GREATER VANCOUVER REGIONAL DISTRICT  
ZERO WASTE COMMITTEE  

REGULAR MEETING  

Thursday, October 13, 2016  
1:00 p.m.  
2nd Floor Boardroom, 4330 Kingsway, Burnaby, British Columbia

REVISED AGENDA\(^1\)

1. ADOPTION OF THE AGENDA

1.1 October 13, 2016 Regular Meeting Agenda  
That the Zero Waste Committee adopt the agenda for its regular meeting scheduled for October 13, 2016 as circulated.

2. ADOPTION OF THE MINUTES

2.1 September 15, 2016 Regular Meeting Minutes  
That the Zero Waste Committee adopt the minutes of its regular meeting held September 15, 2016 as circulated.

3. DELEGATIONS

3.1 Dean Drysdale, Board Chair, FoamOnly Recycling Corporation  
Subject: Proposed disposal ban on expanded polystyrene (EPS) and additional EPS recycling drop-off capacity at Metro Vancouver disposal facilities.

3.2 Cynthia Shore, on behalf of Joe Casalini, Director of Business Development, ROBANCO  
Subject: Contingency landfill disposal procurement process: rationale for not signing the participation agreement.

3.3 Corinne Atwood, Executive Director, BC Bottle and Recycling Depot Association  
Subject: Recovery of disposal costs for extended producer responsibility (EPR) materials that are disposed of in the garbage.

4. INVITED PRESENTATIONS

5. REPORTS FROM COMMITTEE OR STAFF

5.1 2017 Budget and Work Plans – Solid Waste Services  
Designated Speaker: Paul Henderson, General Manager, Solid Waste Services

\(^1\) Note: Recommendation is shown under each item, where applicable.
That the Zero Waste Committee endorse the 2017 Solid Waste Services Budget and Work Plan as presented in this report dated October 6, 2016, titled “2017 Budget and Work Plans – Solid Waste Services” and forward them to the Board Budget Workshop on October 21, 2016 for consideration.

5.2 Municipal Programs and Policies to Encourage Recycling in the Multi-Family and Commercial/Institutional Sectors

*Designated Speaker: Karen Storry, Senior Project Engineer, Solid Waste Services*

That the GVS&DD Board receive the report dated October 7, 2016, titled “Municipal Programs and Policies to Encourage Recycling in the Multi-family and Commercial/Institutional Sectors” for information and send a copy to all member jurisdictions and to the provincial Ministry of Environment.

5.3 Non-Ferrous Metal Recovery Project at the Metro Vancouver Waste-to-Energy Facility

*Designated Speaker: Chris Allan, Lead Senior Engineer, Solid Waste Services*

That the GVS&DD Board authorize:

a) award to Covanta Burnaby Renewable Energy, ULC, the construction of the non-ferrous metal recovery system at the Metro Vancouver Waste-to-Energy Facility at a cost of $5,897,843 (excluding taxes), under the terms and conditions of existing Contract 98106; and

b) the Commissioner and Corporate Officer to execute any necessary documents.

5.4 GVS&DD Tipping Fee and Solid Waste Disposal Regulation Bylaw No. 302, 2016

*Designated Speaker: Paul Henderson, General Manager, Solid Waste Services*

That the GVS&DD Board:

a) approve the following provisions in the 2017 Tipping Fee Bylaw effective January 1, 2017:

1. Tipping Fees to remain the same as in 2016 with the following exceptions:
   i. Recycling Fee for Source-Separated Organic Waste, Green Waste and Clean Wood at North Shore Transfer Station to be reduced from $71 per tonne to $67 per tonne;
   ii. Surcharge for Hazardous and Operational Impact Materials and Product Stewardship Materials to increase from $50 to $65 per occurrence; and
   iii. Recycling Fee for Gypsum to be $150 per tonne, with a minimum $15 fee (including Transaction Fee);

2. Ability for General Manager of Solid Waste Services to waive fees and charges for loads from non-profit or volunteer community clean-up projects on public land in certain circumstances;

3. GVS&DD’s costs of providing dedicated recycling depots at the North Shore and Coquitlam Transfer Stations are to be apportioned among participating municipalities on a population basis;

4. Weigh scales precision improved to 5 kg increments; and

5. Peak Hours definition change to exclude Statutory Holidays;

b) approve the following provisions in the 2017 Tipping Fee Bylaw effective July 1, 2017:
I. Surcharge threshold for Food Waste to change from 25% to 5%;
II. Surcharge threshold for Clean Wood to change from 10% to 5%;
III. New Surcharge for Unsecured Load: 50% of the applicable tipping fee to a maximum of $50;
IV. Personal Hygiene Products making up 10% or more of a load and not properly contained added to Hazardous and Operational Impact Materials; and
V. Removal of ban exemption for Wax Paper/Cardboard;
   c) give first, second and third reading to Greater Vancouver Sewerage and Drainage District Tipping Fee and Solid Waste Disposal Regulation Bylaw No. 302, 2016; and
   d) pass and finally adopt Greater Vancouver Sewerage and Drainage District Tipping Fee and Solid Waste Disposal Regulation Bylaw No. 302, 2016.

5.5 Status of Sewerage and Drainage District (Solid Waste) Capital Expenditures to August 31, 2016
Designated Speaker: Paul Remillard, Director, Solid Waste Operations, Solid Waste Services
That the Zero Waste Committee receive the report dated October 7, 2016, titled “Status of Sewerage and Drainage District (Solid Waste) Capital Expenditures to August 31, 2016” for information.

5.6 2016 Christmas Campaign – Create Memories, Not Garbage
Designated Speaker: Larina Lopez, Division Manager, Corporate Communications
That the GVRD Board receive the report titled dated September 23, 2016, titled “2016 Christmas Campaign – Create Memories, Not Garbage” for information.

5.7 Manager’s Report
Designated Speaker: Paul Henderson, General Manager, Solid Waste Services
That the Zero Waste Committee receive the report dated October 7, 2016, titled “Manager’s Report” for information.

6. INFORMATION ITEMS

6.1 Letter dated September 30, 2016 addressed to Paul Henderson, General Manager, Solid Waste Services from Mark Obedzinski, President, FoamOnly Recycling re Alternative to the Land-Filling of EPS (Styrofoam) Waste in Metro Vancouver

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.

   “90 (1) A part of a meeting may be closed to the public if the subject matter being considered relates to or is one or more of the following:
   
   (e) the acquisition, disposition or expropriation of land or improvements, if the board or committee considers that disclosure could reasonably be expected to harm the interests of the regional district;
   
   (i) the receipt of advice that is subject to solicitor-client privilege, including communications necessary for that purpose; and
   
   (g) litigation or potential litigation affecting the regional district.

10. **ADJOURNMENT/CONCLUSION**

    That the Zero Waste Committee adjourn/conclude its regular meeting of October 13, 2016.

Membership:

| Brodie, Malcolm (C) – Richmond                  | Gambioli, Nora – West Vancouver                             | Reimer, Andrea – Vancouver                     |
| Corrigan, Derek (VC) – Burnaby                  | Hayne, Bruce – Surrey                                        | Schaffer, Ted – Langley City                   |
| Baldwin, Wayne – White Rock                     | Hodge, Craig – Coquitlam                                     | Washington, Dean – Port Coquitlam              |
| Bassam, Roger – North Vancouver District        | Jackson, Lois – Delta                                        |                                               |
| Coté, Jonathan – New Westminster                | Long, Bob – Langley Township                                 |                                               |
GREATER VANCOUVER REGIONAL DISTRICT
ZERO WASTE COMMITTEE

Minutes of the Regular Meeting of the Greater Vancouver Regional District (GVRD) Zero Waste Committee held at 1:00 p.m. on Thursday, September 15, 2016 in the 2nd Floor Boardroom, 4330 Kingsway, Burnaby, British Columbia.

MEMBERS PRESENT:
Chair, Mayor Malcolm Brodie, Richmond
Vice Chair, Mayor Derek Corrigan, Burnaby
Mayor Wayne Baldwin, White Rock
Councillor Roger Bassam, North Vancouver District
Mayor Jonathan Coté, New Westminster
Councillor Nora Gambioli, West Vancouver
Councillor Bruce Hayne, Surrey
Councillor Craig Hodge, Coquitlam (arrived at 1:05 p.m.)
Councillor Andrea Reimer, Vancouver
Mayor Ted Schaffer, Langley City (arrived at 1:04 p.m.)

MEMBERS ABSENT:
Mayor Lois Jackson, Delta
Councillor Bob Long, Langley Township
Councillor Dean Washington, Port Coquitlam

STAFF PRESENT:
Paul Henderson, General Manager, Solid Waste Services
Carol Mason, Chief Administrative Officer
Janis Knaupp, Assistant to Regional Committees, Board and Information Services

1. ADOPTION OF THE AGENDA

1.1 September 15, 2016 Regular Meeting Agenda

It was MOVED and SECONDED
That the Zero Waste Committee adopt the agenda for its regular meeting scheduled for September 15, 2016 as circulated.

CARRIED
2. ADOPTION OF THE MINUTES

2.1 July 14, 2016 Regular Meeting Minutes

It was MOVED and SECONDED
That the Zero Waste Committee adopt the minutes of its regular meeting held July 14, 2016 as circulated.

CARRIED

3. DELEGATIONS

No items presented.

4. INVITED PRESENTATIONS

No items presented.

5. REPORTS FROM COMMITTEE OR STAFF

5.1 Award of Contract Resulting from RFP No. 16-114 for Maple Ridge and Langley Transfer Stations Operating and Maintenance Services Agreement

Report dated September 9, 2016 from Tracey S. Husoy, Purchasing and Risk Management Division Manager, Financial Services, seeking GVS&DD Board authority to award a contract to SSG Holdings Ltd. for operation and maintenance of the Maple Ridge and Langley Transfer Stations in the amount of $17,677,000 (exclusive of taxes).

1:04 p.m. Mayor Schaffer arrived at the meeting.
1:05 p.m. Councillor Hodge arrived at the meeting.

In response to questions, members were informed about operating agreements for recycling facilities, models for dedicated recycling areas, and current recycling services available to Langley residents.

Comments were offered about the need for a consistent approach to operations and costs associated with recycling facilities in Metro Vancouver, and about types of recycled materials and recycling locations.

Request of Staff

Staff was requested to report back to the Zero Waste Committee:

- on the status of any stand-alone recycling facilities in the City of Langley and Township of Langley; and
- with a gap matrix showing types of materials which may be recycled, by facility, within the Metro Vancouver region.
It was MOVED and SECONDED
That the GVS&DD Board authorize:
   a) award of a contract for operation and maintenance of the Maple Ridge and Langley Transfer Stations to SSG Holdings Ltd. as a result of RFP No. 16-114 for an anticipated value of $17,677,000 (exclusive of taxes) over a seven year term; and
   b) the Commissioner and Corporate Officer to execute the contract.

CARRIED

5.2 Greater Vancouver Sewerage and Drainage District Municipal Solid Waste and Recyclable Material Regulatory Bylaw – Staff Appointments

Report dated September 1, 2016 from Ray Robb, Environmental Regulation and Enforcement Division Manager, Legal and Legislative Services, seeking GVS&DD Board approval to update staff appointments pursuant to the Environmental Management Act and Greater Vancouver Sewerage and Drainage District Municipal Solid Waste and Recyclable Material Regulatory Bylaw No. 181, 1996.

It was MOVED and SECONDED
That the GVS&DD Board, pursuant to the Environmental Management Act and Greater Vancouver Sewerage and Drainage District Municipal Solid Waste and Recyclable Material Regulatory Bylaw No. 181, 1996:
   a) appoint Metro Vancouver employee Mona Sardashti as an Officer, and
   b) rescind the appointment of former Metro Vancouver employee Susy Marble as an Officer.

CARRIED

5.3 Food Scraps Campaign Update

Report dated September 9, 2016 from Larina Lopez, Corporate Communications Division Manager, External Relations, advising of the next phase of the Metro Vancouver Food Scraps Campaign in support of the Organics Disposal Ban and increasing food scraps recycling.

Members were provided a presentation update on the Metro Vancouver Foods Scraps Campaign highlighting the 2015 campaign, 2016 Campaign plans to involve member jurisdictions, traditional and digital media, and next steps.

Presentation material titled “Food Scraps Recycling 2016 Campaign” is retained with the September 15, 2016 Zero Waste Committee agenda.

It was MOVED and SECONDED
That the GVRD Board receive the report dated September 9, 2016, titled “Food Scraps Campaign Update” for information.

CARRIED
5.4 **Integrated Solid Waste and Resource Management Plan Dispute Resolution Procedure**

Report dated September 9, 2016 from Paul Henderson, General Manager, Solid Waste Services, seeking GVS&DD Board approval of the *Integrated Solid Waste and Resource Management Plan* Dispute Resolution Procedure, and approval to submit the procedure to the BC Ministry of Environment Regional Director.

**It was MOVED and SECONDED**

That the GVS&DD Board:

a) approve the “Integrated Solid Waste and Resource Management Plan Dispute Resolution Procedure” as presented in the report dated September 9, 2016, titled “Integrated Solid Waste and Resource Management Plan Dispute Resolution Procedure”; and

b) direct staff to send the “Integrated Solid Waste and Resource Management Plan Dispute Resolution Procedure” to the BC Ministry of Environment Regional Director.

CARRIED

5.5 **Manager’s Report**


Mayor Coté updated the Committee on his attendance at the 2016 WASTECON Conference highlighting sessions regarding challenges with solid waste management, new technologies, waste-to-energy, diversion rates, and bi-weekly garbage pickup service.

Members were provided a presentation on the 2016 telephone survey on organics recycling in terms of 2016 access to *Food Scraps Recycling Program*.

In response to questions, members were informed about *National Zero Waste Conference* registration and challenges with reporting on diversion rates by member jurisdiction.

Presentation material titled “2016 Telephone Survey on Organics Recycling” is retained with the September 15, 2016 Zero Waste Committee agenda.

**It was MOVED and SECONDED**

That the Zero Waste Committee receive the report dated September 7, 2016, titled “Manager’s Report” for information.

CARRIED
6. INFORMATION ITEMS

**It was MOVED and SECONDED**
That the Zero Waste Committee receive for information the following Information Items:

6.1 Letter dated September 1, 2016 addressed to Metro Vancouver Zero Waste Committee from B.C. Ministry of Environment re: Notice of Decision Permit PR-108476 Enviro-Smart Organics Ltd

6.2 Letter dated August 23, 2016 addressed to Chair Moore and Directors, Metro Vancouver Board from The Honourable Mary Polak, Minister of Environment re: Implementation of Multi-Material BC Program

6.3 Letter dated July 18, 2016 addressed to The Honourable Mary Polak, Minister of Environment from Chair Moore, Metro Vancouver Board re: Mattress and Bulky Furniture Extended Producer Responsibility

6.4 Letter dated July 26, 2016 addressed to The Honourable Mary Polak, Minister of Environment from Al Richmond, Chair, Cariboo Regional District re: Mattress and Bulky Furniture Extended Producer Responsibility

6.5 Letter dated August 4, 2016 addressed to The Honourable Mary Polak, Minister of Environment from Penny L. Feist, Chief Administrative Officer, Village of Midway

6.6 Letter dated August 8, 2016 addressed to Chair Moore, Metro Vancouver Board from Sharon Gaetz, Chair, Fraser Valley Regional District re: Mattress and Bulky Furniture Extended Producer Responsibility

6.7 Letter dated August 9, 2016 addressed to The Honourable Mary Polak, Minister of Environment from Mr. Lyn Hal, Mayor, City of Prince George re: Mattress and Bulky Furniture Extended Producer Responsibility

**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 September 15, 2016.

CARRIED
(Time: 2:03 p.m.)

____________________________ ____________________________
Janis Knaupp, Malcolm Brodie, Chair
Assistant to Regional Committees
RABANCO, a Republic Services Company of BC, operator of the Roosevelt Regional Landfill was looking forward to participating in the contingency landfill disposal procurement process as likely were all the companies who expressed interest and attended the information meeting for Proponents on August 29, 2016.

Unique to this procurement process and a complete departure from the transfer station RFP, was a mandatory Participation Agreement as referenced in the Manager’s Report on page 115 of today’s ZWC agenda.

RABANCO did not sign the Agreement because of the Conflict of Interest provision.

The Conflict of Interest provision restricted the Contractor from:

- operating a facility that receives mixed MSW; or from
- hauling mixed MSW to a facility not under contract with the GVS&DD.

This does not apply to RABANCO because they are not in either of those businesses.

RABANCO is also not in conflict with the goals and strategies set out in the Integrated Solid Waste and Resource Management Plan.

RABANCO did not submit a signed Participation Agreement because it required a legally binding provision that is unattainable. The Agreement would have restricted the Contractor and its affiliates or officers from carrying out the above actions.

Signing the Agreement would require one company, the Proponent, to be legally responsible for another company, their customer’s, business activities for all time, regardless as to whether Metro Vancouver concluded the procurement process and regardless as to whether the Proponent won the business and became the Contractor.

This is not only unreasonable, it is not feasible.

Requiring customers to abide by the laws of the land can be achieved through contractual agreements but to impose business agreements with a third party on to the customer cannot. How would RABANCO monitor or enforce such a provision? What happens when Metro changes its policies or procedures, how is RABANCO to require its customers to be compliant with the new terms or any future terms for all time?
The Participation Agreement would have bound the Proponent to terms that were unenforceable, ambiguous and not negotiable. The information meeting made it clear that there would be no negotiations between Metro Vancouver and interested Proponents, no two-way discussions, no full explanations, no option to work with Metro to achieve success in fulfilling the Integrated Solid Waste and Resource Management Plan STRATEGY 4.3 Establish contingency disposal sites.

It is important to understand that contingency landfill disposal was never explored through an RFP because the procurement process failed at the Participation Agreement stage before Proponents had a chance to respond to the RFP.

Some of the most experienced waste management companies in North America were very interested in working with Metro Vancouver on providing solutions to its disposal capacity limitations. RABANCO remains so inclined.
October 12, 2016

Re: October 13th Presentation to Metro Vancouver Zero Waste Committee

Dear Metro Vancouver Zero Waste Committee

The BC Bottle and Recycling Depot Association (BCBRDA) raised concerns at the recent tipping fee workshop that materials that are captured under EPR Product Stewardship programs in BC are able to be disposed of free of charge to the steward at any BC landfill, transfer station or incinerator and the cost of disposal is entirely at the at the taxpayer’s expense.

The BC Recycling Regulations state that the cost of EPR is to be borne by the consumer and manufacturer. At this time in BC consumers appear to pay the majority of the costs of recycling through advance disposal fees and deposits. Taxpayers pay the rest.

Slides presented as part of the tipping fee workshop stated that 52,000 tonnes of MMBC materials alone made its way into the Vancouver landfill without charge to MMBC. I asked at that time if BC EPR stewards pay for the disposal of their materials (identified through waste audits) that find their way into landfill through any means including roadside retrieval and was told that that Metro Vancouver does not invoice the stewards for those costs. I asked “why not” and was told that here is nothing in the BC Recycling Regulations that allows Metro Vancouver to charge EPR stewards for their share of abandoned materials.

I have found nothing in the BC Recycling Regulations to suggest that Metro Vancouver or other communities and regional districts cannot invoice EPR stewards for the cost of disposal for materials not recovered by their programs.

Currently a large number of depots are considering no longer carrying most EPR stewardship materials other than Encorp containers as they do not pay enough handling fees to support recovery, storage and labour of those materials. Depots have not seen an increase in handling fees since most of the EPR programs started 20 years ago. Business costs have gone up over 50% in the last decade.

If bottle and recycling depots refuse to collect most EPR stewarded materials, Metro Vancouver and other landfills and transfer locations can expect more stewarded materials at their door. Stewards should pay collection outside contracted depots out of the slush funds they are creating from consumer dollars.

An estimate of monies collected through EPR program in BC suggests that over 390 million dollars were collected last year from consumers for deposits and advanced disposal fees. Of that money the stewards showed collectively just over 20 million dollars in excess funds and in addition, EPR stewards have amassed over 90 million dollars in restricted and unrestricted contingency funds. Contingency funds should be set aside by manufacturers who found the stewardship agencies not funded by the consumer.
1) **The BCBRDA asks that Metro Vancouver amend their tipping fee bylaws identified below as 5.4.a, 5.4a ii and 5.4a iii and Section 5b to include that any and all efforts will be made to determine the amount of EPR materials found in waste audits and that Metro Vancouver will send invoices demanding repayment of the costs associated with recovery and disposal of EPR materials to EPR stewards based on percentage.**

This should encourage EPR stewards to solidify relationships with their contracted partners and pay the true cost of recovery instead of taking advantage of the free disposal they currently enjoy at the taxpayers expense, Consumers already pay recycling fees upfront and should not have to pay a second time for the same service by being charged at the landfill or transfer station for disposal of these stewarded materials.

5.4.a

ii) Surcharge for Hazardous and Operational Impact Materials and Product Stewardship Materials to increase from $50 to $65 per occurrence; and

As per 5.4.iii

**The BCBRDA does not support that Metro Vancouver Zero Waste Committee waive fees for clean up projects and that again the cost of these activities should be the responsibility of the EPR stewards.**

iii) Ability for General Manager of Solid Waste Services to waive fees and charges for loads from non-profit or volunteer community clean-up projects on public land in certain circumstances; III

Section 5 b

b) GVS&DD’s costs of providing dedicated recycling depots at the North Shore and Coquitlam Transfer Stations are to be apportioned among participating municipalities on a population basis; IV

**EPR Stewards should be responsible for these costs.**

If amendments to the BC Recycling Regulations are need to support these concerns the BCBRDA supports Metro Vancouver Waste Committee to request that the BC Ministry of Environment to amend the BC Recycling Regulations to allow local government and regional districts who handle waste from the public to charge back EPR Stewards for their share of materials they have failed to collect.

In addition:

2) **The BCBRDA asks Metro Vancouver Zero Waste Committee to support the creation of a BC Recycling Management Board comprised of 14 seats, 3 depots (1 for the BCBRDA and 1 for member depots, 1 for non member) 3 government (local, provincial and regional district representatives) 3 manufacturer and 2 industry (1 haulers, 1 processor) and 3 “at large” seats for non industry related members of the public.**

Respectfully submitted by

Corinne Atwood
Executive Director BC Bottle and Recycling Depot Association
To: Zero Waste Committee  
From: Paul Henderson, General Manager, Solid Waste Services Department  
Date: October 6, 2016  
Meeting Date: October 13, 2016  
Subject: **2017 Budget and Work Plans – Solid Waste Services**

**RECOMMENDATION**
That the Zero Waste Committee endorse the 2017 Solid Waste Services Budget and Work Plan as presented in this report dated October 6, 2016, titled “2017 Budget and Work Plans – Solid Waste Services” and forward them to the Board Budget Workshop on October 21, 2016 for consideration.

**PURPOSE**
To present the 2017 Solid Waste Services Budget and Work Plans for consideration by the Zero Waste Committee.

