison Committee

At the April 29, 2019 Regular Meeting, Delta Council considered the enclosed report from the Corporate Services Department dated April 2, 2019 regarding Vancouver Landfill Technical Liaison Committee and unanimously endorsed the recommendations contained therein.

Accordingly, this letter and report are provided for your information.

Yours truly,

George V. Harvie
Mayor

Enclosure

cc: Paul Henderson, General Manager of Solid Waste Services, Metro Vancouver
Delta Council
Sean McGill, City Manager, City of Delta
Mel Cheesman, A/Director of Corporate Services, City of Delta
Mike Brotherston, Manager of Climate Action & Environment, City of Delta
The following report has been reviewed and endorsed by the City Manager.

**RECOMMENDATIONS:**

A. THAT a copy of this report be provided to the City of Vancouver’s Mayor Kennedy Stewart and Council; Mr. Sadhu Johnston, City Manager; and Mr. Jerry Dobrovolny, General Manager of Engineering Services.

B. THAT a copy of this report be provided to Metro Vancouver’s Zero Waste Committee.

**PURPOSE:**

To provide information to Council on the subject of a recent meeting of the Vancouver Landfill Technical Liaison Committee.

**BACKGROUND:**

At the April 11, 2011 Regular Meeting of Delta Council, the establishment of a Vancouver Landfill Technical Liaison Committee was endorsed in response to concerns raised by Delta regarding landfill gas emissions. The committee meets quarterly to discuss issues relating to the Vancouver Landfill and consists of senior staff from the City of Delta (Delta) and City of Vancouver (Vancouver). A map showing the phases of the Vancouver Landfill is included as Attachment A. Phase 1, Phase 2, Phase 3 West, Phase 3 Southeast, and a significant portion of the Western 40 Hectares have been closed. The current active area of the Landfill is Phase 4 South.

**DISCUSSION:**

A meeting of the Vancouver Landfill Technical Liaison Committee (the committee) was held on March 14, 2019. The following items were discussed:

**Landfill Gas Collection and Progressive Landfill Closure Works**

Landfill gas is created during the decomposition of organic waste. Given the environmental impacts of landfill gas, which are explained further in this report, it is important to collect as much gas as possible from the landfill. The average gas collection efficiency for 2018 was 75.3% which is calculated using a site specific landfill gas generation model and represents a slight increase over the 2017 value. Vancouver has received support from the Ministry of
Environment and Climate Change Strategy to reference this model in their reporting. A target efficiency of 75% is set out in the BC Landfill Gas Management Regulation. Overall landfill gas collection efficiency was 71.1% for February and 72% year to date in 2019. This reduction compared to 2018 is due to the need for a number of landfill gas wells to be temporarily disconnected to allow for the landfill closure work. It is anticipated the gas collection efficiency will increase as the closure work is completed this year.

Significant improvements have been made to landfill gas collection efficiency since 2011 and these efforts are continuing. This has resulted in a greater amount of landfill gas available for beneficial use. Vancouver and FortisBC have signed an agreement regarding the installation of a system to clean the gas so that it can be injected into the natural gas pipeline as “renewable natural gas”. An application for the project is in the final stages of review by the BC Utilities Commission and a decision is expected in the coming weeks.

Landfill closure work includes the construction of an impermeable liner, landfill gas collection piping and surface drainage infrastructure. Construction of two of three stages of the $23 million closure project for the Western 40 Hectares at Vancouver Landfill have been completed. The remaining area to be closed is approximately 11 hectares and is currently scheduled to be completed this year. The closure of Phase 3 Northeast is also in progress and expected to be completed later this year. The current area of filling is Phase 4 South which is expected to be closed in 2020 and work is underway on the design of the closure for this area. Delta staff have requested Vancouver to keep final grades of this part of the landfill as flat as possible and the City is taking steps to assess the options with the BC Ministry of Environment and Climate Change Strategy as part of upcoming design work. The options for future use of this area which will be subject to further discussions with Delta Council given that Delta has an option to acquire areas of the landfill that have been closed and no longer required for landfill operations. These closure areas are shown on Attachment A.

Greenhouse Gas Emissions

While Vancouver is striving to collect as much landfill gas as possible, there still is a quantity of methane that is not collected and emitted to the atmosphere. Methane has a global warming potential that is 25 times greater than an equivalent amount of carbon dioxide. As a result, the estimated quantity of methane emissions from the landfill are multiplied by 25 to get emissions that are reported in carbon dioxide equivalents.

It is unknown exactly how much methane actually escapes to the atmosphere since the portion of gas not collected (25%) does partially degrade through natural processes as the methane passes through the cover soil of the landfill. Vancouver is conducting a five-year study using aerial remote monitoring technology to get a better understanding on the quantity and locations of methane that is escaping from the landfill.

In 2018 the quantity of landfill gas collected and either beneficially used or flared was equal to 548,750 tonnes of carbon dioxide equivalents. This reduction in emissions is the same as taking approximately 110,000 passenger cars off the road.
Landfill Operations

The landfill is operated in accordance with a Landfill Design, Operation and Progressive Closure Plan that is approved by the Ministry of Environment and Climate Change Strategy. Vancouver has completed an update of this plan given the fact the current plan is based on the regional plan for additional waste to energy capacity in 2020 which has been deferred. The landfill is authorized to accept up to 750,000 tonnes of municipal solid waste (including demolition waste) for disposal each year. In 2018, 717,906 tonnes of waste were received at the landfill.

Vancouver has initiated a project to upgrade the landfill entry and scales along with the residential drop off area where additional recycling opportunities will be available for residents. Construction is currently underway and expected to be complete later this year.

Based on the results of a successful pilot project an area of approximately 1.3 hectares was identified for a future full-scale construction and demolition material recovery facility. This site has been preloaded and a business case is in development for the facility.

Currently clean stormwater run-off from closed sections of the landfill are being mixed with leachate and piped to the Annacis Wastewater Treatment Plant. There are regulatory requirements to separate clean stormwater and Vancouver is investigating options to discharge their clean stormwater in a manner that does not negatively affect Burns Bog or the surrounding agricultural areas. In addition to discussions with Delta staff, Vancouver will be reviewing these options with surrounding land owners, the Delta Farmers' Institute and the Burns Bog Ecological Area Scientific Advisory Panel.

Regulatory Reporting

It was confirmed at the committee meeting that Delta was receiving regular information on landfill gas, water quality and leachate monitoring from Vancouver. Since the last committee meeting, there have been no deadlines for formal regulatory reports.

Complaints

A list of the complaints received since the last meeting was reviewed by the committee. No formal odour complaints have been received where the landfill was identified to be the source. Delta has also not received any formal odour complaints that were attributed to the Vancouver Landfill since the last meeting.

Implications:
Financial Implications – There are no financial implications
CONCLUSION:

A summary of items discussed at the last meeting of the Vancouver Landfill Technical Liaison Committee is provided for information. This committee is an important mechanism for ensuring ongoing communication between Vancouver and Delta staff related to Vancouver Landfill issues.

Mel Cheesman  
Acting Director of Corporate Services

Department submission prepared by: Mike Brotherston, Manager of Climate Action and Environment

This report has been prepared in consultation with the following listed departments.

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<td>Steven Lan</td>
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ATTACHMENT:

A. Vancouver Landfill fill plan
Fill Phases & Progressive Closure Dates

Zero Waste Committee