**BACKGROUND**
The Solid Waste Services function comprises 18 members within Metro Vancouver and provides regional solid waste planning, facilities for waste transfer, waste-to-energy and disposal, and regional coordination of public recycling services and education. The Solid Waste Services function is guided by the Board Strategic Plan and the *Integrated Solid Waste and Resource Management Plan* with a focus on the following strategic directions and goals:

- **Metro Vancouver Board Strategic Plan**
  - Reduce solid waste through an aggressive waste reduction campaign and the recovery of materials and energy from the waste that remains.
  - Work towards a financial model for managing a solid waste management system consistent with zero waste objectives.
  - Continue to promote behaviour change that will reduce waste generated in the region.

- **Integrated Solid Waste and Resource Management Plan**
  - Goal 1 - Minimize waste generation
  - Goal 2 - Maximize reuse, recycling & material recovery
  - Goal 3 - Recover energy from waste stream after material recovery
  - Goal 4 - Dispose of all waste in landfill after recycling & energy recovery

As part of the review of the proposed 2016 Solid Waste Services Budget, the Zero Waste Committee directed that staff make planning for waste diversion a priority in the Solid Waste Services 2016 Work Plan with a goal of better aligning programs to diversion performance objectives in 2017. The Zero Waste Committee highlighted that increased diversion efforts were required to achieve the *Integrated Solid Waste and Resource Management Plan* targets.

In the past year Metro Vancouver has initiated a long term financial planning process, with an increased emphasis on the development of a five year financial plan. The focus of this report and
the attached budget and annual work plans is 2017. Preliminary five year financial plans have been prepared utilizing the framework presented to the Intergovernment and Finance Committee on July 20, 2016. The Five Year Financial Plan will be an agenda item for the Board Strategic Workshop scheduled for February 24th, 2017.

2017 BUDGET AND WORK PLANS
This report provides the 2017 budgetary highlights of Solid Waste Services functions. Attachments are provided for the Committee’s consideration, including the Budget (Attachment 1), Capital Budget (Attachment 2), Equipment Capital Plan Budget (Attachment 3), Environmental Regulation and Enforcement Solid Waste Budget (Attachment 4), Operations and Planning and Public Involvement Annual Work Plans (Attachments 5a and 5b), Organizational Chart (Attachment 6) and an overview of 2017 Initiatives for Increasing Waste Diversion (Attachment 7).

Operating Budget Highlights
The Solid Waste Services annual budget is proposed to increase by $3.6 million (4.0%) in 2017 for a total budget of $94.4 million (Attachment 1). This increase includes a $4.9 million contribution to reserves. A reduction of $1.5 million (-1.7%) in the Total Operating Programs (excluding Debt Service and Contribution to Reserve) is primarily due to reductions in transfer station operating costs resulting from the implementation of a new operations contract for Surrey, North Shore and Coquitlam Transfer Stations. This budget includes solid waste regulatory expenditures allocated from the Environmental Regulation and Enforcement Division.

Support for regional waste prevention initiatives and campaigns is included under the General Government Budget as part of the Communication Program with a budget of $0.65 million. Also included in the 2017 General Government Budget is support for the National Zero Waste Council in the amount of $0.37 million for administration, project development and implementation. These programs provide an overall regional benefit and are, therefore, funded through a GVRD Tax Requisition.

The 2017 annual budget includes the following key actions:
Goal 1 - Minimize waste generation
• Support the delivery of Metro Vancouver’s regional waste prevention programs:
  ▪ Create Memories Not Garbage (prevention of seasonal gift wastes)
  ▪ Food isn’t Garbage (reduction and recycling of food wastes)
  ▪ Love Food Hate Waste (reduction of household food wastes)
  ▪ A regional abandoned waste campaign and
  ▪ The Annual Zero Waste Conference
• Support for the National Zero Waste Council and its national waste prevention agenda
  ▪ Development and implementation of a National Food Waste Reduction Strategy
  ▪ Work to improve the design of products & packaging
  ▪ Shared and coordinated Zero Waste communications, and Circular Economy education and promotion

Goal 2 - Maximize reuse, recycling & material recovery
• Conduct projects to update technical and educational resources for increasing regional waste diversion
• Update regional waste composition monitoring for municipal solid waste
• Consult on new disposal bans: textiles and expanded polystyrene
- Consult on review of Municipal Solid Waste and Recyclable Material Regulatory Bylaw No. 181, 1996 (Bylaw 181)
- Temporarily increase the number of disposal ban inspectors to focus on small vehicle loads that have high quantities of clean wood waste
- Implement municipally funded dedicated recycling systems at North Shore and Coquitlam Transfer Stations
- Determine options and costs to develop dedicated recycling areas at Surrey and Langley Transfer Stations in collaboration with municipalities served by those facilities
- Complete construction of non-ferrous metal recovery from bottom ash at the Waste to Energy Facility (WTEF)
- Review options to increase construction and demolition recycling capacity in the region

Goal 3 - Recover energy from waste stream after material recovery
- Evaluate options and business models for district energy delivery from the WTEF
- Evaluate options for new WTE capacity

Goal 4 - Dispose of all waste in landfill after recycling & energy recovery
- Transition to the new contractor (Emterra) for the operation and maintenance of the North Shore, Coquitlam and Surrey Transfer Stations
- Complete construction and commence operation of the North Shore Transfer Station reconfiguration project
- Secure contingency landfill disposal capacity
- Complete fly ash disposal procurement process
- Continue development of Coquitlam Transfer Station by preparing detail design and costing and obtain permitting for construction
- Continue development of a new Surrey Residential Drop-Off facility by continuing to work with the City of Surrey on siting and design

Achieving Regional Waste Diversion and Reduction Goals
In order to achieve the region’s 80% waste diversion and 10% per capita waste reduction goals, the region needs to reduce waste generation by about 200,000 tonnes and divert approximately 500,000 tonnes per year more than it currently does.

Attachment 7 provides an overview of key 2017 proposed expenditures in support of achieving these waste diversion and the waste reduction targets. The table shows investment areas and the projects and amounts targeted in each area. The additional diversion is estimated based on the assumption that the region can divert about half of the remaining key recyclable and compostable materials in the waste stream by 2020. Per capita waste generation has dropped from approximately 1.6 tonnes per capita in 2007 to 1.36 tonnes per capita in 2014. Per capita waste generation has remained effectively flat since 2010.

Waste Diversion through Transfer Station Operations
Although transfer station operations and development work falls under Goal 4, within that operating budget of $31.7 million, Metro Vancouver spends approximately $8.7 million (27%) to divert wastes from disposal through its Environmental Impact Reduction program and other recycling services provided at the transfer station facilities (e.g. managing recyclables and organics, disposal ban inspections, gypsum, mattresses, metals etc.). These expenditures, which are recovered through user fees, allocation to participating member municipalities, and other revenues, include:
- Recyclables and organics: $7.5 million
- Disposal Ban Inspection Program: $0.75 million
- Dedicated Recycling Areas: $0.26 million
- CFC Removal Program: $0.15 million

Waste Diversion through Environmental Regulation and Enforcement

Environmental Regulation and Enforcement is responsible for licensing and regulating private recycling facilities in the region through the application of Bylaw 181. While the Environmental Regulation and Enforcement Division is part of the Legal and Legislative Services Department, the solid waste portion of the Environmental Regulation and Enforcement Budget is included in the Solid Waste Services Budget, projected to be $0.84 million in 2017. Any new resources resulting from the proposed Bylaw 181 review will be determined through the review process with required revenues factored into any new licensing provisions.

Key 2017 consulting projects:
- Municipal solid waste composition monitoring ($120,000)
- Updated resources and educational support for increasing 3Rs ($110,000)
- National benchmarking and applied research for waste reduction and recycling ($40,000)
- Consultation for new facility projects and evaluations of existing waste/recycling facilities ($70,000)
- Research and support for potential future EPR and existing/future disposal bans ($140,000)
- Research and development of new markets and recycling infrastructure for C&D wastes ($100,000)
- Designs, signage & education for improved recycling at transfer stations ($70,000)
- Evaluation of options and design for district energy delivery ($80,000)
- Review of options for the development of new WTE capacity ($300,000)

Other Operating Budget Highlights

As previously reported to the Board, the impact of the financing of the December 2015 purchase of a new head office complex has been included in the 2017 centralized support budget. The allocation of these costs to the various Metro Vancouver entities and functions reflects the 2017 borrowing costs.

Capital Budget Highlights

The Solid Waste Services Capital Budget is $26.7 million. Highlighted capital projects planned for 2017 include the following:
- North Shore Transfer Station reconfiguration and structural modifications
- Coquitlam Transfer Station replacement detailed design
- Surrey Residential Drop-Off siting and design
- Various projects for the existing WTEF including crane replacement, new bottom ash conveyors and non-ferrous metal recovery

Work Plan Performance Indicators

Within the Solid Waste Services Work Plans, 6 performance indicators have been developed and are being tracked. These include:
- Waste diversion rate (percent of solid waste flow diverted from final disposal)
- Waste disposed per capita (tonnes/capita)
• Annual solid waste flows in Metro Vancouver system (tonnes)
• Annual amount of recycled material in Metro Vancouver system (tonnes)
• Availability/environmental performance of the WTEF
• Solid Waste regulatory licenses

The trend in these performance measures suggest that waste diversion continues to gradually increase and per capita disposal continues to decrease.

Budget Approval Process
The proposed 2017 Budget and Work Plans for Solid Waste Services are presented to the Zero Waste Committee for consideration and endorsement before being forwarded to the Board for consideration.

The next steps of the budget process are:
- The 2017 Budget and Work Plans for Solid Waste Services will be presented at the Board Budget Workshop on October 21, 2016.
- The Board will consider adoption of the Budget on October 28, 2016.

ALTERNATIVES
1. That the Zero Waste Committee endorse the 2017 Solid Waste Services Budget and Work Plans as presented in this report dated October 6, 2016, titled “2017 Budget and Work Plans - Solid Waste Services” and forward them to the Board Budget Workshop on October 21, 2016 for consideration.

2. That the Zero Waste Committee make recommendations for amendments, endorse the 2017 Solid Waste Services Budget and Work Plans as amended, and forward them to the Board Budget Workshop on October 21, 2016 for consideration.

FINANCIAL IMPLICATIONS
If the GVS&DD Board approves the 2017 Solid Waste Services Budget and Work Plans as presented in Alternative 1, tipping fees and other revenues are expected to generate a balanced budget with an expected contribution to reserves of approximately $4.9 million. Waste flows and landfill operating and closure costs continue to be key budget drivers.

Expenditures include operating costs along with the allocation of corporate support costs, debt services costs and contribution to reserves. Subject to approval of the 2017 tipping fee structure, tipping fees will remain unchanged for all waste loads (local government single family and public works waste, large commercial vehicles, and small and medium vehicles).

Under Alternative 2, the Committee may wish to consider recommending amendments to the operating and/or capital budget to reflect Board strategic priorities. Any proposed changes may require an update to the tipping fees and/or the expected contribution to reserves. Increases in tipping fees for commercial garbage could lead to increased bypassing of Metro Vancouver waste disposal facilities, decreasing overall system revenues.

SUMMARY / CONCLUSION
As part of the annual budget process for 2017, Work Plans have been prepared to accompany service area budgets to provide Committee and Board members with a high level overview of the role of the
service, the total budget, overall staff complement, performance indicators and key actions for the coming year.

The Solid Waste Services annual budget increased by $3.6 million (4.0%) in 2017 for a total budget of $94.4 million. This increase includes a $4.9 million contribution to reserves. Capital program expenditures are projected to total $26.7 million for 2017.

The Budget for 2017 has been prepared to respond to direction provided in the Metro Vancouver Board Strategic Plan and support the goals of the Integrated Solid Waste and Resource Management Plan. Waste flows and landfill operating and closure costs will continue to be key budget drivers in 2017. Staff recommend endorsing the 2017 Budget and Work Plans as presented under Alternative 1.

Attachments:
1. 2017 Solid Waste Services Budget
2. 2017 Solid Waste Services Capital Budget
3. 2017 Solid Waste Services Equipment Capital Plan Budget
4. 2017 Solid Waste Services Environmental Regulation and Enforcement Budget
5. 2017 Solid Waste Services Work Plans
   a. Operations
   b. Planning and Public Involvement
6. 2017 Solid Waste Services Organizational Chart
7. 2017 Initiatives for Increasing Waste Diversion

19572831
## REVENUES

<table>
<thead>
<tr>
<th>Description</th>
<th>2015</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>% CHANGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tipping Fees</td>
<td>$75,813,273</td>
<td>$83,290,870</td>
<td>$80,015,101</td>
<td>$85,373,222</td>
<td>6.7%</td>
</tr>
<tr>
<td>Energy Sales</td>
<td>6,102,848</td>
<td>4,701,618</td>
<td>5,719,900</td>
<td>5,719,900</td>
<td></td>
</tr>
<tr>
<td>Other External Revenues</td>
<td>6,700,530</td>
<td>4,464,746</td>
<td>2,855,894</td>
<td>3,303,073</td>
<td></td>
</tr>
<tr>
<td>Reserves</td>
<td>4,549,545</td>
<td>958,084</td>
<td>2,208,728</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL REVENUES</strong></td>
<td><strong>$93,166,196</strong></td>
<td><strong>$93,415,318</strong></td>
<td><strong>$90,799,623</strong></td>
<td><strong>$94,396,195</strong></td>
<td><strong>4.0%</strong></td>
</tr>
</tbody>
</table>

## EXPENDITURES

### Solid Waste Operations

<table>
<thead>
<tr>
<th>Description</th>
<th>2015</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>% CHANGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allocated Quality Control</td>
<td>$22,315</td>
<td>$24,711</td>
<td>$23,223</td>
<td>$15,613</td>
<td></td>
</tr>
<tr>
<td>Ashcroft Ranch</td>
<td>462,456</td>
<td>317,161</td>
<td>277,608</td>
<td>554,718</td>
<td></td>
</tr>
<tr>
<td>Engineers in Training</td>
<td>463,598</td>
<td>382,696</td>
<td>140,271</td>
<td>156,428</td>
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</tr>
<tr>
<td>Transfer Stations-Environmental Initiatives</td>
<td>4,997,354</td>
<td>4,262,732</td>
<td>5,234,882</td>
<td>5,017,292</td>
<td></td>
</tr>
<tr>
<td>Landfills</td>
<td>17,522,457</td>
<td>21,232,194</td>
<td>19,532,177</td>
<td>24,461,495</td>
<td></td>
</tr>
<tr>
<td>Minor Capital Projects</td>
<td>56,208</td>
<td>-</td>
<td>7,771</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Sustainability Fund</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Transfer Station System</td>
<td>35,236,437</td>
<td>36,946,245</td>
<td>33,416,414</td>
<td>26,650,110</td>
<td></td>
</tr>
<tr>
<td>Waste to Energy Facility</td>
<td>22,942,375</td>
<td>21,272,806</td>
<td>22,794,804</td>
<td>22,535,208</td>
<td></td>
</tr>
<tr>
<td><strong>Total Operating Programs</strong></td>
<td>$81,703,200</td>
<td>$84,438,544</td>
<td>$81,427,150</td>
<td>$79,390,864</td>
<td>(2.5%)</td>
</tr>
</tbody>
</table>

### Solid Waste Planning

<table>
<thead>
<tr>
<th>Description</th>
<th>2015</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>% CHANGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Policy and Facility Development</td>
<td>2,114,044</td>
<td>1,534,936</td>
<td>1,156,983</td>
<td>1,087,371</td>
<td></td>
</tr>
<tr>
<td>Zero Waste Implementation</td>
<td>1,774,662</td>
<td>1,000,198</td>
<td>1,636,325</td>
<td>1,626,726</td>
<td></td>
</tr>
<tr>
<td>Programs and Public Involvement</td>
<td>737,731</td>
<td>189,812</td>
<td>409,135</td>
<td>423,873</td>
<td></td>
</tr>
<tr>
<td><strong>Total Operating Programs</strong></td>
<td>$4,626,437</td>
<td>$2,724,947</td>
<td>$3,204,443</td>
<td>$3,137,970</td>
<td>(2.1%)</td>
</tr>
</tbody>
</table>

### Administration and Department Support

<table>
<thead>
<tr>
<th>Description</th>
<th>2015</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>% CHANGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administration and Department Support</td>
<td>900,345</td>
<td>728,580</td>
<td>790,794</td>
<td>731,332</td>
<td>(7.5%)</td>
</tr>
</tbody>
</table>

### Environmental Regulation and Enforcement

<table>
<thead>
<tr>
<th>Description</th>
<th>2015</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>% CHANGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Regulation and Enforcement</td>
<td>1,293,467</td>
<td>932,911</td>
<td>830,562</td>
<td>841,914</td>
<td>1.4%</td>
</tr>
</tbody>
</table>

### Allocation of Centralized Costs

<table>
<thead>
<tr>
<th>Description</th>
<th>2015</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>% CHANGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Operating Programs</td>
<td>91,767,012</td>
<td>92,078,052</td>
<td>89,486,895</td>
<td>87,973,214</td>
<td>(1.7%)</td>
</tr>
</tbody>
</table>

### Debt Service

<table>
<thead>
<tr>
<th>Description</th>
<th>2015</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>% CHANGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Debt Service</td>
<td>1,399,184</td>
<td>825,696</td>
<td>1,312,728</td>
<td>1,532,829</td>
<td>16.8%</td>
</tr>
</tbody>
</table>

### Contribution to Reserve

<table>
<thead>
<tr>
<th>Description</th>
<th>2015</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>% CHANGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contribution to Reserve</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>4,890,152</td>
<td>N/A</td>
</tr>
</tbody>
</table>

**TOTAL EXPENDITURES**

<table>
<thead>
<tr>
<th>Description</th>
<th>2015</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>% CHANGE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Operating Programs</strong></td>
<td>$93,166,196</td>
<td>$92,903,747</td>
<td>$90,799,623</td>
<td>$94,396,195</td>
<td><strong>4.0%</strong></td>
</tr>
</tbody>
</table>

---

GREATER VANCOUVER SEWERAGE AND DRAINAGE DISTRICT
SOLID WASTE
2017 BUDGET REVIEW

ZWC - 17
<table>
<thead>
<tr>
<th>2017 CAPITAL BUDGET</th>
<th>ORIGINAL TOTAL PROJECT COSTS</th>
<th>CHANGE IN TOTAL PROJECT COSTS</th>
<th>TOTAL PROJECT COSTS *</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CAPITAL EXPENDITURES</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>SW Landfills Capital</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2017 - Approved Projects in Progress</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coquitlam Landfill Gas Collection Upgrades Phase II Design</td>
<td>$300,000</td>
<td>$300,000</td>
<td>-</td>
</tr>
<tr>
<td>Coquitlam Landfill Leachate Collection System Grade Realignment Design</td>
<td>200,000</td>
<td>200,000</td>
<td>-</td>
</tr>
<tr>
<td>2017 - New Projects</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coquitlam Landfill Gas Collection Upgrades Phase II Construction</td>
<td>500,000</td>
<td>3,300,000</td>
<td>-</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>$1,000,000</td>
<td>$3,800,000</td>
<td>-</td>
</tr>
<tr>
<td><strong>SW Transfer Stations Capital</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2017 - Approved Projects in Progress</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coquitlam Transfer Station Replacement</td>
<td>1,600,000</td>
<td>57,000,000</td>
<td>(9,800,000)</td>
</tr>
<tr>
<td>North Shore TS Reconfiguration</td>
<td>750,000</td>
<td>7,000,000</td>
<td>-</td>
</tr>
<tr>
<td>Surrey RDO Siting &amp; Design</td>
<td>11,000,000</td>
<td>4,700,000</td>
<td>7,300,000</td>
</tr>
<tr>
<td>2017 - New Projects</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>North Shore TS Structural Modifications Construction</td>
<td>1,500,000</td>
<td>1,500,000</td>
<td>-</td>
</tr>
<tr>
<td>Weigh Scale Upgrades</td>
<td>1,500,000</td>
<td>1,500,000</td>
<td>-</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>$16,350,000</td>
<td>$71,700,000</td>
<td>(2,500,000)</td>
</tr>
<tr>
<td><strong>SW Waste to Energy Facility Capital</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2017 - Approved Projects in Progress</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bottom Ash Processing</td>
<td>4,000,000</td>
<td>6,000,000</td>
<td>800,000</td>
</tr>
<tr>
<td>Scrubber Design</td>
<td>500,000</td>
<td>2,000,000</td>
<td>-</td>
</tr>
<tr>
<td>WTEF Gas Burner Replacement</td>
<td>500,000</td>
<td>2,800,000</td>
<td>-</td>
</tr>
<tr>
<td>2017 - New Projects</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bottom Ash Dischargers / Conveyors Construction</td>
<td>1,400,000</td>
<td>1,400,000</td>
<td>-</td>
</tr>
<tr>
<td>Refuse Crane Construction</td>
<td>3,000,000</td>
<td>3,000,000</td>
<td>-</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>$9,400,000</td>
<td>$15,200,000</td>
<td>$800,000</td>
</tr>
<tr>
<td><strong>TOTAL CAPITAL EXPENDITURES</strong></td>
<td>$20,750,000</td>
<td>$90,700,000</td>
<td>($1,700,000)</td>
</tr>
</tbody>
</table>

* Total Project Costs include costs expected to be funded by partners.
<table>
<thead>
<tr>
<th>Summary</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Transfer Station Program:</td>
<td></td>
</tr>
<tr>
<td>Stationary Compactor</td>
<td>$1,500,000</td>
</tr>
<tr>
<td>Compactor Cylinder Refurbish</td>
<td>$100,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$1,600,000</strong></td>
</tr>
</tbody>
</table>
## GREATER VANCOUVER SEWERAGE & DRAINAGE DISTRICT
### SOLID WASTE
#### ENVIRONMENTAL REGULATION AND ENFORCEMENT
##### 2017 BUDGET

<table>
<thead>
<tr>
<th></th>
<th>2016 BUDGET</th>
<th>2017 BUDGET</th>
<th>% CHANGE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>REVENUES</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solid Waste Revenues</td>
<td>$ 830,562</td>
<td>$ 841,914</td>
<td>1.4%</td>
</tr>
<tr>
<td><strong>TOTAL REVENUES</strong></td>
<td>$ 830,562</td>
<td>$ 841,914</td>
<td>1.4%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>2016 BUDGET</th>
<th>2017 BUDGET</th>
<th>% CHANGE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>EXPENDITURES</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operating Programs:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enforcement</td>
<td>$ 748,345</td>
<td>$ 768,688</td>
<td></td>
</tr>
<tr>
<td>Administration and Department Support</td>
<td>$ 82,217</td>
<td>$ 73,226</td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL EXPENDITURES</strong></td>
<td>$ 830,562</td>
<td>$ 841,914</td>
<td>1.4%</td>
</tr>
</tbody>
</table>
Description of services
The business area is responsible for operating an integrated solid waste management system. Service delivery is focused on achieving Metro Vancouver’s Zero Waste objectives through reliable, cost-effective, safe and environmentally-sound operations. The service is a user pay system, funded by users through solid waste tipping fees.

The Metro Vancouver facilities are the North Shore, Coquitlam, Surrey, Maple Ridge, and Langley Transfer Stations; and Waste-to-Energy Facility (WTEF); these facilities are managed though several large contracts/agreements. Metro Vancouver also manages the closed Matsqui Transfer Station and the closed Coquitlam Landfill.

The operating budget for this business area is $79,390,864 and the capital budget is $14,150,000.

Strategic directions and high level goals supported
Board Strategic Plan
- Reduce solid waste through an aggressive waste reduction campaign and the recovery of materials and energy from the waste that remains.
- Work towards a financial model for managing a solid waste management system consistent with zero waste objectives.
- Continue to promote behaviour change that will reduce waste generated in the region.

Integrated Solid Waste and Resource Management Plan
- Goal 2 - Maximize reuse, recycling & material recovery.
- Goal 3 - Recover energy from waste stream after material recovery.
- Goal 4 - Dispose of all waste in landfill after recycling & energy recovery.

Performance indicators

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Historical and/or industry benchmark</th>
<th>Current performance</th>
<th>2017 performance objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual solid waste flows in Metro Vancouver system (tonnes)</td>
<td>2015: 822,000 2014: 831,000 2013: 890,000</td>
<td>2016 projected: 875,000</td>
<td>804,000</td>
</tr>
<tr>
<td>Availability of the WTEF</td>
<td>Contract Requirement: 90%</td>
<td>2016 projected: 93%</td>
<td>93%</td>
</tr>
</tbody>
</table>

2017 key actions
| Transition to the new contractor (Emterra) for the operation and maintenance of the North Shore, Coquitlam and Surrey Transfer Stations. |
| Complete construction and commence operation of the North Shore Transfer Station reconfiguration project. |
| Implement municipally funded dedicated recycling systems at North Shore and Coquitlam Transfer Stations. |
| Complete construction of non-ferrous metal recovery from bottom ash at the Waste to Energy Facility (WTEF). |
| At the WTEF, complete construction of the gas burner, refuse crane replacement and bottom ash dischargers/conveyors upgrades. |
| Add two temporary Material Disposal Ban inspectors to focus on small vehicle loads that have high quantities of clean wood waste. |
| Secure contingency landfill disposal capacity. |
| Complete fly ash disposal procurement process. |
| Evaluate options for the development of new waste-to-energy capacity. |
SOLID WASTE SERVICES
Solid Waste Planning and Public Involvement

Description of services
As set out in the Integrated Solid Waste and Resources Management Plan (ISWRMP), this business area:
- develops and implements regional waste reduction and recycling initiatives in the ISWRMP, including bans, bylaws, eco-centres, etc.;
- identifies, plans and develops regional infrastructure to fulfill future needs for waste transfer and disposal;
- plans for the establishment of additional waste to energy capacity;
- provides public involvement and consultation services to key solid waste projects.

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

The operating budget for this business area is $3,137,970 and the capital budget is $12,600,000.

Strategic directions and high level goals supported
Board Strategic Plan
- Reduce solid waste through an aggressive waste reduction campaign and the recovery of materials and energy from the waste that remains.
- Work towards a financial model for managing a solid waste management system consistent with zero waste objectives.
- Continue to promote behaviour change that will reduce waste generated in the region.

Integrated Solid Waste and Resource Management Plan
- Goal 1 - Minimize waste generation
- Goal 2 - Maximize reuse, recycling & material recovery
- Goal 3 - Recover energy from waste stream after material recovery
- Goal 4 - Dispose of all waste in landfill after recycling & energy recovery

Performance indicators

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Historical and/or industry benchmark</th>
<th>Current performance</th>
<th>2017 performance objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waste diversion rate (percent of solid waste flow diverted from final disposal)</td>
<td>Canadian average*: 24%</td>
<td>63% (2015 est.)</td>
<td>70% (regional goal by end of 2015) 80% aspirational goal by 2020</td>
</tr>
<tr>
<td>Waste disposed per capita (tonnes)</td>
<td>Canadian average*: 0.73</td>
<td>0.50 (2015 est.)</td>
<td>0.42</td>
</tr>
<tr>
<td>Indicator</td>
<td>Historical and/or industry benchmark</td>
<td>Current performance</td>
<td>2017 performance objectives</td>
</tr>
<tr>
<td>----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>-------------------------------------</td>
<td>---------------------</td>
<td>-----------------------------</td>
</tr>
<tr>
<td>Total number of licenses issued to private facilities managing municipal solid waste and recyclable materials, that must be regulated and monitored</td>
<td>2014: 48</td>
<td>51</td>
<td>52</td>
</tr>
<tr>
<td>2014: 51</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Most recent Canadian national figures from 2010. Newer figures expected from Stats Canada after 2017 Census.

### 2017 key actions

- Support the delivery of Metro Vancouver’s regional waste prevention programs: Create Memories Not Garbage (prevention of seasonal gift wastes), Food isn’t Garbage (reduction and recycling of food wastes), Love Food Hate Waste (reduction of household food wastes), A regional abandoned waste campaign and the Annual Zero Waste Conference
- Conduct projects to update technical and educational resources for increasing regional waste diversion, with emphasis on organics and wood.
- Support national benchmarking and applied research for waste reduction and recycling
- Survey regional transfer stations to assess level of customer service and identify opportunities for increased waste diversion.
- Develop resources and supports to improve recycling at transfer stations.
- Develop public education campaign to support municipal programs discouraging illegal dumping.
- Update regional waste composition monitoring for municipal solid waste.
- Review options to increase construction and demolition recycling capacity in the region.
- In partnership with Ministry of Environment staff, develop and implement an action plan that focuses on enhancing performance of EPR programs, improves awareness and understanding of EPR, and leads to expanding products obligated by the Recycling Regulation.
- Engage and consult with municipalities, industry, businesses and residents on upcoming solid waste initiatives including the 2018 Solid Waste Tipping Fee Bylaw, review of Bylaw 181, new disposal bans on textiles and expanded polystyrene, Gypsum Pilot Program, and any changes to transfer station operations.
- Evaluate options and business models for district energy delivery from the WTEF.
- Evaluate options for new WTE capacity.
- Determine options and costs to develop dedicated recycling areas at Surrey and Langley Transfer Stations in collaboration with municipalities served by those facilities.
- Continue development of Coquitlam Transfer Station by preparing detail design and costing and obtain permitting for construction.
- Implement a new Surrey Residential Drop-Off facility by continuing to work with the City of Surrey on siting and design.
- Track and manage the flow of wastes to minimize or eliminate wastes bypassing the regional disposal system.
Solid Waste Services

2016

18924234
September 28, 2016

FTRs = 8.0

Department Support
Weigh Scale Administration

FTRs = 4.0

POLICY & FACILITY DEVELOPMENT
Policy & Facility Development

FTRs = 4.0

SOLID WASTE OPERATIONS
Waste-to-Energy Facility
Landfills
Transfer Station System

FTRs = 17.0

SOLID WASTE PLANNING
Zero Waste Implementation
Solid Waste Planning

FTRs = 9.0

SOLID WASTE PROGRAMS
Programs & Public Involvement

FTRs = 2.0

Solid Waste Services
2016 Total FTRs = 41.0
2017 Proposed FTRs = 41.0
## 2017 Initiatives for Increasing Waste Diversion

<table>
<thead>
<tr>
<th>PROJECT DESCRIPTION</th>
<th>BUDGET</th>
<th>ISWRMP GOAL*</th>
<th>TARGETED SECTORS/MATERIALS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Clean and Treated Wood</td>
</tr>
<tr>
<td>Resources and Educational Support for 3Rs, Behaviour Change</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consulting projects to support waste reduction/diversion outreach &amp; communications</td>
<td>$ 30,000</td>
<td>1, 2</td>
<td>✓</td>
</tr>
<tr>
<td>New peer-reviewed organic waste diversion guides esp. for restaurants, MF residences, and ICI sites.</td>
<td>$ 80,000</td>
<td>1, 2</td>
<td>✓</td>
</tr>
<tr>
<td>Create Memories Not Garbage (waste prevention)</td>
<td>$ 175,000</td>
<td>1</td>
<td>✓</td>
</tr>
<tr>
<td>Food isn’t garbage (food waste prevention/recycling)</td>
<td>$ 100,000</td>
<td>1, 2</td>
<td>✓</td>
</tr>
<tr>
<td>Love Food Hate Waste (res. food waste prevention)</td>
<td>$ 86,500</td>
<td>1</td>
<td>✓</td>
</tr>
<tr>
<td>Abandoned waste campaign</td>
<td>$ 80,000</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Zero Waste Conference (projected revenues of $57,000)</td>
<td>$ 207,000</td>
<td>1, 2</td>
<td>✓</td>
</tr>
<tr>
<td>National ZW Council (food waste reduction, product/packaging design, communications, circular economy) - excludes in-kind services</td>
<td>$ 120,700</td>
<td>1</td>
<td>✓</td>
</tr>
<tr>
<td>Waste Composition Monitoring</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waste composition monitoring with periodic specialized audits for specific materials or sectors.</td>
<td>$ 120,000</td>
<td>1, 2</td>
<td>✓</td>
</tr>
<tr>
<td>Benchmarking and Applied Research for 3Rs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>National Solid Waste Benchmarking Initiative, and Municipal Waste Research Collaborative projects.</td>
<td>$ 40,000</td>
<td>1, 2</td>
<td>✓</td>
</tr>
<tr>
<td>Facility Consultations and Evaluations</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anonymous assessment of customer service provided by operators of regional waste facilities.</td>
<td>$ 30,000</td>
<td>1, 2</td>
<td></td>
</tr>
<tr>
<td>Consultation workshops and facilitation for facilities (e.g. Coquitlam TS, Surrey RDO) and projects.</td>
<td>$ 40,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Support for EPR and Disposal Bans</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Study of EPR models for non-traditional materials (packaged foods, clothing reuse, C&amp;D wastes)</td>
<td>$ 30,000</td>
<td>1, 2</td>
<td>✓</td>
</tr>
<tr>
<td>Mapping of recycling capacity, including C&amp;D waste and organics within the region.</td>
<td>$ 20,000</td>
<td>2</td>
<td>✓</td>
</tr>
<tr>
<td>Research and development of disposal alternatives for new materials per July 2016 Board report.</td>
<td>$ 30,000</td>
<td>2</td>
<td>✓</td>
</tr>
<tr>
<td>Improving management/removal of contaminants at organics processing facilities.</td>
<td>$ 30,000</td>
<td>2</td>
<td>✓</td>
</tr>
<tr>
<td>Follow-up on past audience surveys of MFR and ICI participation in organics recycling.</td>
<td>$ 30,000</td>
<td>2</td>
<td>✓</td>
</tr>
<tr>
<td>Additional disposal ban inspectors</td>
<td>$ 172,000</td>
<td>2</td>
<td>✓</td>
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<tr>
<td>Recycling of C&amp;D Wastes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Projects for increased C&amp;D recycling through increased processing capacity, market development.</td>
<td>$ 100,000</td>
<td>2</td>
<td>✓</td>
</tr>
<tr>
<td>Improved Recycling at Regional Facilities</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transfer station signage and education.</td>
<td>$ 30,000</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Conceptual design options for dedicated recycling services before scales at Surrey and Langley TSs.</td>
<td>$ 40,000</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Expansion of dedicated recycling at Coquitlam and North Shore TSs (cost recovery from municipalities)</td>
<td>$ -</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>District Energy</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cost-benefit evaluation of options and conceptual designs for district energy at existing WTEF</td>
<td>$ 80,000</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

### Performance Targets

- **ESTIMATED DECREASE IN WASTE GENERATION by 2020** (~200,000 tonnes/year)
- **ESTIMATED POTENTIAL WASTE DIVERSION by 2020** (~150,000 tonnes/year)
- **ESTIMATED POTENTIAL WASTE DIVERSION by 2020 (additional % diversion)** (~5%)
To: Zero Waste Committee

From: Karen Storry, Senior Project Engineer, Solid Waste Services

Date: October 7, 2016

Meeting Date: October 13, 2016

Subject: Municipal Programs and Policies to Encourage Recycling in the Multi-Family and Commercial/Institutional Sectors

RECOMMENDATION
That the GVS&DD Board receive the report dated October 7, 2016, titled “Municipal Programs and Policies to Encourage Recycling in the Multi-family and Commercial/Institutional Sectors” for information and send a copy to all member jurisdictions and to the provincial Ministry of Environment.

PURPOSE
The purpose of this report is to update the GVS&DD Board on the municipal programs and policies in place in the region to encourage recycling in the multi-family and commercial/institutional sectors.

BACKGROUND
Metro Vancouver’s Integrated Solid Waste and Resource Management Plan (ISWRMP) sets ambitious diversion targets for all sectors: single-family (65%); multi-family (30%); and commercial/institutional (70%). To progress towards these goals, Metro Vancouver collaborates with member municipalities on programs and policies to encourage waste diversion. In 2014 Metro Vancouver commissioned a study entitled “Policy Models for Industrial, Commercial and Institutional & Multi-family Sectors Recycling Incentives”. Of the three models considered in the study, municipal regulatory tools had the greatest potential to impact waste diversion.

The 2016 Zero Waste Committee Work Plan includes an update from staff on municipal regulatory tools and other programs to encourage diversion in the multi-family and commercial/institutional sectors.

2016 SUMMARY OF MUNICIPAL PROGRAMS AND POLICIES TO ENCOURAGE RECYCLING
Metro Vancouver reviewed GVS&DD member municipality bylaws and interviewed GVS&DD member municipal staff to summarize programs and regulatory measures that encourage multi-family and commercial/institutional waste diversion. Municipal tools focus on diversion at the waste generator level and are complementary to the existing disposal bans at regional disposal facilities. Three tables are attached to the report and provide further detail on GVS&DD member municipality programs and policies in place for the multi-family and commercial/institutional sectors, as reported to Metro Vancouver.
Municipal programs or policies to encourage diversion cover almost all single-family units in the region (Attachment 3). This has contributed to high diversion rates in the single-family sector, nearly reaching its ISWRMP diversion goal (Table 1 above). In comparison, there are fewer municipal regulatory tools and programs available for the multi-family and commercial/institutional sectors.

**Multi-Family Sector**

As shown in Attachment 3, 16 of 18 municipalities have a program or policy for multi-family recycling. For organics, 11 of 18 municipalities have a program or policy in place. Multi-family recycling is typically funded or serviced directly by MMBC; therefore, many member municipal bylaws include recycling requirements for the multi-family sector.

Currently, most municipalities focus educational efforts on multi-family buildings where they provide collection service. Municipalities can leave educational tags and refuse collection for buildings they service, for example if the recycling is contaminated. One challenge with multi-family buildings is that bins have multiple users with higher user turnover, resulting in a need for continual education. Approaches to multi-family education range from providing links to Metro Vancouver resources on the city’s website to contacting all multi-family buildings and offering free lobby events. Some local municipalities have bylaws that require multi-family buildings to have a diversion plan or distribute recycling information to their residents at least once per year.

During a Metro Vancouver-hosted workshop on multi-family organics diversion in May 2016, participants identified two key challenges for improving multi-family food scraps recycling rates:

1. Increasing participation, and
2. Improving regional consistency on what is accepted for recycling, to reduce confusion for multi-family residents.

Regional and local surveys of multi-family buildings suggest that most buildings have organics bins in place. The next challenge is to encourage residents to properly use the bins.

**Commercial/Institutional Sector**

Less than 50% of licensed businesses in the region are covered by municipal regulatory tools or programs that encourage commercial/institutional recycling. Table 1 above shows the commercial/institutional sector is farther from reaching its ISWRMP diversion goal compared to the single-family and multi-family sectors.

As shown in Attachment 3, 5 of 18 municipalities have a program or policy for commercial/institutional recycling and organics diversion. There is a great opportunity for Metro Vancouver and member municipalities to work together to introduce more programs and policies to encourage recycling in this sector. Some municipalities are already engaging with businesses to encourage waste diversion. City of Burnaby and City of Vancouver have bylaws with recycling requirements for business owners and commercial landlords, including a required educational
component. Port Moody provides educational information in their annual business license renewal notice. City of North Vancouver has introduced zero waste coaches which cover single-family, multi-family and commercial/institutional sectors. Richmond is working on a pilot to help move business toward zero waste. Township of Langley participated in a business recycling pilot program to reveal barriers to business recycling. Many municipalities are starting small pilots with their civic facilities to better understand challenges specific to the commercial/institutional sector.

In support of municipal programs and policies to encourage diversion, Metro Vancouver provides business recycling and organics diversion resources for municipalities to share with their businesses. Metro Vancouver facilitated a workshop with member municipalities in 2015 to discuss challenges and share solutions on regulatory tools to encourage multi-family and commercial/institutional recycling. Most recently, Metro Vancouver hired a consulting team to conduct a business engagement study to determine what further resources are needed for the commercial/institutional sector. The results of the study are expected to be shared with member jurisdictions in January 2017.

ALTERNATIVES
1. That the GVS&DD Board receive the report dated October 7, 2016, titled “Municipal Programs and Policies to Encourage Recycling in the Multi-family and Commercial/Institutional Sectors” for information and send a copy to all member jurisdictions and to the provincial Ministry of Environment.

2. That the Zero Waste Committee receive the report dated October 7, 2016, titled “Municipal Programs and Policies to Encourage Recycling in the Multi-family and Commercial/Institutional Sectors” for information and provide alternate direction to staff.

FINANCIAL IMPLICATIONS
There are no financial implications associated with this report. Programs to support municipal regulatory measures to encourage recycling, such as resource development, are included in the region’s annual budget.

SUMMARY / CONCLUSION
Metro Vancouver and member municipalities continue to work on programs and policies to encourage recycling in single-family, multi-family and commercial/institutional sectors. A review of municipal bylaws and programs showed that the commercial/institutional sector is a key focus area to advance towards the region’s diversion goals.

Staff recommend this information be shared with the member jurisdictions and the Ministry of Environment as described in Alternative 1.

Attachments:
1: Municipal Policies and Programs to Encourage Multi-Family Residential Recycling
2: Municipal Policies and Programs to Encourage Commercial/Institutional Recycling
3: Summary of Municipalities with Regulatory Tools and Programs to Encourage Single-Family, Multi-Family and Commercial/Institutional Recycling

19263895
## Municipal Policies and Programs to Encourage Multi-Family Residential Recycling

<table>
<thead>
<tr>
<th>Municipality</th>
<th>Municipal Policy/Program</th>
<th>Recycling</th>
<th>Organics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Municipal Collection</td>
<td>Diversion Policy*</td>
</tr>
<tr>
<td>Burnaby</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>(optional)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Delta</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>(mandatory fee)</td>
<td>(for those on city service)</td>
<td></td>
</tr>
<tr>
<td>Langley Township</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(mandatory for new townhomes, otherwise optional)</td>
</tr>
<tr>
<td>Maple Ridge</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>New Westminster</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>North Vancouver City</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(available, but most use private service)</td>
</tr>
<tr>
<td>North Vancouver District</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(available, but most use private service)</td>
</tr>
<tr>
<td>Pitt Meadows</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Port Coquitlam</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>(optional)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Port Moody</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>(optional)</td>
<td>(for those on city service)</td>
<td></td>
</tr>
<tr>
<td>Richmond</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>(mandatory fee)</td>
<td>(for those on city service)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(must pay for city service if not on private service)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Surrey</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(can opt for private service)</td>
<td></td>
</tr>
<tr>
<td>Vancouver</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>(transition to MMBC Oct 3)</td>
<td>(must have a diversion plan)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(some buildings)</td>
<td>(must have a diversion plan)</td>
</tr>
<tr>
<td>West Vancouver</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>White Rock</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

*Diversion policies encourage waste diversion and are included in municipal bylaws. Examples: mandatory municipal service, no organics allowed in the garbage, or a required diversion plan.*
## Municipal Policies and Programs to Encourage Commercial/Institutional Recycling

<table>
<thead>
<tr>
<th>Municipality</th>
<th>Recycling</th>
<th>Organics</th>
<th>Education and Outreach</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Municipal Collection Offered*</td>
<td>Diversion Policy</td>
<td>Municipal Collection Offered*</td>
</tr>
<tr>
<td>Burnaby</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Township of Langley</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>New Westminster</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>City of North Vancouver</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Port Coquitlam</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Port Moody</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Richmond</td>
<td>Pilot</td>
<td>Pilot</td>
<td></td>
</tr>
<tr>
<td>Surrey</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Vancouver</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>White Rock</td>
<td>✓</td>
<td></td>
<td>✓</td>
</tr>
</tbody>
</table>

* Service may be limited to small business that do not require front load bin service, and may not be part of the municipality's core collection services
### Summary of Municipalities with Regulatory Tools and Programs to Encourage Single-Family, Multi-Family and Commercial/Institutional Recycling

<table>
<thead>
<tr>
<th></th>
<th>Single-Family</th>
<th></th>
<th>Multi-Family</th>
<th></th>
<th>Commercial/Institutional</th>
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</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Recycling</td>
<td>Organics</td>
<td>Recycling</td>
<td>Organics</td>
<td>Recycling</td>
<td>Organics</td>
</tr>
<tr>
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<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Coquitlam</td>
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<td>MMBC</td>
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</tr>
<tr>
<td>Delta</td>
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<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Langley City</td>
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<td>MMBC</td>
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</tr>
<tr>
<td>Maple Ridge</td>
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<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>New Westminster</td>
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<td>✓</td>
<td>✓</td>
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<td></td>
</tr>
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<td>North Vancouver City</td>
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<td>✓</td>
<td>✓</td>
<td></td>
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</tr>
<tr>
<td>North Vancouver District</td>
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<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pitt Meadows</td>
<td>MMBC</td>
<td>✓</td>
<td>MMBC</td>
<td>✓</td>
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<td></td>
</tr>
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<td>Port Coquitlam</td>
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<td>✓</td>
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<tr>
<td>Port Moody</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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</tr>
<tr>
<td>Richmond</td>
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<td>✓</td>
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<td>✓</td>
<td>Pilot</td>
<td>Pilot</td>
</tr>
<tr>
<td>Surrey</td>
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<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Vancouver</td>
<td>MMBC</td>
<td>✓</td>
<td>MMBC</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>West Vancouver</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White Rock</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>18 of 18</td>
<td>18 of 18</td>
<td>16 of 18</td>
<td>11 of 18</td>
<td>5 of 18</td>
<td>5 of 18</td>
</tr>
</tbody>
</table>

- ✓ = Has a policy or program that applies to at least 80% of households or businesses in the municipality
- MMBC = Serviced directly by Multi-Material BC
RECOMMENDATION
That the GVS&DD Board authorize:
   a) award to Covanta Burnaby Renewable Energy, ULC, the construction of the non-ferrous metal recovery system at the Metro Vancouver Waste-to-Energy Facility at a cost of $5,897,843 (excluding taxes), under the terms and conditions of existing Contract 98106; and
   b) the Commissioner and Corporate Officer to execute any necessary documents.

PURPOSE
To seek Board authorization to award to Covanta Burnaby Renewable Energy, ULC (Covanta) to construct a non-ferrous metal recovery system at the Metro Vancouver Waste-to-Energy Facility (WTEF) in the amount of $5,897,843 (excluding taxes).

BACKGROUND
Pursuant to the Officers and Delegation Bylaw No. 247 and the Procurement and Real Property Contracting Authority Policy adopted by the Board on July 11, 2014 effective September 1, 2014, procurement contracts which exceed a value of $5,000,000 require the approval of the Board of Directors.

The Zero Waste Committee received a report recommending award of construction of a Non-Ferrous Metal Recovery project to Covanta. The Zero Waste Committee referred the item back to staff with the following motion:

   That the Zero Waste Committee refer the matter of the award of the Non-Ferrous Metal Recovery Project to staff to report back with the following information:
   a) background information on the contract, including the business case for the project and the environmental and social impacts of the project;
   b) confirmation of the value of the contract, through a review of the cost of the contract by a quantity surveyor or other similar consultant; and,
   c) an analysis of the appropriation of risk of the project.

Following this direction from the Zero Waste Committee, a third party consultant was engaged to review these issues.

PROJECT DESCRIPTION
The goal of the Non-Ferrous Metal Recovery project is to increase the existing recovery of ferrous metal content from the bottom ash (e.g., iron and steel), and add the recovery of the non-ferrous metal component (e.g., aluminum, copper) which currently remains in the bottom ash.
This project will involve construction of a number of new elements at the WTEF. The main components consist of conveyors, hoppers, screens, additional magnetic belts and an eddy current separator. The challenge with this project is the small footprint available which will require an installation more vertical in nature than typical of this equipment at other facilities.

**Project Benefits**

The project is expected to increase the diversion of non-ferrous and ferrous metal by approximately 570 to 710 tonnes per year. Currently approximately 7,000 tonnes per year of non-ferrous metals are recovered from the facility. It is expected that increased removal of metals from the bottom ash will generate a net revenue stream of $320,000 to $475,000 per year (after operation and maintenance expenses), increase overall recycling at the WTEF, and improve the physical and chemical properties of the bottom ash for regulatory compliance and potential beneficial reuse opportunities.

The project payback period is estimated at 12 to 19 years depending on the assumptions used for metal revenue and whether the full project contingency is required. Environmental benefits of metal recycling include:

- substantial greenhouse gas emission reductions resulting from offsetting the various smelting and processing operations used when making metal from virgin ore
- energy savings of 90% by recycling aluminum and copper compared to using virgin ore; and,
- improved physical and chemical properties of the bottom ash

Social benefits include supporting jobs in the scrap metal recycling industry and reducing the impacts of society on the planet.

**Selection of General Contractor**

To ensure continual operation of the WTEF Covanta is the best firm to perform the work. During the upgrades, Covanta will continue to operate the facility in accordance with requirements in the *Integrated Solid Waste and Resource Management Plan*, and fulfill the obligations of the Electricity Purchase Agreement with B.C. Hydro (e.g., avoid liquidated damages). In addition, as Covanta is responsible for the operation and maintenance of the installed works, there is greater accountability if Covanta acts as general contractor during construction. To ensure a fair price for Metro Vancouver, Covanta will tender out the non-proprietary work and their markup for the work is specified in Contract 98106. Covanta has submitted a not to exceed value of $5,897,843 (excluding taxes) for project construction.

**Third-party Consultant Review**

A third party consultant, HDR, reviewed the project on behalf of Metro Vancouver and concluded that the proposed capital cost was appropriate given the current exchange rate with the US dollar and the increased contingency that is warranted given the uncertainty around the elevated design required by space constraints at the site. The consultant report concluded that the non-ferrous metal recovery rate is within the range observed at other facilities and the metal prices used in the projections appear reasonable based on recent history but noted that scrap metal prices vary widely based on market conditions.

The consultant report concluded that Covanta is the most appropriate party to undertake the project given the scope, complexity and cost of the work and the fact that the work needs to be installed in a confined area while the WTEF continues to operate. This arrangement would best minimize Metro
Vancouver’s risk of plant downtime during construction and future operation and maintenance. Attached is the consultant report.

**ALTERNATIVES**

1. That the GVS&DD Board authorize:
   a) award to Covanta Burnaby Renewable Energy, ULC, to construct a non-ferrous metal recovery system at the Metro Vancouver Waste-to-Energy at a cost of $5,897,843 (excluding taxes), under the terms and conditions of existing Contract 98106; and,
   b) the Commissioner and Corporate Officer to execute the required agreement.

2. That the Zero Waste Committee receive the report dated October 6, 2016, titled “Non-Ferrous Metal Recovery Project at the Metro Vancouver Waste-to-Energy Facility” for information and provide alternate direction to staff.

**FINANCIAL IMPLICATIONS**

If the Board approves Alternative 1, Covanta will proceed with construction of the Non-Ferrous Metal Recovery Project in the amount of $5,897,843 (excluding taxes). There is sufficient funding in the 2016 and proposed 2017 capital budgets to cover this cost.

If the Non-Ferrous Metal Recovery Project does not proceed, an estimated 570 – 710 tonnes per year of ferrous and non-ferrous metal that is currently landfilled along with ash will continue to be disposed.

**SUMMARY / CONCLUSION**

Design is complete for the Non-Ferrous Metal Recovery Project at the Metro Vancouver Waste-to-Energy Facility. Proceeding with the project is expected to result in 570 – 710 tonnes per year of additional ferrous and non-ferrous metal recovery, with an expected simple payback of 12 – 19 years. Additional benefits of recovering more metal include expected improvements to bottom ash chemical and physical characteristics improving the potential to beneficially use the bottom ash. A third party engineering firm has confirmed the expected costs and revenues are reasonable and Covanta is the appropriate party to complete the work. Staff recommend Alternative 1 that Covanta be contracted to construct a non-ferrous metal recovery system at the WTEF at a cost $5,897,843 (excluding taxes), under the terms and conditions of existing Contract 98106.

**Attachment:**
HDR Review of Non-Ferrous Project Report

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INTRODUCTION

The Greater Vancouver Sewerage and Drainage District (Corporation) requested that HDR Corporation (HDR) review the engineering design and construction cost estimates prepared by Covanta Burnaby Renewable Energy, ULC (Covanta) for the Non-Ferrous Recovery Project (Project). The Project is currently budgeted in the Corporation’s capital plan. In July 2014, the Corporation authorized Covanta to undertake the first phase of the project, which included undertaking a detailed engineering design to determine the project requirements and refine Covanta’s preliminary capital cost estimate. Prior to authorizing the second phase of the Project (procurement, installation and commissioning), the Corporation’s Zero Waste Committee requested that an independent third party review be performed to ensure the Corporation is receiving a fair and competitive value for this project, consistent with their procurement strategy, and that proposed design is sound.

HDR has reviewed the presentations, letters and proposals pertinent to the Project, as well as the phase one engineering design package submitted by Covanta, included as Attachment A with this letter. HDR has also relied upon its knowledge of the Metro Vancouver Waste-to-Energy Facility (WTEF) and the Operating and Maintenance (O&M) Agreement between the Corporation and Covanta as well as our experience with ferrous and non-ferrous metal recovery systems installed at other similar waste-to-energy facilities in North America. Our findings are summarized below.

PROJECT BACKGROUND

Covanta’s initial PowerPoint presentation on March 6, 2014 and original proposal for the Project, dated May 14, 2014, identified two potential options for upgrading the existing metal recovery system at the WTEF, which currently includes ferrous metal recovery only. Both options included the same design for the non-ferrous recovery system with differing designs for upgrading the existing ferrous metal recovery system. Option #1 included the installation of an additional overhead belt magnet that would recover an incremental amount of ferrous metals in the combined bottom ash stream from all three combustion units; while Option #2 included replacement of the three existing overhead belt magnets (one per combustion unit) with rare earth magnets that would recover a marginally greater amount of ferrous metals compared to the existing WTEF ferrous recovery system and the equipment proposed in Option #1. Both options were broken up into two phases; (i) detailed design, and (ii) procurement, construction, and
commissioning. Covanta provided a not-to-exceed budget for detailed engineering design work and a preliminary construction cost estimate for each option.

The Corporation reviewed both options provided by Covanta and presented a recommendation to their Chief Administrative Officer to authorize the phase one design work for Option #1 in the amount of $300,000 dollars. This recommendation was based on the expected revenue generated from recovering the non-ferrous and additional ferrous metals, and the improved overall recycling component of the WTEF. Covanta was authorized to proceed with phase one of the Project on July 25, 2014.

On June 23, 2015, Covanta provided a proposal for phase two of the Project. This proposal included detailed equipment cost information from Steinert US, Inc. (Steinert) and Wolf Material Handling Systems (Wolf). Covanta also provided a breakdown for the remaining direct project costs as well as indirect costs, such as project management, procurement, construction management, commissioning, training, etc. The not-to-exceed budget for phase two was $5,581,325 CAD (based on a currency exchange rate, in affect at the time, of 80 cents USD per CAD).

Corporation staff provided a letter, dated February 3, 2016 to the Zero Waste Committee requesting approval to award phase 2 of the Project to Covanta. The Corporation requested $6,130,153 CAD to be allocated for the Project. The higher budget request reflected the use of a lower US-Canada currency exchange rate given the further downward pressure on the Canadian currency experienced since Covanta submitted its June 23, 2015 proposal.

PROJECT DESIGN AND CONSTRUCTION

Covanta contracted Wolf (for the mechanical and structural design) and RCM Technologies (for the electrical design) to perform the detailed engineering design work for phase one of the Project. Steinert, the Eddy Current Separator (ECS) manufacturer, provided the specifications that were used by Wolf for this piece of equipment. Although HDR did not perform an in-depth review of every drawing, the drawing package appears to be substantially complete and all of the drawings are marked “Issued for Construction.”

The system is designed to remove non-ferrous metals and additional ferrous metals from the combined bottom ash stream from all three combustion units and has a nominal capacity of 45 tonnes of bottom ash per hour. The existing clam shell bucket would move the bottom ash from the existing ash bunkers to a new receiving hopper located immediately outside the west end of the WTEF. From the receiving hopper, the ash stream would be distributed across two consecutive vibratory feeder conveyors before dropping onto a third vibratory conveyor. A new overhead belt magnet would be positioned above the first half of the third vibratory conveyor which would remove the remaining ferrous metal from the ash stream. The recovered ferrous metals would be deposited in a separate container. The latter half of the third conveyor would have a built-in grizzly screen designed to separate material in the ash stream that is six inches and greater. The ‘overs’ (greater than 15-centimeter material) is assumed to have a negligible amount of recoverable non-ferrous material and removing this larger material upfront would allow the downstream equipment including the ECS to operate more efficiently. The overs would be collected in a separate container whereas the ‘unders’ (smaller than 15-centimeter material) would be dropped onto a FSW belt conveyor orientated at a 90-degree angle to the vibratory conveyor. Shortly after being dropped on this belt conveyor, the ‘unders’ material would then be conveyed vertically almost 14 meters. The FSW belt conveyor would be designed with perpendicular fins, or flights, on the belt which act like a shelf when conveying the ash material vertically.
After conveying the ‘unders’ ash stream vertically, the material would be dropped on to a fourth vibratory feeder conveyor designed to distribute the ash stream across the width of the ECS belt. A drag chain conveyor would also be located underneath the outlet of the FSW belt to catch any ash material that remained on the belt; ash material collected by the drag chain conveyor would be directed to the fourth vibratory conveyor as well. The ECS would remove the non-ferrous metals from the ash stream by repelling them across a diverter gate. The non-ferrous metals would drop, by gravity, into a storage silo with a capacity of approximately 44 m$^3$ of non-ferrous metals. The bottom of the non-ferrous metal storage silo would be fitted with a clam shell gate for offloading material into a trailer. The remaining ash stream would drop off the end of the ECS belt and into an ash storage silo. The top of the silo would be equipped with a set of auger, or leveling, screws to spread the ash evenly inside the silo and the bottom of the silo is fitted with two clam shell gates for offloading. The ash storage silo has a capacity of approximately 96 m$^3$ of ash material.

The Steinert non-ferrous ECS, which is the heart of the non-ferrous system, is utilized at other Covanta operated waste-to-energy facilities. Recent installations at the H-POWER (Honolulu, Hawaii) facility (both at the back end of a newer stand-alone mass burn unit and for the original RDF units) and at the Durham York Energy Centre (DYEC, Clarington, Ontario) have been very successful. Test results during acceptance testing at the DYEC and H-POWER facilities showed that the non-ferrous recovery rate was greater than 75% effective at removing the non-ferrous metals from the bottom ash stream.

The proposed design of the non-ferrous recovery system for the WTEF differs from other waste-to-energy facilities installations due to the amount of available space for installation and the use of a bunker to store bottom ash. The ash bunker at the WTEF requires that the bottom ash be offloaded and run through the new system as a batch type process. By comparison, the metal recovery systems at most waste-to-energy facilities operate on a continuous basis, with both ferrous and non-ferrous metals removed before the ash reaches the storage area. While ferrous metal is removed in this manner at the WTEF, there is insufficient space to install non-ferrous metal recovery equipment prior to the ash bunker. Furthermore, the WTEF site is very small and the new equipment needs to be installed within a limited area bordered by the air cooled condenser and entrance ramp to the waste receiving area. The material handling equipment leading to the ECS equipment is therefore unique to the WTEF Project given the limited space and batch type operation.

Based on our review of the information, HDR has the following issues and concerns relative to the Covanta’s proposed design of the Project that requires further clarification from Covanta.

- The process flow diagram does not show any provisions for bypassing the ash receiving hopper. This is required to allow direct loading of trucks with ferrous metal from the existing ferrous bunkers and ash from the existing ash bunkers (in the event that the non-ferrous system is shut down for maintenance).
- The ash receiving hopper discharges directly to a vibrating conveyor. HDR is concerned that dropping a bucket load of ash into this hopper could overload or plug the vibrating conveyor without provisions for some type of metering system.
- To our knowledge, FSW belt conveyors are common and applied on a commercial basis in the coal industry but have not been used to elevate bottom ash in a similar application. This poses additional risk since the operating performance is not well established. Material jams could be a particular problem if pipe or wire gets past the grizzly scalper.
The use of storage bins with clam shell bottoms for non-ferrous and ash storage is also unique to this project. This presents some additional risk since the operating performance with this type of material is not well known. Large objects such as pipe or wire that get past the grizzly scalper could also jam the metering screw at the top of the ash storage bin.

The new equipment will be installed in a congested area and this will require close coordination with operations during construction to ensure that WTEF operations and waste deliveries are not adversely affected.

The ‘overs’ from the grizzly scalper and “ferrous metal” from the overhead belt magnet will be deposited into small bins that will need to be emptied into larger containers prior to shipping off site. The means and location for storing this material has not been detailed.

CONSTRUCTION COST ESTIMATE

Covanta’s June 23, 2015 proposal included a construction cost breakdown for Project. The breakdown included line item costs for equipment purchase from Wolf and Steinert plus other direct and indirect project costs such as installation, project and construction management, commissioning, insurance, contingency, etc. Covanta’s estimated total construction cost, based on a currency exchange rate of 80 cents USD per CAD, was $5,581,325 CAD.

Wolf’s cost proposal includes all equipment outlined in the design (excluding the ECS), as well as structural supports, control panels, stairways and platforms, material for the control room, balance of engineering, on-site assistance (including training and installation support), and freight. Wolf’s proposal, dated June 6, 2015 was in affect for 60 days. Steinert’s cost proposal included the ECS, ECS control panel, on-site assistance for the first day (each additional day will cost $2,000 USD), and freight (excluding custom costs). Steinert’s cost proposal, dated February 23, 2015, was in affect for 30 days. It is unclear if Covanta has received updated pricing from either Wolf or Steinert given that their prices are more than a year old.

Outside of the direct costs for materials and equipment proposed by Wolf and Steinert, the remaining line items in Covanta’s cost breakdown do not have bids or quotes from potential vendors and there is no backup provided for their estimates. The subtotal for all direct and indirect costs is $4,429,623 CAD.

Covanta used a 20 percent contingency on the direct and indirect cost subtotal, resulting in a total contingency cost for the Project of $885,925 CAD. This is significantly higher than HDR would normally expect given Covanta’s recent experience with similar system installations and the current stage of design. However, the higher contingency does provide for additional margin given the higher potential for design changes that may be encountered during construction (given the limited space available for installing the system), the potential for price escalation with the passage of time, and the volatility of currency exchange rates. Covanta also uses a 5 percent markup on the total cost, including contingency. The 5 percent markup is consistent with Article 12 of the O&M Agreement for work performed by a consultant or subcontractor to Covanta. The Covanta markup for the project is estimated at $265,777 CAD.

The Corporation staff’s letter to the Zero Waste Committee dated February 3, 2016 is based on a currency exchange rate that existed at that time of approximately 65 cents USD per CAD. At the time this report was prepared, the currency exchange rate was 79 cents USD per CAD. At the current rate, the estimated project costs are back within range of Covanta’s June 23, 2015 cost proposal.
OPERATING COSTS AND REVENUE PROJECTIONS

In their March 2014 presentation, Covanta estimated that the proposed system could recover 0.20% of the MSW processed as non-ferrous metals and an additional 0.25% of the MSW processed could be recovered as ferrous metals. This projects to approximately 570 and 710 tonnes per year of non-ferrous metal and ferrous metal, respectively, based on an annual processing capacity of 285,000 tonnes of MSW. Covanta also projected annual revenues of $573,000 for non-ferrous metal and $125,000 for additional ferrous metal. Using these estimates, HDR back calculated unit costs of approximately $1,000/tonne for non-ferrous metals and $175/tonne for ferrous metals. Based on HDR’s experience, the assumed non-ferrous metal recovery rate of 0.20% of the MSW processed is in range of what is observed at other waste-to-energy facilities in North America. The non-ferrous and ferrous metal unit cost projections used by Covanta appear reasonable based on recent history, but scrap metal prices may vary widely based on current market conditions.

Covanta’s March 2014 presentation also included an estimated annual cost of $185,000 CAD for “Operator, Maintenance, Parts, Labor, Associated Electrical Costs” but no detailed breakdown was provided. This presents approximately 8% of the equipment cost, which appears high. It is HDR’s understanding that the first year operational costs (after the system has been accepted) will be based on actual costs incurred plus the contractually allowable markup. After the first year of operation, Covanta will provide the Corporation with a guaranteed long-term annual rate based on the detailed breakdown of actual operational costs plus a projection of the preventative and life cycle maintenance costs. The operational costs will also include the electricity purchased to run the system, which will not be an insignificant expenditure.

Covanta’s May 2014 concept proposal included a request that Covanta be reimbursed for 100% of the demonstrated incremental O&M costs for the new non-ferrous system including allocated corporate overhead for marketing of the recovered non-ferrous metal. Covanta proposed that the allocated corporate overhead expense be based on a flat rate of $80 CDN per U.S. short ton of non-ferrous metal, subject to annual escalation. This rate appears high.

Note that the revenue estimates do not include any avoided costs as a result of removing the non-ferrous and ferrous metals. These savings could include avoided landfilling costs from less ash material remaining after metal removal, avoided landfilling costs for potential beneficial reuse opportunities for the bottom ash after metal removal, and reduced bottom ash conditioning costs.

CONTRACTING ARRANGEMENT

Article 13 (Capital Improvements) of the O&M Agreement between the Corporation and Covanta (Contract No. 98106) allows the Corporation to construct or install capital improvements requested by the Corporation in either of three ways; (i) by itself, (ii) through a third party contractor, or (iii) through Covanta. Where the Corporation directs Covanta to construct or install a capital improvement, the work is governed by Article 12 (Extra Work). Payment terms under Article 12 include the actual necessary expense plus 12 percent for work performed directly by Covanta and the actual necessary expense plus 5 percent for work performed by a consultant or subcontractor to Covanta.

The Corporation has elected to direct Covanta to construct the Project consistent with past capital improvements at the WTEF. The majority of the work is expected to be performed by consultants and subcontractors to Covanta. HDR concurs with this approach for the following reasons:
• Due to the nature of the Project and space constraints, the Project would need to be constructed in an area currently used for ash and ferrous metal loadout, which is located immediately adjacent to the entrance road to the waste receiving area. This would require close coordination with operations to minimize impacts to ash/ferrous metal loadout, waste deliveries and overall facility operations. Covanta being fully responsible for this coordination should reduce the Corporation’s risk by eliminating the potential for claims by Covanta that construction interfered with operation of the facility.

• The performance of the Project is critical to maximizing the amount of ferrous and non-ferrous metals removed from the ash. A single party being responsible for both construction and operation of the Project would reduce the Corporation’s performance risk and maximize potential metal revenues. Single party responsibility would also allow for inclusion of ferrous and non-ferrous metal removal guarantees.

• Single party responsibility would also eliminate the potential for claims by Covanta that the Project has caused operational, maintenance or environmental issues with either the new equipment or else ware in the facility.

• Implementation of the Project by the Corporation itself or through a third party contractor would require a significantly greater level of involvement by the Corporation’s technical, legal and administrative staff.

The detailed engineering design performed by Covanta assumes the supply of all of the new equipment and associated support steel by a single vendor (Wolf), except for the eddy current separator used to remove the non-ferrous metals, which would be supplied by Steinert. Given the number of system components, HDR concurs with single party responsibility as the best means of ensuring that the equipment is integrated properly and performs as expected. The equipment pricing submitted by Wolf and Steinert, which represents about 40% of the estimated project budget after accounting for currency exchange, is reasonable based on HDR’s experience. It is HDR’s understanding that the balance of the work would be competitively bid by Covanta to local contractors.

None of the Project documents refer to performance guarantees for non-ferrous and/or ferrous capture. Normally when a ferrous or non-ferrous system is implemented the system is tested during startup to determine if the system is capturing the anticipated amount of material. HDR recommends that non-ferrous and ferrous performance guarantees of greater than 80% each, be agreed upon with Covanta and that during commissioning proper testing be performed to show compliance with these capture rates.

SUMMARY OF CONCLUSIONS AND RECOMMENDATIONS

Based on our review of the Project as discussed above, HDR offers the following conclusions and recommendations for the Corporation’s consideration:

• While the design appears substantially complete, HDR has concerns related to several design features including elevating the ash vertically with a belt conveyor and temporarily storing ash and non-ferrous metal in storage bins with clam shell bottoms due to the lack of operating experience with this equipment in this application.

• The estimated construction cost for the Project appears reasonable given the scope of work and the challenges of installing the new equipment in a congested area while the WTEF continues to operate. While the 20 percent contingency rate is significantly higher than HDR would normally expect given the status of design, we believe it should provide sufficient margin given the higher...
potential for design changes that may be encountered during construction (given the limited space available for installing the system), price escalation with the passage of time and the volatility of currency exchange rates.

- Based on HDR’s experience, Covanta’s assumed non-ferrous metal recovery rate of 0.20% of the MSW processed is in range of what is observed at other waste-to-energy facilities in North America.
- The non-ferrous and ferrous metal unit cost projections used by Covanta appear reasonable based on recent history but it is noted that scrap metal prices can vary widely based on market conditions.
- Covanta’s estimated operation and maintenance cost of $185,000 CAD per year appears high. However, it is HDR’s understanding that the first year operational costs (after the system has been accepted) will be based on actual costs incurred plus the contractually allowable markup, and that after the first year Covanta will provide the Corporation with a guaranteed long-term annual rate based on the detailed breakdown of actual operational costs plus a projection of the preventative and life cycle maintenance costs.
- Covanta proposed cost of $80 CDN per U.S. short ton for allocated corporate overhead expenses associated with marketing the non-ferrous metal. This rate appears high.
- HDR concurs that Covanta is the most appropriate party to undertake the Project given the scope, complexity and cost of the work and the fact that the work needs to be installed in a confined area while the WTEF continues to operate. This arrangement minimizes the Corporation's risk.
- HDR concurs with Covanta’s plan to sole source the majority of the system to Wolf, which is the best means for ensuring that the equipment is integrated properly and performs as expected.
- HDR recommends that the Corporation negotiate ferrous and non-ferrous metal removal performance guarantees with Covanta to ensure that the system performance meets expectations both during initial startup as well as during the remainder of the contract term. Metal removal guarantees are customary in the waste-to-energy industry.
- The Corporation may want to consider, possibly as part of an agreement on performance guarantees, to share a portion of the net metal revenues with Covanta as an added incentive to maximize the performance of the system at all times. Metal revenue sharing is customary in the waste-to-energy industry.

If the Corporation has any questions or concerns with HDR’s assessment of the Project, please do not hesitate to contact us.

Sincerely,

Bruce J. Howie, P.E.
Vice President
HDR Corporation
To: Zero Waste Committee
From: Paul Henderson, General Manager, Solid Waste Services
Date: October 7, 2016
Meeting Date: October 13, 2016
Subject: GVS&DD Tipping Fee and Solid Waste Disposal Regulation Bylaw No. 302, 2016

RECOMMENDATION
That the GVS&DD Board:

a) approve the following provisions in the 2017 Tipping Fee Bylaw effective January 1, 2017:
   I. Tipping Fees to remain the same as in 2016 with the following exceptions:
      i. Recycling Fee for Source-Separated Organic Waste, Green Waste and Clean Wood at North Shore Transfer Station to be reduced from $71 per tonne to $67 per tonne;
      ii. Surcharge for Hazardous and Operational Impact Materials and Product Stewardship Materials to increase from $50 to $65 per occurrence; and
      iii. Recycling Fee for Gypsum to be $150 per tonne, with a minimum $15 fee (including Transaction Fee);
   II. Ability for General Manager of Solid Waste Services to waive fees and charges for loads from non-profit or volunteer community clean-up projects on public land in certain circumstances;
   III. GVS&DD’s costs of providing dedicated recycling depots at the North Shore and Coquitlam Transfer Stations are to be apportioned among participating municipalities on a population basis;
   IV. Weigh scales precision improved to 5 kg increments; and
   V. Peak Hours definition change to exclude Statutory Holidays;

b) approve the following provisions in the 2017 Tipping Fee Bylaw effective July 1, 2017:
   I. Surcharge threshold for Food Waste to change from 25% to 5%;
   II. Surcharge threshold for Clean Wood to change from 10% to 5%;
   III. New Surcharge for Unsecured Load: 50% of the applicable tipping fee to a maximum of $50;
   IV. Personal Hygiene Products making up 10% or more of a load and not properly contained added to Hazardous and Operational Impact Materials; and
   V. Removal of ban exemption for Wax Paper/Cardboard;

c) give first, second and third reading to Greater Vancouver Sewerage and Drainage District Tipping Fee and Solid Waste Disposal Regulation Bylaw No. 302, 2016; and

d) pass and finally adopt Greater Vancouver Sewerage and Drainage District Tipping Fee and Solid Waste Disposal Regulation Bylaw No. 302, 2016.

PURPOSE
The purpose of this report is to propose an updated Greater Vancouver Sewerage and Drainage District Tipping Fee and Solid Waste Disposal Regulation Bylaw No. 302, 2016 (2017 Tipping Fee Bylaw) to be implemented January 1, 2017.
BACKGROUND
The Tipping Fee Bylaw sets tipping fees and requirements, including disposal bans, for Metro Vancouver solid waste facilities. Under the authority of the Greater Vancouver Sewerage and Drainage Act, the bylaw is amended or replaced when the tipping fee or any other fees or surcharges require changes or if operational requirements of the disposal facilities are changed. The Tipping Fee Bylaw is typically replaced on an annual basis with the current bylaw being the Greater Vancouver Sewerage and Drainage District Tipping Fee and Solid Waste Disposal Regulation Bylaw No. 293, 2015.

The GVS&DD Board received reports on suggested changes to the 2017 Tipping Fee Bylaw at various meetings in 2016. At its July 29, 2016 meeting, the GVS&DD Board reviewed proposed changes to the 2017 Tipping Fee Bylaw and adopted the following resolution:

That the GVS&DD Board direct staff to:

a) consult with stakeholders on proposed changes to the 2017 Tipping Fee Bylaw related to:
   • Personal Hygiene Products;
   • Organics and Clean Wood Disposal Ban Enforcement Thresholds;
   • Disposal Ban surcharges for loads containing any Hazardous and Operational Impact Materials or Product Stewardship Materials; and

b) report back to the Board on consultation feedback, and integrate proposed changes on these items into the proposed 2017 Tipping Fee Bylaw.

At its June 24, 2016 meeting, the GVS&DD Board reviewed a funding model for dedicated recycling areas at the North Shore and Coquitlam Transfer Stations and adopted the following resolution:

a) That the GVS&DD Board direct staff to prepare amendments to be incorporated into the proposed 2017 Tipping Fee and Solid Waste Disposal Bylaw to apportion the annual costs on a population basis for operating dedicated recycling areas at the North Shore and Coquitlam Transfer Stations to the following participating municipalities; North Shore Transfer Station Recycling Area (District of North Vancouver, City of North Vancouver, District of West Vancouver); and Coquitlam Transfer Station Recycling Area (City of Coquitlam, City of Port Coquitlam, City of Port Moody).

At its May 27, 2016 meeting, the GVS&DD Board approved the following actions to help reduce abandoned waste, litter and escaped waste:

a) incorporate a surcharge for unsecured loads into the proposed 2017 Tipping Fee Bylaw; and

b) develop requirements to waive tipping fees for volunteer community clean-up events.

The suggested changes outlined in these reports have been included in the proposed 2017 Tipping Fee Bylaw.

2017 TIPPING FEE BYLAW PROVISIONS
The proposed 2017 Tipping Fee Bylaw is included as Attachment 1. A blackline version of the proposed 2017 Tipping Fee Bylaw compared to the 2016 Tipping Fee Bylaw is included as Attachment 2. Key provisions are discussed below.
Overview of Provisions that Would Stay the Same as 2016
The provisions to stay the same as 2016 in the proposed 2017 Tipping Fee Bylaw include:

- Municipal Garbage tipping fee for local government single family and public works waste at $100 per tonne;
- Tipping Fees for All Garbage other than Municipal Garbage at:
  - Up to 1 tonne: $133 per tonne, to a maximum of $112 per load;
  - 1 tonne to 9 tonnes: $112 per tonne, to a maximum of $720 per load; and
  - 9 tonnes and over: $80 per tonne;
- Garbage, Special Handle Waste and Gypsum Transaction Fee at $5 per load;
- Minimum Tipping Fee for Garbage at $15 (including the $5 Transaction Fee);
- Special Handle Waste at $250 per tonne with a $50 minimum fee; and
- Regional Service Rate: 6% of the municipal tipping fee for local government single family and public works waste, and included in all tipping fees.

Overview of Proposed Changes
Changes to the 2017 Tipping Fee Bylaw for the Board’s consideration include:

- Lowering the food waste and clean wood surcharge thresholds to 5%;
- Increasing the surcharge from $50 to $65 (to account for inflation) for loads containing any hazardous and operational impact materials or product stewardship materials;
- Incorporating a surcharge for unsecured loads;
- Reducing the source-separated organic waste, green waste and clean wood recycling fees at the North Shore Transfer Station from $71 tonne to $67 tonne to match the other transfer stations because infrastructure previously funded through the higher fees is now paid for;
- Removing the different fee for two sheets or less of gypsum to have gypsum at a consistent fee structure of $150 per tonne and a minimum fee of $15 (including the $5 Transaction Fee);
- Regulating personal hygiene products that make up more than 10% of the load by requiring them to be contained in a sealed plastic bag (double bagged);
- Removing the ban exemption for wax paper/cardboard because it is compostable;
- Including the ability and conditions to waive tipping fees for loads from non-profit or volunteer community clean-up projects on public land;
- Establishing a method of apportioning the annual costs to participating municipalities on a population basis for providing dedicated recycling depots at the North Shore and Coquitlam Transfer Stations;
- Improving the precision of the weigh scales from 10 kg to 5 kg; and
- Excluding statutory holidays from having a different tipping fee during peak hours.

Timing of Proposed Changes
Proposed changes to the Tipping Fee Bylaw are recommended to take effect January 1, 2017 with the exception of a 6 month educational period from January 1 to June 30, 2017 for the following:

- New enforcement ban thresholds for food waste and clean wood;
- Surcharge on unsecured loads;
- Required containment of personal hygiene products for loads that contain more than 10% of these products; and
- Removal of ban exemption on wax paper/cardboard.

If the proposed 2017 Tipping Fee Bylaw is approved, regional disposal facility customers, the public, and other stakeholders will be advised through a communication program.
Stakeholder Feedback on Proposed Tipping Fee Bylaw Changes

Stakeholder engagement and consultation began in mid-2016 with notifications to a broad range of stakeholders including member municipalities, organic waste generators, waste management businesses, processing facilities, non-governmental organizations, academia, government agencies, consultants, business associations, property managers, health facilities and construction and demolition professionals. Emails were sent to over 2000 stakeholders during the consultation period. In July stakeholders were sent a link to the July 14, 2016 Zero Waste Committee Agenda, which included a report on proposed changes to the 2017 Tipping Fee Bylaw. In addition, stakeholders were invited to participate in a webinar, workshop, and meetings by request to discuss the proposed changes. Each email notification also invited stakeholders to respond with written feedback. Attachment 3 documents consultation activities and notifications, and summarizes stakeholder feedback.

There was general support for proposed changes. The proposed reduction in Organics and Clean Wood Disposal Ban enforcement thresholds to 5% were seen as positive steps towards the region’s diversion goals. The consultation activities also provided opportunities to clarify elements of the existing Disposal Ban Program, including the three categories of banned materials and opportunities for banned items to be safely removed to avoid a surcharge.

Requests were made to provide sufficient time to adjust to proposed changes, especially for multi-family buildings and businesses to adjust to the potential new organics ban enforcement threshold and for self-haul vehicles to adjust to requirements on securing their loads.

Stakeholders requested that Metro Vancouver take a cautious and gradual approach when considering future material disposal bans, such as textiles and expanded polystyrene, to allow time to understand all potential concerns and consequences. Metro Vancouver will undertake stakeholder consultation prior to introducing any new material disposal bans.

ALTERNATIVES

1. That the GVS&DD Board:
   a) approve the following provisions in the 2017 Tipping Fee Bylaw effective January 1, 2017:
      I. Tipping Fees to remain the same as in 2016 with the following exceptions:
         i. Recycling Fee for Source-Separated Organic Waste, Green Waste and Clean Wood at North Shore Transfer Station to be reduced from $71 per tonne to $67 per tonne;
         ii. Surcharge for Hazardous and Operational Impact Materials and Product Stewardship Materials to increase from $50 to $65 per occurrence; and
         iii. Recycling Fee for Gypsum to be $150 per tonne, with a minimum $15 fee (including Transaction Fee);
      II. Ability for General Manager of Solid Waste Services to waive fees and charges for loads from non-profit or volunteer community clean-up projects on public land in certain circumstances;
      III. GVS&DD’s costs of providing dedicated recycling depots at the North Shore and Coquitlam Transfer Stations are to be apportioned among participating municipalities on a population basis;
      IV. Weigh scales precision improved to 5 kg increments; and
      V. Peak Hours definition change to exclude Statutory Holidays;
   b) approve the following provisions in the 2017 Tipping Fee Bylaw effective July 1, 2017:
      I. Surcharge threshold for Food Waste to change from 25% to 5%;
      II. Surcharge threshold for Clean Wood to change from 10% to 5%;
III. New Surcharge for Unsecured Load: 50% of the applicable tipping fee to a maximum of $50;

IV. Personal Hygiene Products making up 10% or more of a load and not properly contained added to Hazardous and Operational Impact Materials; and

V. Removal of ban exemption for Wax Paper/Cardboard;

c) give first, second and third reading to Greater Vancouver Sewerage and Drainage District Tipping Fee and Solid Waste Disposal Regulation Bylaw No. 302, 2016; and

d) pass and finally adopt Greater Vancouver Sewerage and Drainage District Tipping Fee and Solid Waste Disposal Regulation Bylaw No. 302, 2016.

2. That the GVS&DD Board receive the report dated October 7, 2016, titled “GVS&DD Tipping Fee and Solid Waste Disposal Regulation Bylaw No. 302, 2016” and provide alternate direction to staff.

FINANCIAL IMPLICATIONS

If the Board approves Alternative 1, the changes proposed in this report will be incorporated into the Tipping Fee Bylaw for 2017. The Metro Vancouver solid waste function operates as a user pay utility. Tipping fees are the primary revenue source to fund the operation of the regional waste disposal system and Metro Vancouver zero waste planning and communication initiatives. The tipping fee is based on a number of factors including the Transfer Station Operations and Maintenance Contract, the anticipated volume of waste received at Regional Facilities and estimated funding for future capital expenditures. Waste flows and landfill operating and closure costs are key drivers of actual financial performance.

If the Board does not approve the proposed 2017 Tipping Fee Bylaw, the Greater Vancouver Sewerage and Drainage District Tipping Fee and Solid Waste Disposal Regulation Bylaw No. 293, 2015 (2016 Tipping Fee Bylaw) will remain in place and changes proposed in this report dated October 7, 2016, titled “GVS&DD Tipping Fee and Solid Waste Disposal Regulation Bylaw No. 302, 2016” would not be implemented.

SUMMARY / CONCLUSION

Tipping fees for garbage are proposed to remain the same in 2017 as in 2016. Proposed changes include reducing the Food Waste and Clean Wood surcharge thresholds to 5%; increasing the single item surcharges from $50 to $65; adding a surcharge for unsecured loads; including requirements for proper containment of personal hygiene products; removing the disposal ban exemption on wax paper/cardboard; including the ability to waive tipping fees for loads from non-profit or volunteer community clean-up projects on public land; and apportioning the annual costs for operating dedicated recycling depots at the North Shore and Coquitlam Transfer Stations. Staff recommend Alternative 1, that the Board approve the 2017 Tipping Fee Bylaw.

Attachments:
1: Draft Greater Vancouver Sewerage and Drainage Tipping Fee and Solid Waste Disposal Regulation Bylaw No. 302, 2016
2: Blackline version of the proposed 2017 Tipping Fee Bylaw compared to the 2016 Tipping Fee Bylaw
3: 2017 Tipping Fee Bylaw Proposed Changes: Summary of Notification and Consultation Activities and Feedback

19480654
GREATER VANCOUVER SEWERAGE AND DRAINAGE DISTRICT

BYLAW NO. 302, 2016

A Bylaw to Establish the Tipping Fee and Solid Waste Disposal Regulation

WHEREAS:

A. Pursuant to the Greater Vancouver Sewerage and Drainage District Act (the “Act”) the objects of the Greater Vancouver Sewerage and Drainage District (“GVS&DD”) include the disposal of all types of waste and the operation and administration of facilities for the disposal of all types of waste;

B. Section 7A(5)(b) of the Act empowers the GVS&DD to establish the uses to which its waste disposal facilities may be put and by whom they may be used;

C. Section 7A(5)(g) of the Act empowers the GVS&DD to establish scales of charges for services rendered by the GVS&DD and for the use of any of the GVS&DD’s waste disposal facilities;

D. In relation to the disposal of solid waste generated within its area, section 7B of the Act empowers the GVS&DD to set levies payable by generators of waste or by other persons who use the services of a waste hauler based on the quantity, volume, type or composition of waste generated; and

E. Section 55(4) of the Act empowers the GVS&DD to establish a method of apportionment of its costs among its member municipalities.

NOW THEREFORE the Board of the Greater Vancouver Sewerage and Drainage District in open meeting assembled, enacts as follows:

1.0 Repeal of Bylaw

1.1 “Greater Vancouver Sewerage and Drainage District Tipping Fee and Solid Waste Disposal Regulation Bylaw No. 293, 2015” is hereby repealed.

2.0 Citation

2.1 The official citation for this bylaw is “Greater Vancouver Sewerage and Drainage District Tipping Fee and Solid Waste Disposal Regulation Bylaw No. 302, 2016”.

2.2 This Bylaw may be cited as the “2017 Tipping Fee Bylaw”.

Greater Vancouver Sewerage and Drainage District Tipping Fee and Solid Waste Disposal Regulation
Bylaw No. 302, 2016

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3.0 Definitions

3.1 In this Bylaw:

“Agricultural Waste” means Refuse that originates from an agricultural operation as defined pursuant to the Agricultural Waste Control Regulation, B.C. Reg. 131/1992, adopted pursuant to the Environmental Management Act, and includes manure, used mushroom medium and agricultural vegetation waste;

“Banned Materials” means Hazardous and Operational Impact Materials, Recyclable Materials or Product Stewardship Materials;

“Board” means the board of directors of the Greater Vancouver Sewerage and Drainage District;

“Clean Wood” means Municipal Solid Waste that comprises solid wood, lumber or pallets:

(i) that does not contain any glues or resins;

(ii) that is unpainted, unstained and untreated; and

(iii) that may or may not be pierced with nails or other metal fasteners;

“Contaminated Recyclable Paper” means Recyclable Paper that has been contaminated with grease, oil, food residue or other material;

“Corrugated Cardboard” means Recyclable Paper that consists of a fluted corrugated sheet and one or two flat linerboards;

“Delta Garbage” means all Garbage originating from within the territorial boundaries of the Corporation of Delta, except Delta Residential Drop-off Garbage;

“Delta Residential Drop-off Garbage” means Garbage brought to a Vancouver Disposal Site by residential customers who reside in Delta;

“Disposal Site” means any of the Municipal Solid Waste disposal facilities listed in Schedule “A”;

“Environmental Management Act” means the Environmental Management Act S.B.C. 2003 c. 53;

“Food Waste” means Municipal Solid Waste that comprises food, including meat, fish, fat, dairy products, bread, baking products, fruits and vegetables, whether cooked or uncooked and packaged or unpackaged;
“Garbage” means the Municipal Solid Waste that is disposed of in a bunker, pit or on the tipping floor, as opposed to a Recycling Area, at a Disposal Site or a Vancouver Disposal Site;

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

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

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

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

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

“Load” means a quantity of Municipal Solid Waste that is or was contained within a single vehicle attending at a Disposal Site;

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

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

“Municipal Garbage” means:

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

(ii) Loads of Municipal Solid Waste collected by local government staff from local government owned premises, such as parks, streets or public buildings;
“Municipal Solid Waste” means Refuse that originates from residential, light industrial, commercial, institutional, demolition, land clearing or construction sources or Refuse specified to be included in the GVS&DD’s solid waste management plan pursuant to the Environmental Management Act;

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

“Personal Hygiene Products” means personal care products such as diapers, feminine hygiene products and incontinence products;

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

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

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

“Recyclable Paper” means Municipal Solid Waste manufactured from thin sheets from wood pulp or other fibrous substances that may be converted into reusable materials and includes newspapers and inserts, magazines, telephone directories, catalogues, office papers, envelopes, boxboard, paper bags and mail, but excludes photographic paper, carbon paper, tissue paper, paper napkins or towels, paper that is adhered to plastic or metal, composite paper products such as tetrapak containers, and gable-top paper containers such as milk cartons;

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

“Recycling Depots” means the area located in front of the weigh scales at the Coquitlam Transfer Station and the North Shore Transfer Station, where identified materials can be dropped-off at no charge;

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

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

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

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

“Special Handle Waste” means International Waste and Municipal Solid Waste that requires immediate destruction or is designated for product destruction by a regulatory agency;

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

“Tipping Fee” means the fee charged by the GVS&DD for disposing of Garbage or Special Handle Waste at Disposal Sites, as set out in Table 1 of Schedule “B” of this Bylaw, which includes the Regional Services Rate;

“Transaction Fee” means the fee charged by the GVS&DD, in addition to the Tipping Fee, for all Loads of Garbage disposed of at Disposal Sites, all Loads of Special Handle Waste disposed of at the Waste-to-Energy Facility and all Loads of Gypsum dropped off at designated Recycling Areas, as set out in Table 2 of Schedule “B” of this Bylaw;

“Unsecured Load” means a Load that is not tied and covered or otherwise secured to prevent any of the Load escaping from the vehicle;

“Vancouver Disposal Site” means either of the following Municipal Solid Waste disposal facilities that are owned or operated by the City of Vancouver:

(i) Vancouver Landfill located at 5400 72nd Street, Delta; and

(ii) Vancouver South Transfer Station, Recycling Depot and Yard Trimmings Drop-off located at 377 West Kent Avenue North, Vancouver; and

“Vancouver Garbage” means all Garbage that originates from within the territorial boundaries of the City of Vancouver.

4.0 Restrictions and Prohibitions

4.1 No person shall dispose of anything at a Disposal Site except in accordance with this Bylaw.
4.2 No person shall dispose of Municipal Solid Waste at a Disposal Site unless it originates from within the geographic area of the GVS&DD.

4.3 Despite section 4.2, the Board may authorize acceptance at a Disposal Site of Municipal Solid Waste that originates from outside the geographic area of the GVS&DD, including International Waste.

4.4 No person shall dispose of any Loads that emit odours, fumes or particulate matter (such as dust) that cause or are capable of causing material discomfort to a person at a Disposal Site, except that where expressly authorized by the Manager such Loads may be disposed of at the Waste-to-Energy Facility.

4.5 No person shall dispose of any Loads dominated by oily materials, substances or objects at a Disposal Site, except that where expressly authorized by the Manager such Loads may be disposed of at the Waste-to-Energy Facility.

4.6 No person shall dispose of Gypsum at a Disposal Site, except Gypsum that weighs less than one half tonne may be dropped off at a designated Recycling Area.

4.7 No person shall dispose of Mattresses at a Disposal Site, except that four or fewer Mattresses may be dropped off at a designated Recycling Area.

4.8 No person shall scavenge or salvage any Municipal Solid Waste or Recyclable Materials from a Disposal Site.

4.9 The Manager may prohibit a person who contravenes this Bylaw from disposing of Municipal Solid Waste at any Disposal Site for such period as the Manager may determine.

5.0 **Tipping Fees, Transaction Fee, Recycling Fees and Surcharges**

5.1 Every person who disposes of Municipal Solid Waste at a Disposal Site must pay to the GVS&DD:

(a) the applicable Tipping Fees set out in Table 1 of Schedule “B”;

(b) the Transaction Fee set out in Table 2 of Schedule “B”;

(c) the applicable Recycling Fees set out in Table 3 of Schedule “B”; and

(d) the applicable Surcharges set out in Table 4 of Schedule “B”,

and all such fees and charges must be paid before the person leaves the Disposal Site.
5.2 Every person who disposes of Special Handle Waste at the Waste-to-Energy Facility must pay the applicable Tipping Fee specified in Table 1 of Schedule “B” of this Bylaw and the Transaction Fee specified in Table 2 of Schedule “B” of this Bylaw.

5.3 Every person who drops off Source-Separated Organic Waste, Green Waste, Clean Wood, Gypsum or Mattresses at a designated Recycling Area must pay the applicable Recycling Fee specified in Table 3 of Schedule “B” of this Bylaw.

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

5.5 Every person who disposes of a Load at a Disposal Site that contains a quantity of Recyclable Materials other than Food Waste or Clean Wood that exceeds either 5% of the total weight of the Load or 5% of the total volume of the Load must pay a Surcharge in the amount set out in Table 4 of Schedule “B” of this Bylaw.

5.6 Every person who disposes of a Load at a Disposal Site that contains Contaminated Recyclable Paper that exceeds either 5% of the total weight of the Load or 5% of the total volume of the Load must pay a Surcharge in the amounts set out in Table 4 of Schedule “B” of this Bylaw.

5.7 Up until June 30, 2017 every person who disposes of a Load at a Disposal Site that contains Food Waste that exceeds either 25% of the total weight of the Load or 25% of the total volume of the Load must pay a Surcharge in the amounts set out in Table 4 of Schedule “B” of this Bylaw.

5.8 From July 1, 2017 every person who disposes of a Load at a Disposal Site that contains Food Waste that exceeds either 5% of the total weight of the Load or 5% of the total volume of the Load must pay a Surcharge in the amounts set out in Table 4 of Schedule “B” of this Bylaw.

5.9 Up until June 30, 2017 every person who disposes of a Load at a Disposal Site that contains Clean Wood that exceeds either 10% of the total weight of the Load or 10% of the total volume of the Load must pay a Surcharge in the amounts set out in Table 4 of Schedule “B” of this Bylaw.

5.10 From July 1, 2017 every person who disposes of a Load at a Disposal Site that contains Clean Wood that exceeds either exceeds either 5% of the total weight of the Load or 5% of the total volume of the Load must pay a Surcharge in the amounts set out in Table 4 of Schedule “B” of this Bylaw.
5.11 Every person who drops off of a Load of Source-Separated Organic Waste at a designated Recycling Area that contains more than 0.05% (by wet weight) of any other type of Refuse must pay a Surcharge in the amount set out in Table 4 of Schedule “B” of this Bylaw.

5.12 Every person who disposes of a Load at a Disposal Site that contains any Hazardous and Operational Impact Materials or Product Stewardship Materials must pay a Surcharge in the amount set out in Table 4 of Schedule “B” of this Bylaw, plus the costs of remediation and clean up.

5.13 Every person who enters a Disposal Site with an Unsecured Load must pay a Surcharge in the amount set out in Table 4 of Schedule “B” of this Bylaw.

5.14 Special Handle Waste is exempt from all Surcharges, but if a Load of Special Handle Waste contains any Hazardous and Operational Impact Materials, it will be subject to the costs of remediation and clean-up.

5.15 Where a single Load is subject to multiple Surcharges, the Surcharge with the highest value will apply for the weight of the entire Load.

5.16 Despite anything else in this Bylaw, in advance of any person transporting a single Load or multiple Loads to a Disposal Site, the Manager may, at his or her discretion, waive any Surcharge or Surcharges or a portion thereof for a specified period and for specified classes of persons.

5.17 Despite anything else in this Bylaw, the Manager may, at his or her discretion, waive all fees and charges for a Load delivered to a Disposal Site by a non-profit or volunteer group resulting from a community clean-up project, provided that:

(a) the community clean-up project is conducted within the geographic area any of GVRD member municipalities;

(b) the community clean-up project involves collecting litter or abandoned waste from the natural environment from any of the following publicly owned areas:

(i) green space, such as natural areas, recreational parks or playgrounds;

(ii) roads;

(iii) marine shorelines and harbours;

(iv) lakes, ponds, rivers, creeks, streams or other natural waterways.

(c) the Load does not contain Recyclable Materials or Hazardous and Operational Impact Materials;
(d) the Manager receives an advance written request from the non-profit or volunteer group prior to the date the community clean-up project is to be held;

(e) the Manager confirms in writing to the non-profit or volunteer group that fees and charges otherwise payable under this Bylaw will be waived; and

(f) the non-profit or volunteer group brings the Manager’s written confirmation to the Disposal Site at the time of disposal.

5.18 The weigh scales at Disposal Sites weigh to the nearest 0.005 tonnes. For those customers who do not have a customer charge account, as described in Schedule “F”, the total amount payable to GVS&DD is rounded to the nearest dollar.

5.19 Every person who disposes of a Load at the Waste-to-Energy Facility that is made up of at least 85% by weight of metals will receive a credit of $25 per tonne on exiting the scale house at the Waste-to-Energy Facility.

5.20 Despite section 5.1 of this Bylaw, any person who disposes of Municipal Solid Waste at a Disposal Site on a regular basis may apply to the GVS&DD for a customer charge account in accordance with Schedule “F” to this Bylaw.

5.21 In the event the weigh scale system at a Disposal Site is not functioning for any reason, at his or her discretion the Manager may:

(a) close the Disposal Site until the weigh scale system is functioning; or

(b) permit a person to dispose of a single Load at the Disposal Site subject to the following:

(i) the Load must not measure more than 0.5 cubic metres in volume; and

(ii) the minimum Tipping Fee set out in Table 1 of Schedule “B” of this Bylaw, plus the Transaction Fee, will be charged for the Load.

6.0 **Regional Services Rate**

6.1 The Regional Services Rate is set at an amount equal to 6% of the Tipping Fee for Municipal Garbage, as specified in Table 1 of Schedule “B”. The Regional Services Rate is included in all Tipping Fees.

6.2 Every Quarter, the City of Vancouver must record:

(a) the total tonnage of Garbage;

(b) the tonnage of Vancouver Garbage and Delta Garbage; and
(c) the tonnage of Delta Residential Drop-off Garbage,

that is disposed of at the Vancouver Disposal Sites during that Quarter and provide such information to GVS&DD and the Corporation of Delta within 30 days of the end of the Quarter.

6.3 Every Quarter GVS&DD will invoice the City of Vancouver for an amount equal to the Regional Services Rate for every tonne of Vancouver Garbage and Delta Residential Drop-off Garbage disposed of at the Vancouver Disposal Sites during the previous Quarter, and the City of Vancouver must remit payment to GVS&DD within 30 days of the date of such invoice.

6.4 Every Quarter GVS&DD will invoice the Corporation of Delta for an amount equal to the Regional Services Rate for every tonne of Delta Garbage disposed of at the Vancouver Disposal Sites during the previous Quarter, and the Corporation of Delta must remit payment to GVS&DD within 30 days of the date of such invoice.

7.0 Apportionment of Recycling Depot Costs

7.1 On or before March 31 each year, the GVS&DD will prepare a detailed estimate of the amount required for constructing, maintaining, administering and operating the Recycling Depot at the North Shore Transfer Station (“Annual Estimate North Shore Recycling Depot”) in that calendar year.

7.2 The Annual Estimate North Shore Recycling Depot will be calculated as follows:

\[ \text{Annual Estimate North Shore Recycling Depot} = \text{OP} + \text{AD} + \text{CA} + \text{LA} - R +/- \text{DE} \]

Where:

- \( \text{OP} = \) the amount charged by GVS&DD’s service provider for operating the Recycling Depot at the North Shore Transfer Station in that calendar year (which does not include costs related to management of mixed metals at the Recycling Depot);

- \( \text{AD} = \) GVS&DD’s administrative charge of $25,000;

- \( \text{CA} = \) amortized capital costs, amounting to $68,000 each year for the calendar years 2017 – 2031;

- \( \text{LA} = \) a land use contribution of $23,268 each calendar year;

- \( R = \) revenues received from Multi-Material BC Society and Product Care Association of Canada for collection of recyclable materials from the Recycling Depot at the North Shore Transfer Station during the calendar year; and
DE = any deficit or surplus in the estimate from any previous calendar year.

7.3 The GVS&DD will apportion the Annual Estimate North Shore Recycling Depot among the City of North Vancouver, District of North Vancouver, the District of West Vancouver on the basis of population (as published in the most recent version of British Columbia Municipal and Regional District Population Estimates of the Demographic Analysis Section of BC Stats, Ministry of Technology, Innovation and Citizens’ Services of the Government of the Province of British Columbia).

7.4 On or before March 31 each year, the GVS&DD will prepare a detailed estimate of the amount required for constructing, maintaining, administering and operating the Recycling Depot at the Coquitlam Transfer Station ("Annual Estimate Coquitlam Recycling Depot") in that calendar year.

7.5 The Annual Estimate Coquitlam Transfer Station will be calculated as follows:

\[
\text{Annual Estimate Coquitlam Recycling Depot} = \text{OP} + \text{AD} + \text{LA} - \text{R} + /- \text{DE}
\]

Where:

- \text{OP} = the amount charged by GVS&DD’s service provider for operating the Recycling Depot at the Coquitlam Transfer Station in that calendar year (which does not include costs related to management of mixed metals at the Recycling Depot);
- \text{AD} = GVS&DD’s administrative charge of $25,000;
- \text{LA} = a land use contribution of $11,657;
- \text{R} = revenues received from Product Care Association of Canada for collection of recyclable materials from the Recycling Depot at the Coquitlam Transfer Station during the calendar year; and
- \text{DE} = any deficit or surplus in the estimate from any previous calendar year.

7.6 The GVS&DD will apportion the Annual Estimate Coquitlam Recycling Depot among the City of Port Moody, the City of Coquitlam, and the City of Port Coquitlam on the basis of population (as published in the most recent version of British Columbia Municipal and Regional District Population Estimates of the Demographic Analysis Section of BC Stats, Ministry of Technology, Innovation and Citizens’ Services of the Government of the Province of British Columbia).

7.7 On or before March 31 each year the GVS&DD will deliver to each municipality referenced in this section 7 an invoice for its apportionment of costs pursuant to this section 7, and, in accordance with section 56 of the Greater Vancouver Sewerage and Drainage District Act, such invoices are payable on or before August 15 of the calendar year.
8.0 **Interpretation**

8.1 If a portion of this Bylaw is held to be invalid it shall be severed and the remainder of the Bylaw shall remain in effect.

8.2 In this Bylaw, the word “person” includes a corporation.

8.3 Schedules “A”, “B”, “C”, “D”, “E”, and “F” are attached to and form part of this Bylaw.

9.0 **Effective Date**

9.1 This Bylaw comes into force and takes effect January 1, 2017.

READ A FIRST, SECOND AND THIRD TIME this _______ day of _____________________, 2016.

PASSED AND FINALLY ADOPTED this _______ day of _________________________, 2016.

__________________________________________
Greg Moore, Chairperson

__________________________________________
Chris Plagnol
SCHEDULE “A”

DISPOSAL SITES

- Coquitlam Transfer Station located at 1200 United Boulevard, Coquitlam
- North Shore Transfer Station located at 30 Riverside Drive, North Vancouver
- Surrey Transfer Station located at 9770 192nd Street, Surrey
- Langley Residential Transfer Station located at 1070 272 Street, Langley
- Maple Ridge Residential Transfer Station located at 10092 236 Street, Maple Ridge
- Waste-to-Energy Facility located at 5150 Riverbend Drive, Burnaby
### TABLE 1 – TIPPING FEES FOR GARBAGE AND SPECIAL HANDLE WASTE

<table>
<thead>
<tr>
<th>Net Weight</th>
<th>North Shore Transfer Station¹</th>
<th>Surrey Transfer Station¹</th>
<th>Coquitlam Transfer Station¹</th>
<th>Maple Ridge Transfer Station¹</th>
<th>Langley Transfer Station¹</th>
<th>Waste-to-Energy Facility¹</th>
</tr>
</thead>
<tbody>
<tr>
<td>Municipal Garbage</td>
<td>All Loads</td>
<td>$100/tonne</td>
<td>$100/tonne</td>
<td>$100/tonne</td>
<td>$100/tonne</td>
<td>$100/tonne</td>
</tr>
<tr>
<td>All Garbage other than Municipal Garbage</td>
<td>0 to .99 tonnes 1.0 to 8.99 tonnes 9.0 tonnes or more</td>
<td>$133/tonne²</td>
<td>$133/tonne³</td>
<td>$133/tonne³</td>
<td>$133/tonne³</td>
<td>$133/tonne³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$112/tonne⁴</td>
<td>$112/tonne⁴</td>
<td>$112/tonne⁴</td>
<td>$112/tonne⁴</td>
<td>$112/tonne⁴</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$80/tonne</td>
<td>$80/tonne</td>
<td>$80/tonne</td>
<td>$80/tonne</td>
<td>$80/tonne</td>
</tr>
<tr>
<td>Minimum Tipping Fee for Garbage</td>
<td>Minimum Tipping Fee during Peak Hours</td>
<td>$20/Load</td>
<td>$20/Load</td>
<td>$20/Load</td>
<td>$10/Load</td>
<td>$10/Load</td>
</tr>
<tr>
<td></td>
<td>Minimum Tipping Fee outside of Peak Hours</td>
<td>$10/Load</td>
<td>$10/Load</td>
<td>$10/Load</td>
<td>$10/Load</td>
<td>$10/Load</td>
</tr>
</tbody>
</table>

¹ All Loads originating from Maple Ridge will be assessed an additional fee of $4/tonne.
² To a maximum of $112 per Load.
³ To a maximum of $116 per Load.
⁴ To a maximum of $720 per Load.
⁵ To a maximum of $756 per Load.

### Table 2 – Transaction Fee

| Each Load of Garbage disposed of at any Disposal Site, each Load of Special Handle Waste disposed of at the Waste-to-Energy Facility, and each Load of Gypsum dropped off at a designated Recycling Area | $5/Load |

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Greater Vancouver Sewerage and Drainage District Tipping Fee and Solid Waste Disposal Regulation
Bylaw No. 302, 2016
Page 14 of 21
<table>
<thead>
<tr>
<th>Source-Separated Organic Waste</th>
<th>North Shore Transfer Station</th>
<th>Surrey Transfer Station</th>
<th>Coquitlam Transfer Station</th>
<th>Maple Ridge Transfer Station</th>
<th>Langley Transfer Station</th>
<th>Waste-to-Energy Facility</th>
</tr>
</thead>
<tbody>
<tr>
<td>$67/tonne, $6 minimum</td>
<td>$67/tonne, $6 minimum</td>
<td>$67/tonne, $6 minimum</td>
<td>$67/tonne, $6 minimum</td>
<td>$67/tonne, $6 minimum</td>
<td>Not accepted.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Green Waste</th>
<th>North Shore Transfer Station</th>
<th>Surrey Transfer Station</th>
<th>Coquitlam Transfer Station</th>
<th>Maple Ridge Transfer Station</th>
<th>Langley Transfer Station</th>
<th>Waste-to-Energy Facility</th>
</tr>
</thead>
<tbody>
<tr>
<td>$67/tonne, $6 minimum</td>
<td>$67/tonne, $6 minimum</td>
<td>$67/tonne, $6 minimum</td>
<td>$67/tonne, $6 minimum</td>
<td>$67/tonne, $6 minimum</td>
<td>Not accepted.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Clean Wood</th>
<th>North Shore Transfer Station</th>
<th>Surrey Transfer Station</th>
<th>Coquitlam Transfer Station</th>
<th>Maple Ridge Transfer Station</th>
<th>Langley Transfer Station</th>
<th>Waste-to-Energy Facility</th>
</tr>
</thead>
<tbody>
<tr>
<td>$67/tonne, $6 minimum</td>
<td>$67/tonne, $6 minimum</td>
<td>$67/tonne, $6 minimum</td>
<td>$67/tonne, $6 minimum</td>
<td>$67/tonne, $6 minimum</td>
<td>Not accepted.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Gypsum – less than ½ tonne</th>
<th>North Shore Transfer Station</th>
<th>Surrey Transfer Station</th>
<th>Coquitlam Transfer Station</th>
<th>Maple Ridge Transfer Station</th>
<th>Langley Transfer Station</th>
<th>Waste-to-Energy Facility</th>
</tr>
</thead>
<tbody>
<tr>
<td>$150/tonne, $10 minimum</td>
<td>$150/tonne, $10 minimum</td>
<td>$150/tonne, $10 minimum</td>
<td>$150/tonne, $10 minimum</td>
<td>$150/tonne, $10 minimum</td>
<td>Not accepted.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mattresses</th>
<th>North Shore Transfer Station</th>
<th>Surrey Transfer Station</th>
<th>Coquitlam Transfer Station</th>
<th>Maple Ridge Transfer Station</th>
<th>Langley Transfer Station</th>
<th>Waste-to-Energy Facility</th>
</tr>
</thead>
<tbody>
<tr>
<td>$15 per Mattress</td>
<td>$15 per Mattress</td>
<td>$15 per Mattress</td>
<td>$15 per Mattress</td>
<td>$15 per Mattress</td>
<td>Not accepted.</td>
<td></td>
</tr>
</tbody>
</table>
Table 4 – Surcharges

| Loads containing Recyclable Materials other than Food Waste or Clean Wood that exceeds either 5% of the total weight of the Load or 5% of the total volume of the Load (section 5.5) | 50% of the applicable Tipping Fee |
| Loads containing Contaminated Recyclable Paper that exceeds either 5% of the total weight of the Load or 5% of the total volume of the Load (section 5.6) | 50% of the applicable Tipping Fee |
| Before June 30, 2017 Loads containing Food Waste that exceeds either 25% of the total weight of the Load or 25% of the total volume of the Load (section 5.7) | 50% of the applicable Tipping Fee |
| From July 1, 2017 Loads containing Food Waste that exceeds either 5% of the total weight of the Load or 5% of the total volume of the Load (section 5.8) | 50% of the applicable Tipping Fee |
| Before June 30, 2017 Loads containing Clean Wood that exceeds either 10% of the total weight of the Load or 10% of the total volume of the Load (section 5.9) | 50% of the applicable Tipping Fee |
| From July 1, 2017 Loads containing Clean Wood that exceeds either 5% of the total weight of the Load or 5% of the total volume of the Load (section 5.10) | 50% of the applicable Tipping Fee |
| Loads of Source Separated Organic Waste containing more than 0.05% (by wet weight) of any other type of Refuse (section 5.11) | $50 per Load |
| Loads containing any Hazardous and Operational Impact Materials or Product Stewardship Materials (section 5.12) | $65 per Load plus any remediation or clean-up costs |
| Unsecured Loads (section 5.13) | 50% of the applicable Tipping Fee to a maximum of $50.00 |
SCHEDULE “C”

HAZARDOUS AND OPERATIONAL IMPACT MATERIALS

1. Agricultural Waste;
2. Automobile parts and bodies;
3. Refuse that is on fire, smoldering, odourous, dusty, flammable or explosive;
4. Hazardous Waste as defined in the Hazardous Waste Regulation, B.C. Reg. 63/88;
5. Propane tanks;
6. Liquids or sludge;
7. Coated or uncoated wire and cable exceeding 1% of the load;
8. Dead animals;
9. Inert fill material including soil, sod, gravel, concrete and asphalt exceeding 0.5 cubic metres per load.
10. Excrement, other than amounts of pet excrement that are double bagged and discarded with Municipal Solid Waste and that do not exceed either 5% of the total weight of the Load or 5% of the total volume of the Load;
11. Personal Hygiene Products where the Personal Hygiene Products make up more than 10% of the Load unless the Personal Hygiene Products are double bagged in sealed plastic bags that are sufficiently durable to resist leaking or breaking during collection and disposal;
12. Barrels, drums, pails or other large (205 litre or greater) liquid containers, whether full or empty;
13. Any single object that:
   (a) weighs more than 100 kilograms; or
   (b) exceeds 0.35 square metres in cross section at any point; or
   (c) exceeds 1.2 metres in width and/or 2.5 metres in length, except at the Waste-to-Energy Facility where a single object must not exceed 1.0 metre in length; or
   (d) exceeds 3 cubic metres in volume.
14. Gypsum;
15. Mattresses;

16. Refuse that would cause undue risk of injury or occupational disease to any person at the Disposal Site or that would otherwise contravene the *Occupational Health and Safety Regulation* B.C. Reg. 296/97 enacted pursuant to the *Workers Compensation Act*, as amended or replaced from time to time; and

17. Any other Refuse that the Manager considers unsuitable for handling at a Disposal Site.
SCHEDULE “D”

RECYCLABLE MATERIALS

1. Beverage containers identified in “Schedule 1 – Beverage Container Product Category” to the Recycling Regulation;

2. Containers other than beverage containers made of:
   (a) metal;
   (b) glass; or
   (c) polyethylene terephthalate (number 1 PET plastic), high density polyethylene (number 2 HDPE plastic), low density polyethylene (number 4 LDPE plastic) or polypropylene (number 5 PP);

3. Corrugated Cardboard;

4. Recyclable Paper;

5. Green Waste;

6. Food Waste; and

7. Clean Wood.
SCHEDULE “E”

PRODUCT STEWARDSHIP MATERIALS

1. The following materials pursuant to Schedule 2 – Residual Product Category to the Recycling Regulation:

   (a) Solvents and flammable liquids;
   (b) Pesticides;
   (c) Gasoline;
   (d) Pharmaceutical products and medications;
   (e) Oil, oil filters and oil containers;
   (f) Lubricating oils and lubricating oil containers;
   (g) Paint;
   (h) Lead-acid batteries;
   (i) Antifreeze and antifreeze containers;

2. Electronics and electrical products, including metal household and commercial appliance, as identified in Schedule 3 – Electronics and Electrical Products Category to the Recycling Regulation;

3. Tires pursuant to Schedule 4 – Tire Product Category to the Recycling Regulation.
1. Any person wishing to establish a customer charge account with the GVS&DD must complete the GVS&DD’s application for credit ("Application for Credit").

2. The Treasury Manager may approve the Application for Credit on behalf of the GVS&DD and establish a commercial charge account for a person for up to $250,000.

3. The Division Manager of Financial Planning and Processes may approve the Application for Credit on behalf of the GVS&DD and establish a commercial charge account for a person for amounts up to $500,000.

4. The Chief Financial Officer may approve the Application for Credit on behalf of the GVS&DD and establish a commercial charge account for a person for amounts up to $2,000,000.

5. If the GVS&DD approves a person’s Application for Credit and establishes a commercial charge account, then:

   (a) the person may leave the Disposal Site before paying the applicable Tipping Fees, Transaction Fee, Recycling Fees and Surcharges; and

   (b) the GVS&DD will generate invoices for Tipping Fees, Transaction Fees, Recycling Fees and Surcharges on a monthly basis for up to the established commercial charge account limit, which invoices are payable within 35 days.

6. Where a person fails or refuses to pay an invoice for Tipping Fees, Transaction Fees, Recycling Fees and Surcharges within 35 days, then the GVS&DD may rescind their customer charge account and the person must:

   (a) pay interest at the rate of 1.25% per month (15% per year) compounded monthly and calculated daily on all amounts overdue, including all overdue interest, from the date the charge was due to the date of payment; and

   (b) not dispose of any Municipal Solid Waste at a Disposal Site until any outstanding invoice has been paid in full.
WHEREAS:

A. Pursuant to the Greater Vancouver Sewerage and Drainage District Act (the "Act") the objects of the Greater Vancouver Sewerage and Drainage District ("GVS&DD") include the disposal of all types of waste and the operation and administration of facilities for the disposal of all types of waste;

B. Section 7A(5)(b) of the Act empowers the GVS&DD to establish the uses to which its waste disposal facilities may be put and by whom they may be used;

C. Section 7A(5)(g) of the Act empowers the GVS&DD to establish scales of charges for services rendered by the GVS&DD and for the use of any of the GVS&DD’s waste disposal facilities;

D. In relation to the disposal of solid waste generated within its area, section 7B of the Act empowers the GVS&DD to set levies payable by generators of waste or by other persons who use the services of a waste hauler based on the quantity, volume, type or composition of waste generated; and

E. Pursuant to section 14 Section 55(4) of the Act, the Board of the GVS&DD may proceed by bylaw, resolution or order unless specially required by the Act to proceed by bylaw to establish a method of apportionment of its costs among its member municipalities.

NOW THEREFORE the Board of the Greater Vancouver Sewerage and Drainage District in open meeting assembled, enacts as follows:

1.0 Repeal of Bylaw

1.1 “Greater Vancouver Sewerage and Drainage District Tipping Fee and Solid Waste Disposal Regulation Bylaw No. 288, 2015” and “Greater Vancouver Sewerage and Drainage District Development Amending Bylaw No. 289, 2015” are 293, 2015 is hereby repealed.

2.0 Citation

2.1 The official citation for this bylaw is “Greater Vancouver Sewerage and Drainage District Tipping Fee and Solid Waste Disposal Regulation Bylaw No. 293, 2015 302, 2016”.

2.2 This Bylaw may be cited as the “2016-2017 Tipping Fee Bylaw”.

GREATER VANCOUVER SEWERAGE AND DRAINAGE DISTRICT

BYLAW NO. 293, 2015 302, 2016

A Bylaw to Establish the Tipping Fee and Solid Waste Disposal Regulation

GVS&DD
3.0 Definitions

3.1 In this Bylaw:

“Agricultural Waste” means Refuse that originates from an agricultural operation as defined pursuant to the Agricultural Waste Control Regulation, B.C. Reg. 131/1992, adopted pursuant to the Environmental Management Act, and includes manure, used mushroom medium and agricultural vegetation waste;

“Banned Materials” means Hazardous and Operational Impact Materials, Recyclable Materials or Product Stewardship Materials;

“Board” means the board of directors of the Greater Vancouver Sewerage and Drainage District;

“Clean Wood” means Municipal Solid Waste that comprises solid wood, lumber or pallets:

(i) that does not contain any glues or resins;
(ii) that is unpainted, unstained and untreated; and
(iii) that may or may not be pierced with nails or other metal fasteners;

“Commissioner” means the person appointed to the position of Commissioner from time to time by the Board and includes any person appointed or designated to act in his or her place;

“Contaminated Recyclable Paper” means Recyclable Paper that has been contaminated with grease, oil, food residue or other material;

“Corrugated Cardboard” means Recyclable Paper that consists of a fluted corrugated sheet and one or two flat linerboards;

“Delta Garbage” means all Garbage originating from within the territorial boundaries of the Corporation of Delta, except Delta Residential Drop-off Garbage;

“Delta Residential Drop-off Garbage” means Garbage brought to a Vancouver Disposal Site by residential customers who reside in Delta;

“Disposal Site” means any of the Municipal Solid Waste disposal facilities listed in Schedule “A”;

“Environmental Management Act” means the Environmental Management Act S.B.C. 2003 c. 53;
“Food Waste” means Municipal Solid Waste that comprises food, including meat, fish, fat, dairy products, bread, baking products, fruits and vegetables, whether cooked or uncooked and packaged or unpackaged;

“Garbage” means the Municipal Solid Waste that is disposed of in a bunker, pit or on the tipping floor, as opposed to a Recycling Area, at a Disposal Site or a Vancouver Disposal Site;

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

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

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

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

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

“Load” means a quantity of Municipal Solid Waste that is or was contained within a single vehicle attending at a Disposal Site;

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

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

“Municipal Garbage” means:

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

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

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

“Peak Hours” means from 10:00 am to 2:00 pm on Monday through Friday inclusive, excluding statutory holidays;

“Personal Hygiene Products” means personal care products such as diapers, feminine hygiene products and incontinence products;

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

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

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

“Recyclable Paper” means Municipal Solid Waste manufactured from thin sheets from wood pulp or other fibrous substances that may be converted into reusable materials and includes newspapers and inserts, magazines, telephone directories, catalogues, office papers, envelopes, boxboard, paper bags and mail, but excludes photographic paper, carbon paper, tissue paper, paper napkins or towels, paper that is adhered to plastic or metal, composite paper products such as tetrapak containers, and gable-top paper containers such as milk cartons, or paper that is covered or infused with wax;

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

“Recycling Depots” means the area located in front of the weigh scales at the Coquitlam Transfer Station and the North Shore Transfer Station, where identified materials can be dropped-off at no charge;

“Recycling Fee” means the recycling fee charged by the GVS&DD for Green Waste, Source Separated Organic Waste, Clean Wood, Gypsum, Mattresses and the specific
materials, substances and objects that comprise Recyclable Material dropped off in the designated Recycling Area at Disposal Sites, as set out in Table 3 of Schedule “B” of this Bylaw;

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

“Refuse” means discarded or abandoned materials, substances or objects;

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

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

“Special Handle Waste” means International Waste and Municipal Solid Waste that requires immediate destruction or is designated for product destruction by a regulatory agency;

“Surcharge” means the cost charged by the GVS&DD, in addition to the applicable Tipping Fee, for disposing of Banned Materials at a Disposal Site, as set out in Table 4 of Schedule “B” of this Bylaw;

“Tipping Fee” means the fee charged by the GVS&DD for disposing of Garbage or Special Handle Waste at Disposal Sites, as set out in Table 1 of Schedule “B” of this Bylaw, which includes the Regional Services Rate;

“Transaction Fee” means the fee charged by the GVS&DD, in addition to the Tipping Fee, for all Loads of Garbage disposed of at Disposal Sites, all Loads of Special Handle Waste disposed of at the Waste-to-Energy Facility and all Loads of Gypsum dropped off at designated Recycling Areas, as set out in Table 2 of Schedule “B” of this Bylaw;

“Treasurer” means the person appointed to the position of Treasurer from time to time by the GVS&DD and includes any person appointed or designated to act in his or her place;

“Unsecured Load” means a Load that is not tied and covered or otherwise secured to prevent any of the Load escaping from the vehicle.
“Vancouver Disposal Site” means either of the following Municipal Solid Waste disposal facilities that are owned or operated by the City of Vancouver:

(i)  Vancouver Landfill located at 5400 72nd Street, Delta; and
(ii)  Vancouver South Transfer Station, Recycling Depot and Yard Trimmings Drop-off located at 377 West Kent Avenue North, Vancouver; and

“Vancouver Garbage” means all Garbage that originates from within the territorial boundaries of the City of Vancouver.

4.0 Restrictions and Prohibitions

4.1 No person shall dispose of anything at a Disposal Site except in accordance with this Bylaw.

4.2 No person shall dispose of Municipal Solid Waste at a Disposal Site unless it originates from within the geographic area of the GVS&DD.

4.3 Despite section 4.2, the Board may authorize acceptance at a Disposal Site of Municipal Solid Waste that originates from outside the geographic area of the GVS&DD, including International Waste.

4.4 No person shall dispose of any Loads that emit odours, fumes or particulate matter (such as dust) that cause or are capable of causing material discomfort to a person at a Disposal Site, except that where expressly authorized by the Manager such Loads may be disposed of at the Waste-to-Energy Facility.

4.5 No person shall dispose of any Loads dominated by oily materials, substances or objects at a Disposal Site, except that where expressly authorized by the Manager such Loads may be disposed of at the Waste-to-Energy Facility.

4.6 No person shall dispose of Gypsum at a Disposal Site, except Gypsum that weighs less than one half tonne may be dropped off at a designated Recycling Area.

4.7 No person shall dispose of Mattresses at a Disposal Site, except that four or fewer Mattresses may be dropped off at a designated Recycling Area.

4.8 No person shall scavenge or salvage any Municipal Solid Waste or Recyclable Materials from a Disposal Site.
4.84.9 The Manager may prohibit a person who contravenes this Bylaw from disposing of Municipal Solid Waste at any Disposal Site for such period as the Manager may determine.

5.0 **Tipping Fees, Transaction Fee, Recycling Fees and Surcharges**

5.1 Every person who disposes of Municipal Solid Waste at a Disposal Site must pay to the GVS&DD:

(a) the applicable Tipping Fees set out in Table 1 of Schedule “B”;

(b) the Transaction Fee set out in Table 2 of Schedule “B”;

(c) the applicable Recycling Fees set out in Table 3 of Schedule “B”;

(d) the applicable Surcharges set out in Table 4 of Schedule “B” and

all such fees and charges must be paid before the person leaves the Disposal Site.

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

5.3 Every person who drops off Source-Separated Organic Waste, Green Waste, Clean Wood, Gypsum or Mattresses at a designated Recycling Area must pay the applicable Recycling Fee specified in Table 3 of Schedule “B” of this Bylaw.

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

5.5 Every person who disposes of a Load at a Disposal Site that contains a quantity of Recyclable Materials other than Food Waste or Clean Wood that exceeds either 5% of the total weight of the Load or 5% of the total volume of the Load must pay a Surcharge in the amount set out in Table 4 of Schedule “B” of this Bylaw.

5.6 Every person who disposes of a Load at a Disposal Site that contains Contaminated Recyclable Paper that exceeds either 5% of the total weight of the Load or 5% of the total volume of the Load must pay a Surcharge in the amounts set out in Table 4 of Schedule “B” of this Bylaw.
5.7  **Every person who disposes of a Load at a Disposal Site that contains Food Waste that exceeds either 25% of the total weight of the Load or 25% of the total volume of the Load must pay a Surcharge in the amounts set out in Table 4 of Schedule “B” of this Bylaw.**

5.8  **Every person who disposes of a Load at a Disposal Site that contains Food Waste that exceeds either 5% of the total weight of the Load or 5% of the total volume of the Load must pay a Surcharge in the amounts set out in Table 4 of Schedule “B” of this Bylaw.**

5.85.9  **Up until June 30, 2017 every person who disposes of a Load at a Disposal Site that contains Clean Wood that exceeds either 10% of the total weight of the Load or 10% of the total volume of the Load must pay a Surcharge in the amounts set out in Table 4 of Schedule “B” of this Bylaw.**

5.10  **From July 1, 2017 every person who disposes of a Load at a Disposal Site that contains Clean Wood that exceeds either exceeds either 5% of the total weight of the Load or 5% of the total volume of the Load must pay a Surcharge in the amounts set out in Table 4 of Schedule “B” of this Bylaw.**

5.95.11  **Every person who drops off at a Load of Source-Separated Organic Waste at a designated Recycling Area that contains more than 0.05% (by wet weight) of any other type of Refuse must pay a Surcharge in the amount set out in Table 4 of Schedule “B” of this Bylaw.**

5.105.12  **Every person who disposes of a Load at a Disposal Site that contains any Hazardous and Operational Impact Materials or Product Stewardship Materials must pay a Surcharge in the amount set out in Table 4 of Schedule “B” of this Bylaw, plus the costs of remediation and clean up.**

5.13  **Every person who enters a Disposal Site with an Unsecured Load must pay a Surcharge in the amount set out in Table 4 of Schedule “B” of this Bylaw.**

5.145.14  **Special Handle Waste is exempt from all Surcharges, but if a Load of Special Handle Waste contains any Hazardous and Operational Impact Materials, it will be subject to the costs of remediation and clean up.**

5.125.15  **Where a single Load is subject to multiple Surcharges, the Surcharge with the highest value will apply for the weight of the entire Load.**

5.135.16  **Despite anything else in this Bylaw, in advance of any person transporting a single Load or multiple Loads to a Disposal Site, the Manager may, at his or her discretion, waive**
any Surcharge or Surcharges or a portion thereof for a specified period and for specified classes of persons.

5.17 Despite anything else in this Bylaw, the Manager may, at his or her discretion, waive all fees and charges for a Load delivered to a Disposal Site by a non-profit or volunteer group resulting from a community clean-up project, provided that:

(a) the community clean-up project is conducted within the geographic area any of GVRD member municipalities;

(b) the community clean-up project involves collecting litter or abandoned waste from the natural environment from any of the following publicly owned areas:
   (i) green space, such as natural areas, recreational parks or playgrounds;
   (ii) roads;
   (iii) marine shorelines and harbours;
   (iv) lakes, ponds, rivers, creeks, streams or other natural waterways;

(c) the Load does not contain Recyclable Materials or Hazardous and Operational Impact Materials;

(d) the Manager receives an advance written request from the non-profit or volunteer group prior to the date the community clean-up project is to be held;

(e) the Manager confirms in writing to the non-profit or volunteer group that fees and charges otherwise payable under this Bylaw will be waived; and

(f) the non-profit or volunteer group brings the Manager’s written confirmation to the Disposal Site at the time of disposal.

5.145.18 The weigh scales at Disposal Sites are precise to 0.005 tonnes. The Tipping Fees and Recycling Fees payable to GVS&DD are determined by rounding the weight of a Load up to the nearest 0.01 tonnes, and then applying the applicable rates set out in Table 1 and Table 3 of Schedule “B” of this Bylaw—005 tonnes. For those customers who do not have a customer charge account, as described in Schedule “F”, the total amount payable to GVS&DD is rounded to the nearest dollar.

5.155.19 Every person who disposes of a Load at the Waste-to-Energy Facility that is made up of at least 85% by weight of metals will receive a credit of $25 per tonne on exiting the scale house at the Waste-to-Energy Facility.
5.165.20 Despite section 5.15.1 of this Bylaw, any person who disposes of Municipal Solid Waste at a Disposal Site on a regular basis may apply to the GVS&DD for a customer charge account in accordance with Schedule “F” to this Bylaw.

5.175.21 In the event the weigh scale system at a Disposal Site is not functioning for any reason, at his or her discretion the Manager may:

(a) close the Disposal Site until the weigh scale system is functioning; or

(b) permit a person to dispose of a single Load at the Disposal Site subject to the following:

(i) the Load must not measure more than 0.5 cubic metres in volume; and

(ii) the minimum Tipping Fee set out in Table 1 of Schedule “B” of this Bylaw, plus the Transaction Fee, will be charged for the Load.

6.0 Regional Services Rate

6.1 The Regional Services Rate is set at an amount equal to 6% of the Tipping Fee for Municipal Garbage, as specified in Table 1 of Schedule “B”. The Regional Services Rate is included in all Tipping Fees.

6.2 Every Quarter, the City of Vancouver must record:

(a) the total tonnage of Garbage;

(b) the tonnage of Vancouver Garbage and Delta Garbage; and

(c) the tonnage of Delta Residential Drop-off Garbage,

that is disposed of at the Vancouver Disposal Sites during that Quarter and provide such information to GVS&DD and the Corporation of Delta within 30 days of the end of the Quarter.

6.3 Every Quarter GVS&DD will invoice the City of Vancouver for an amount equal to the Regional Services Rate for every tonne of Vancouver Garbage and Delta Residential Drop-off Garbage disposed of at the Vancouver Disposal Sites during the previous Quarter, and the City of Vancouver must remit payment to GVS&DD within 30 days of the date of such invoice.

6.4 Every Quarter GVS&DD will invoice the Corporation of Delta for an amount equal to the Regional Services Rate for every tonne of Delta Garbage disposed of at the Vancouver Disposal Sites during the previous Quarter, and the Corporation of Delta must remit payment to GVS&DD within 30 days of the date of such invoice.
7.0 Apportionment of Recycling Depot Costs

7.1 On or before March 31 each year, the GVS&DD will prepare a detailed estimate of the amount required for constructing, maintaining, administering and operating the Recycling Depot at the North Shore Transfer Station ("Annual Estimate North Shore Recycling Depot") in that calendar year.

7.2 The Annual Estimate North Shore Recycling Depot will be calculated as follows:

Annual Estimate North Shore Recycling Depot = OP + AD + CA + LA – R +/- DE

Where:

OP = the amount charged by GVS&DD's service provider for operating the Recycling Depot at the North Shore Transfer Station in that calendar year (which does not include costs related to management of mixed metals at the Recycling Depot);

AD = GVS&DD's administrative charge of $25,000;

CA = amortized capital costs, amounting to $68,000 each year for the calendar years 2017 – 2031;

LA = a land use contribution of $23,268 each calendar year;

R = revenues received from Multi-Material BC Society and Product Care Association of Canada for collection of recyclable materials from the Recycling Depot at the North Shore Transfer Station during the calendar year; and

DE = any deficit or surplus in the estimate from any previous calendar year.

7.3 The GVS&DD will apportion the Annual Estimate North Shore Recycling Depot among the City of North Vancouver, District of North Vancouver the District of West Vancouver on the basis of population (as published in the most recent version of British Columbia Municipal and Regional District Population Estimates of the Demographic Analysis Section of BC Stats, Ministry of Technology, Innovation and Citizens’ Services of the Government of the Province of British Columbia).

7.4 On or before March 31 each year, the GVS&DD will prepare a detailed estimate of the amount required for constructing, maintaining, administering and operating the Recycling Depot at the Coquitlam Transfer Station ("Annual Estimate Coquitlam Recycling Depot") in that calendar year.
7.5 The Annual Estimate Coquitlam Transfer Station will be calculated as follows:

\[ \text{Annual Estimate Coquitlam Recycling Depot} = \text{OP} + \text{AD} - \text{R} +/- \text{DE} \]

Where:

- \( \text{OP} \) = the amount charged by GVS&DD’s service provider for operating the Recycling Depot at the Coquitlam Transfer Station in that calendar year (which does not include costs related to management of mixed metals at the Recycling Depot);
- \( \text{AD} \) = GVS&DD’s administrative charge of $25,000;
- \( \text{LA} \) = a land use contribution of $11,657;
- \( \text{R} \) = revenues received from Product Care Association of Canada for collection of recyclable materials from the Recycling Depot at the Coquitlam Transfer Station during the calendar year; and
- \( \text{DE} \) = any deficit or surplus in the estimate from any previous calendar year.

7.6 The GVS&DD will apportion the Annual Estimate Coquitlam Recycling Depot among the City of Port Moody, the City of Coquitlam and the City of Port Coquitlam on the basis of population (as published in the most recent version of British Columbia Municipal and Regional District Population Estimates of the Demographic Analysis Section of BC Stats, Ministry of Technology, Innovation and Citizens’ Services of the Government of the Province of British Columbia).

7.7 On or before March 31 each year the GVS&DD will deliver to each municipality referenced in this section 7 an invoice for its apportionment of costs pursuant to this section 7, and, in accordance with section 56 of the Greater Vancouver Sewerage and Drainage District Act, such invoices are payable on or before August 15 of the calendar year.

7.08.0 Interpretation

7.18.1 If a portion of this Bylaw is held to be invalid it shall be severed and the remainder of the Bylaw shall remain in effect.

7.28.2 In this Bylaw, the word “person” includes a corporation.

7.38.3 Schedules “A”, “B”, “C”, “D”, “E”, and “F” are attached to and form part of this Bylaw.
8.09.0 Effective Date

8.19.1 This Bylaw comes into force and takes effect January 1, 2016.

READ A FIRST, SECOND AND THIRD TIME this _____ day of ____________________, 2015.

PASSED AND FINALLY ADOPTED this _____ day of ____________________, 2015.

__________________________________________
Greg Moore, Chairperson

__________________________________________
Chris Plagnol

__________________________________________
Chris Plagnol, Corporate Officer

Greater Vancouver Sewerage and Drainage District Tipping Fee and Solid Waste Disposal Regulation
Bylaw No. 302
2016
2015
SCHEDULE “A”

DISPOSAL SITES

- Coquitlam Resource Recovery Plant Transfer Station located at 1200 United Boulevard, Coquitlam
- North Shore Transfer Station located at 30 Riverside Drive, North Vancouver
- Surrey Transfer Station located at 9770 192nd Street, Surrey
- Langley Residential Transfer Station located at 1070 272 Street, Langley
- Maple Ridge Residential Transfer Station located at 10092 236 Street, Maple Ridge
- Waste-to-Energy Facility located at 5150 Riverbend Drive, Burnaby
### SCHEDULE “B”

**TIPPING FEES, TRANSACTION FEE, RECYCLING FEES AND SURCHARGES**

Table 1 – Tipping Fees for Garbage and Special Handle Waste (including the Regional Services Rate)

| Net Weight                          | North Shore Transfer Station\(^1\) | Surrey Transfer Station\(^1\) | Coquitlam Resource Recovery Plant\(^2\)/Transfer Station\(^1\) | Maple Ridge Transfer Station\(^1\) | Langley Transfer Station\(^1\) | Waste-to-Energy Facility\(^2\) |
|-------------------------------------|-------------------------------------|--------------------------------|---------------------------------------------------------------|-----------------------------------|--------------------------------|---------------------------------
| Municipal Garbage                   | $100/tonne                          | $100/tonne                      | $100/tonne                                                    | $100/tonne                        | $100/tonne                      | $100/tonne                      |
| All Garbage other than Municipal Garbage | $133/tonne\(^2\) $112/tonne\(^4\) $80/tonne | $133/tonne\(^2\) $112/tonne\(^4\) $80/tonne | $133/tonne\(^2\) $112/tonne\(^4\) $80/tonne | $133/tonne\(^2\) $112/tonne\(^4\) Not accepted. | $133/tonne\(^2\) $112/tonne\(^4\) Not accepted. | $133/tonne\(^2\) $112/tonne\(^4\) $80/tonne |
| Minimum Tipping Fee for Garbage     | $20/Load                            | $20/Load                        | $20/Load                                                      | $10/Load                          | $10/Load                        | $10/Load                        |
| Minimum Tipping Fee outside of Peak Hours | $10/Load                            | $10/Load                        | $10/Load                                                      | $10/Load                          | $10/Load                        | $10/Load                        |

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

\(^2\) To a maximum of $112 per Load.

\(^3\) To a maximum of $116 per Load.

\(^4\) To a maximum of $720 per Load.

\(^5\) To a maximum of $756 per Load.

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Table 2 – Transaction Fee

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Greater Vancouver Sewerage and Drainage District Tipping Fee and Solid Waste Disposal Regulation Bylaw No. 293, 2015

Page of 83
Each Load of Garbage disposed of at any Disposal Site, each Load of Special Handle Waste disposed of at the Waste-to-Energy Facility, and each Load of Gypsum dropped off at a designated Recycling Area

$5/Load

<table>
<thead>
<tr>
<th>North Shore Transfer Station</th>
<th>Surrey Transfer Station</th>
<th>Coquitlam Resource Recovery Plant Transfer Station</th>
<th>Maple Ridge Transfer Station</th>
<th>Langley Transfer Station</th>
<th>Waste-to-Energy Facility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Source-Separated Organic Waste</td>
<td>$2467/tonne, $26 minimum</td>
<td>$67/tonne, $6 minimum</td>
<td>$67/tonne, $6 minimum</td>
<td>$67/tonne, $6 minimum</td>
<td>$67/tonne, $6 minimum</td>
</tr>
<tr>
<td>Green Waste</td>
<td>$2467/tonne, $26 minimum</td>
<td>$67/tonne, $6 minimum</td>
<td>$67/tonne, $6 minimum</td>
<td>$67/tonne, $6 minimum</td>
<td>$67/tonne, $6 minimum</td>
</tr>
<tr>
<td>Clean Wood</td>
<td>$2467/tonne, $26 minimum</td>
<td>$67/tonne, $6 minimum</td>
<td>$67/tonne, $6 minimum</td>
<td>$67/tonne, $6 minimum</td>
<td>$67/tonne, $6 minimum</td>
</tr>
<tr>
<td>Gypsum – two sheets 1.22m x 2.44m or less</td>
<td>$133/tonne, $10 minimum</td>
<td>$133/tonne, $10 minimum</td>
<td>$133/tonne, $10 minimum</td>
<td>$133/tonne, $10 minimum</td>
<td>$133/tonne, $10 minimum</td>
</tr>
<tr>
<td>Gypsum – more than two sheets: 1.22m x 2.44m but less than 1/2 tonne</td>
<td>$150/tonne, $10 minimum</td>
<td>$150/tonne, $10 minimum</td>
<td>$150/tonne, $10 minimum</td>
<td>$150/tonne, $10 minimum</td>
<td>$150/tonne, $10 minimum</td>
</tr>
<tr>
<td>Mattresses</td>
<td>$15 per Mattress</td>
<td>$15 per Mattress</td>
<td>$15 per Mattress</td>
<td>$15 per Mattress</td>
<td>$15 per Mattress</td>
</tr>
</tbody>
</table>
### Table 4 – Surcharges

<table>
<thead>
<tr>
<th>Description</th>
<th>Surcharges</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loads containing Recyclable Materials other than Food Waste or Clean Wood</td>
<td>50% of the applicable Tipping Fee</td>
</tr>
<tr>
<td>that exceeds either 5% of the total weight of the Load or 5% of the total</td>
<td></td>
</tr>
<tr>
<td>volume of the Load (section 5.5)</td>
<td></td>
</tr>
<tr>
<td>Loads containing Contaminated Recyclable Paper that exceeds either 5% of</td>
<td>50% of the applicable Tipping Fee</td>
</tr>
<tr>
<td>the total weight of the Load or 5% of the total volume of the Load (section</td>
<td></td>
</tr>
<tr>
<td>5.6)</td>
<td></td>
</tr>
<tr>
<td><strong>Before June 30, 2017</strong> Loads containing Food Waste that exceeds either</td>
<td>50% of the applicable Tipping Fee</td>
</tr>
<tr>
<td>25% of the total weight of the Load or 25% of the total volume of the Load</td>
<td></td>
</tr>
<tr>
<td>(section 5.7)</td>
<td></td>
</tr>
<tr>
<td><strong>From July 1, 2017</strong> Loads containing Clean WoodFood Waste that exceeds</td>
<td>50% of the applicable Tipping Fee</td>
</tr>
<tr>
<td>either 105% of the total weight of the Load or 105% of the total volume of</td>
<td></td>
</tr>
<tr>
<td>the Load (section 5.8)</td>
<td></td>
</tr>
<tr>
<td><strong>Before June 30, 2017</strong> Loads containing Clean Wood that exceeds either</td>
<td>50% of the applicable Tipping Fee</td>
</tr>
<tr>
<td>10% of the total weight of the Load or 10% of the total volume of the Load</td>
<td></td>
</tr>
<tr>
<td>(section 5.9)</td>
<td></td>
</tr>
<tr>
<td><strong>From July 1, 2017</strong> Loads containing Clean Wood that exceeds either 5%</td>
<td>50% of the applicable Tipping Fee</td>
</tr>
<tr>
<td>of the total weight of the Load or 5% of the total volume of the Load</td>
<td></td>
</tr>
<tr>
<td>(section 5.10)</td>
<td></td>
</tr>
<tr>
<td>Loads of Source-Separated Organic Waste containing more than 0.05% (by wet</td>
<td>$50 per Load</td>
</tr>
<tr>
<td>weight) of any other type of Refuse (section 5.11)</td>
<td></td>
</tr>
<tr>
<td>Loads containing any Hazardous and Operational Impact Materials or Product</td>
<td>$6065 per Load plus any remediation or clean-up costs</td>
</tr>
<tr>
<td>Stewardship Materials (section 5.12)</td>
<td></td>
</tr>
<tr>
<td>Unsecured Loads (section 5.13)</td>
<td>50% of the applicable Tipping Fee to a maximum of $50.00</td>
</tr>
</tbody>
</table>
SCHEDULE “C”

**BANNED HAZARDOUS AND OPERATIONAL IMPACT MATERIALS**

1. Agricultural Waste;
2. Automobile parts and bodies;
3. Refuse that is on fire, smoldering, *odourous, dusty*, flammable or explosive;
4. Hazardous Waste as defined in the *Hazardous Waste Regulation*, B.C. Reg. 63/88;
5. Propane tanks;
6. Liquids or sludge;
7. Coated or uncoated wire and cable exceeding 1% of the load;
8. Dead animals;
9. Inert fill material including soil, sod, gravel, concrete and asphalt exceeding 0.5 cubic metres per load.
10. Excrement, other than amounts of pet excrement that are double bagged and discarded with Municipal Solid Waste and that do not exceed either 5% of the total weight of the Load or 5% of the total volume of the Load;
11. **Personal Hygiene Products** where the Personal Hygiene Products make up more than 10% of the Load unless the Personal Hygiene Products are double bagged in sealed plastic bags that are sufficiently durable to resist leaking or breaking during collection and disposal;
11.12. Barrels, drums, pails or other large (205 litre or greater) liquid containers, whether full or empty;
12.13. Any single object that:
   (a) weighs more than 100 kilograms; or
   (b) exceeds 0.35 square metres in cross section at any point; or
   (c) exceeds 1.2 metres in width and/or 2.5 metres in length, except at the Waste-to-Energy Facility where a single object must not exceed 1.0 metre in length; or
   (d) exceeds 3 cubic metres in volume.
14.15. Mattresses;

15.16. Refuse that would cause undue risk of injury or occupational disease to any person at the Disposal Site or that would otherwise contravene the Occupational Health and Safety Regulation B.C. Reg. 296/97 enacted pursuant to the Workers Compensation Act, as amended or replaced from time to time; and

16.17. Any other Refuse that the Manager considers unsuitable for handling at a Disposal Site.
SCHEDULE “D”

**BANNED RECYCLABLE MATERIALS**

1. Beverage containers identified in “Schedule 1 — Beverage Container Product Category” to the Recycling Regulation;
2. Containers other than beverage containers made of:
   (a) metal;
   (b) glass; or
   (c) polyethylene terephthalate (number 1 PET plastic), high density polyethylene (number 2 HDPE plastic), low density polyethylene (number 4 LDPE plastic) or polypropylene (number 5 PP);
3. Corrugated Cardboard;
4. Recyclable Paper;
5. Green Waste;
6. Food Waste; and
7. Clean Wood.
SCHEDULE “E”

BANNED PRODUCT STEWARDSHIP MATERIALS

1. The following materials pursuant to Schedule 2 – Residual Product Category to the Recycling Regulation:
   (a) Solvents and flammable liquids;
   (b) Pesticides;
   (c) Gasoline;
   (d) Pharmaceutical products and medications;
   (e) Oil, oil filters and oil containers;
   (f) Lubricating oils and lubricating oil containers;
   (g) Paint;
   (h) Lead–acid batteries;
   (i) Antifreeze and antifreeze containers;

2. Electronics and electrical products, including metal household and commercial appliance, as identified in Schedule 3 – Electronics and Electrical Products Category to the Recycling Regulation;

3. Tires pursuant to Schedule 4 – Tire Product Category to the Recycling Regulation.
SCHEDULE “F”

CUSTOMER CHARGE ACCOUNTS

1. Any person wishing to establish a customer charge account with the GVS&DD must complete the GVS&DD’s application for credit ("Application for Credit").

1. The Treasurer may approve the Application for Credit on behalf of the GVS&DD and establish a commercial charge account for a person for up to one million dollars ($1,000,000).

2. The Treasurer or The Treasury Manager may approve the Application for Credit on behalf of the GVS&DD and establish a commercial charge account for a person for up to two million dollars ($2,000,000).

3. The Division Manager of Financial Planning and Processes may approve the Application for Credit on behalf of the GVS&DD and establish a commercial charge account for a person for amounts up to $500,000.

4. The Chief Financial Officer may approve the Application for Credit on behalf of the GVS&DD and establish a commercial charge account for a person for amounts up to $2,000,000.

3.5. If the GVS&DD approves a person’s Application for Credit and establishes a commercial charge account, then:

(a) the person may leave the Disposal Site before paying the applicable Tipping Fees, Transaction Fee, Recycling Fees and Surcharges; and
(b) the GVS&DD will generate invoices for Tipping Fees, Transaction Fees, Recycling Fees and Surcharges on a monthly basis for up to the established commercial charge account limit, which invoices are payable on receipt within 35 days.

4.6. Where a person fails or refuses to pay an invoice for Tipping Fees, Transaction Fees, Recycling Fees and Surcharges within thirty-five (35) days, then the Treasurer of the GVS&DD may rescind their customer charge account and the person must:

(a) pay interest on the Tipping Fee, Transaction Fee, Recycling Fee or Surcharge at the rate of 1.25% per month (15% per year) compounded monthly and calculated daily on all amounts overdue, including all overdue interest, from the date the charge was due to the date of payment; and

(b) not dispose of any Municipal Solid Waste at a Disposal Site until any outstanding invoice has been paid in full.
2017 Tipping Fee Bylaw Proposed Changes
Summary of Notification and Consultation Activities and Feedback
July to September, 2016

This document summarizes consultation activities, notifications, and stakeholder feedback related to the proposed changes to the 2017 Tipping Fee Bylaw.

Tables and Figures at a glance:

Tables:

Table 1 – Summary of Email Notifications to Stakeholders
Table 2 – Summary of Meetings and Events on Proposed Tipping Fee Bylaw Changes for 2017
Table 3 – Summary of Issues/Questions/Comments and Responses from the Stakeholder Webinar on Proposed 2017 Tipping Fee and Solid Waste Disposal Bylaw Changes (August 29, 2016)

Figures:

Figure 1 – Email to invite stakeholders to a webinar and workshop on Proposed Tipping Fee Bylaw Changes
Figure 2 – Workshop Presentation slides – Proposed Tipping Fee Bylaw Changes for 2017
Table 1. Summary of Email Notifications to Stakeholders:

<table>
<thead>
<tr>
<th>Date</th>
<th>Notification</th>
<th>Stakeholder groups</th>
</tr>
</thead>
<tbody>
<tr>
<td>July 29, 2016</td>
<td>Description of and provision of a web link to the report in the July 14, 2016 Zero Waste Committee agenda titled “Proposed 2017 Tipping Fee Bylaw Changes”. Invitation to an upcoming webinar and workshop on proposed 2017 Tipping Fee and Solid Waste Disposal Bylaw changes. Invitation to submit feedback via email.</td>
<td>Organics and Clean Wood Disposal Ban stakeholder database (almost 2,000 stakeholders representing a range of businesses, residents, health facilities, haulers, institutions, governments, and more); Business Improvement Associations; Board of Trade and Chambers of Commerce; Industry Associations; Waste and recycling businesses; Sports venues; Municipalities; Licensed facilities accepting organic waste and construction &amp; demolition waste; Licensed brokers; Regional Permits and Licenses Committee</td>
</tr>
<tr>
<td>August 15, 2016</td>
<td>Reminder to register for webinar on Proposed Tipping Fee Bylaw changes on August 29, 2016.</td>
<td>All stakeholders who were sent the original webinar and workshop invitation.</td>
</tr>
<tr>
<td>September 7, 2016</td>
<td>Reminder to register for workshop on Proposed Tipping Fee Bylaw Changes on September 15, 2016.</td>
<td>All stakeholders who were sent the original webinar and workshop invitation.</td>
</tr>
<tr>
<td>September 12, 2016</td>
<td>Summary and presentation slides from the webinar on August 29, 2016. Invitation to submit feedback via email.</td>
<td>Stakeholders who registered for the webinar.</td>
</tr>
<tr>
<td>September 19, 2016</td>
<td>Workshop follow-up and presentation slides. Invitation to submit feedback via email.</td>
<td>Stakeholders who registered for the workshop, plus others who requested a copy of the presentation slides.</td>
</tr>
</tbody>
</table>
Table 2. Summary of Meetings and Events Proposed Tipping Fee Bylaw Changes for 2017:

<table>
<thead>
<tr>
<th>Meeting / Event</th>
<th>Stakeholders</th>
<th>Date</th>
<th>Summary</th>
</tr>
</thead>
</table>
| Teleconference with regional Health Authorities | Fraser Health, Vancouver Coastal Health, Providence Healthcare | August 18, 2016   | Health authorities support the proposed approach to personal hygiene products as it is consistent with their current process of packaging personal hygiene products for disposal.  
Suggest less prescriptive language on the containment requirement (e.g. avoid prescribing 6mil poly bags), instead using language addressing the desired outcome (e.g. no leakage or breakage) – *Proposed provision in the Tipping Fee Bylaw reflects this suggestion.* |
| Stakeholder Webinar                    |                                                  | August 29, 2016   | *See Table 3*                                                                                                                                                                                                                                                                                                                      |
| Disposal Bans Effectiveness Working Group Meeting |                                                  | March 30 and September 9, 2016 | Multi-family buildings remain a challenge in organics recycling. Municipal regulatory requirements for organics recycling seems to be effective in encouraging multi-family buildings subscribing to organics collection.  
With the addition of new material disposal bans in the future, contamination of the recyclable material stream and illegal dumping will become more of a concern.  
Potential disposal ban on textiles would likely not have an impact on haulers.  
Concern expressed on rolling out new material bans too quickly. Metro Vancouver confirmed it will undertake stakeholder consultation prior to introducing any new material disposal bans.  
Identified that a challenge with adding expanded polystyrene as a banned material is that the EPR program applies to the residential sector only.  
Interested in data showing change in use of facilities by small vehicles following implementation of peak period rates. |
<table>
<thead>
<tr>
<th>Event Description</th>
<th>Location</th>
<th>Date</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>GVRD Regional Engineers Advisory Committee (REAC)</td>
<td>Metro Vancouver municipalities</td>
<td>Sept 9, 2016</td>
<td>Confirmation that provisions for dog waste were included in the 2016 Tipping Fee Bylaw.</td>
</tr>
<tr>
<td>Stakeholder Workshop</td>
<td></td>
<td>Sept 15, 2016</td>
<td>Discussion on whether mechanisms are available to allocate costs to product stewards for recyclable material that ends up in the garbage. While such a mechanism does not currently exist, Metro Vancouver does work with product stewards to encourage customers to keep recyclables out of the garbage.</td>
</tr>
<tr>
<td>REAC Solid-Waste Subcommittee meeting</td>
<td>Metro Vancouver municipalities</td>
<td>June 17 and Sept 16, 2016</td>
<td>Requested caution in decreasing the surcharge threshold to 5%, as some municipalities are in the process of finalizing their green bin roll-out to multi-family buildings and time would be required to comply. – 6 month education period is proposed in the Tipping Fee Bylaw. Cities that have tried recycling diapers have had very low recovery rates; continues to be accepted in garbage until viable recycling options are available. Question raised if illegal dumping may increase as a result of surcharges on unsecured loads. – Aiming for acceptable level of surcharge to raise awareness but not turn customers away; 6-month educational period is proposed in the Tipping Fee Bylaw.</td>
</tr>
<tr>
<td>Municipal Waste Reduction Coordinators’ Committee Meeting</td>
<td></td>
<td>July 20 and Sept 21, 2016</td>
<td>Raised question that as waxy cardboard is proposed to be removed from the list of items exempt from disposal bans, that the definition of waxy cardboard be distinct from poly coated paper (such as drink cups and frozen food containers), which is not universally accepted for composting. – the proposed Tipping Fee Bylaw changes would remove ‘paper that is covered or infused with wax’ from the disposal ban exclusion, but will keep the exclusion on ‘paper that is adhered to plastic’. Emphasized the importance of an education period for surcharges on</td>
</tr>
<tr>
<td>Event/Applicant/Inquirer</td>
<td>Location</td>
<td>Date</td>
<td>Notes</td>
</tr>
<tr>
<td>-------------------------</td>
<td>----------</td>
<td>------</td>
<td>-------</td>
</tr>
<tr>
<td>Surrey Board of Trade Environment Team Meeting (Requested presentation)</td>
<td>Surrey businesses</td>
<td>Sept 22, 2016</td>
<td>Clarification that very few additional surcharges would be anticipated if the threshold for Organics or Clean Wood was reduced. As a result, would not anticipate much impact to businesses.</td>
</tr>
<tr>
<td>Questions/Comment submitted via email</td>
<td>Regional Health Authorities</td>
<td>Sept 1, 2016</td>
<td>Clarification that waxy cardboard is proposed to be no longer excluded from the disposal bans in 2017 since there are viable recycling options (i.e. composting). Inquiry on whether the potential future ban on expanded polystyrene would include food service ware. Metro Vancouver will be conducting research and consulting further with stakeholders prior to proposing disposal ban on expanded polystyrene.</td>
</tr>
</tbody>
</table>

unsecured loads, and that Metro Vancouver would develop educational material defining secured/unsecured loads.

Provided feedback that there may be higher interest in disposal bans on propane tanks, fire extinguishers, durable commercial plastics, and furniture, compared to the potential future ban on textiles. Challenges with these materials include lack of EPR programs.

Inquiries about the application of products from organics processing. Compost application in the region primarily goes to landscaping, although there are increasing opportunities to use it in broader contexts as supply increases. Anaerobic digestion facilities also use organics to generate energy.

An option for expanded polystyrene, if a ban were to be considered, would be starting with a very high threshold to target generators who dispose of large loads of expanded polystyrene.

Clarification Metro Vancouver works closely with the inspectors to ensure a consistent approach in determining exceedance of a disposal ban threshold.
| Recycler | Sept 21, 2016 | Clarification that while carpeting and textiles are listed as materials under evaluation for possible future disposal bans, much research is still required to evaluate the suitability of each material for a disposal ban. Metro Vancouver will research recycling options, processing capacity, experiences of other places that have enacted a ban, pros and cons of alternatives to a ban, enforcement logistics, and many other factors. |
Table 3. Summary of Issues/Questions/Comments and Responses from the Stakeholder Webinar on Proposed 2017 Tipping Fee and Solid Waste Disposal Bylaw Changes (August 29, 2016):

<table>
<thead>
<tr>
<th>Issue/Comment/Question</th>
<th>Metro Vancouver Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clarification on Organics and Clean Wood Disposal Ban Thresholds</td>
<td>In October, 2016, the GVS&amp;DD Board will consider a recommendation to decrease the Organics and Clean Wood Disposal Ban thresholds, likely to 5%.</td>
</tr>
<tr>
<td>Waxy cardboard</td>
<td>Waxy cardboard is already accepted by composting facilities operating in Metro Vancouver.</td>
</tr>
<tr>
<td>Disposal bans as regulatory tools for encouraging recycling</td>
<td>Metro Vancouver has the authority to enforce disposal bans only at Metro Vancouver and the City of Vancouver disposal facilities, independent of source of waste. Municipalities can use regulatory tools to encourage waste generators to recycle and many municipalities in Metro Vancouver do have bylaws in place or are working on bylaws and other programs to encourage recycling.</td>
</tr>
<tr>
<td>Separation of recycling and organics in social housing for individuals with medical challenges – are ban exemptions or other solutions possible?</td>
<td>Disposal bans are applied at disposal facilities only, and therefore exemptions by generator type are not practicable, particularly given that many loads are from various generators.</td>
</tr>
<tr>
<td>Waste reduction through packaging and product design</td>
<td>The National Zero Waste Council (NZWC), co-founded by Metro Vancouver, is a partnership of governments, industry, and NGOs striving to influence reduction of waste through design and policy. The NZWC has a working group dedicated to minimizing waste through packaging and product design. More information is available at <a href="http://www.nzwc.ca">www.nzwc.ca</a></td>
</tr>
<tr>
<td>Origin of loads surcharged under the Organics Disposal Ban</td>
<td>Loads from any sector arriving at Metro Vancouver and City of Vancouver disposal facilities are inspected for banned materials. The loads surcharged for organics are primarily from roll-off type trucks that service individual generators.</td>
</tr>
<tr>
<td>The 2015 waste composition study shows 28% organics in the garbage, yet only a small increase in organics surcharges is expected even at 5% thresholds</td>
<td>Disposal ban inspectors inspect loads visually as material is emptied onto the tipping floor without opening bags. As a result the surcharges are based on the amount of a banned material in the garbage that is openly visible.</td>
</tr>
<tr>
<td>How regional organics recycling tonnes are compiled</td>
<td>Tonnes processed at licenced facilities that accept organics are included in the regional organics recycling tonnage. Facilities listed <a href="#">here</a> that are authorized to accept organics, source separated organics or food waste (under “Authorized Materials”) are included.</td>
</tr>
</tbody>
</table>

**Potential Future Disposal Bans**

<table>
<thead>
<tr>
<th>Issue/Comment/Question</th>
<th>Metro Vancouver Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Timeline for introducing additional material disposal bans</td>
<td>The tipping fee bylaw is updated on an annual basis, so new bans would be typically introduced as part of the annual update process. In any case, there would be consultation with affected stakeholders prior to the introduction of any new material disposal bans.</td>
</tr>
</tbody>
</table>
| Textiles recycling: options, research, and markets | The most viable option for textiles is donation for reuse. Collection bins from charitable organizations such as Salvation Army are placed at transfer stations to encourage donation. Agencies that handle donated clothing do pass on any material that is unsuitable for reuse to secondary markets such as rags markets.

Metro Vancouver has been working with the National Zero Waste Council and organizations involved in textiles reuse to research methods to increase donation of clothing. |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Recycling of building materials</td>
<td>Asphalt shingles are under evaluation as a potential future disposal ban material. Mineral aggregates as well as asphalt and concrete are already among the most highly recycled materials in the region. These types of construction and demolition materials are typically managed at privately run transfer stations and landfills where Metro Vancouver’s material disposal bans do not apply.</td>
</tr>
<tr>
<td>Personal Hygiene Products</td>
<td>Proposed containment requirements would only apply to loads that contain more than 10% personal hygiene products. In these loads, properly contained personal hygiene products would not be subject to a surcharge. Proper containment would mean double bagged in durable plastic bags and sealed to resist leaking and breaking during collection and disposal.</td>
</tr>
</tbody>
</table>
| Benefits of Increased Diversion | Benefits of reducing disposal ban thresholds include:
- Renewal of public attention on organics recycling and waste diversion, leading to more buildings introducing organics recycling, and greater participation in existing organics recycling programs
- Reduction in waste going to landfill, thus increasing the lifespan of existing landfills and reducing production of harmful greenhouse gases in landfills as waste decomposes |
| Disposal Ban Inspections | Metro Vancouver has a contract with a 3rd party to perform inspections at the disposal facilities. Disposal ban inspectors complete extensive training with a senior inspector to visually assess each load for banned materials in a consistent manner. In some cases where a banned item is easily removable and it is safe to do so, the customer is given the opportunity to reload the banned item back onto their vehicle to avoid the surcharge.

The proposed 2017 Tipping Fee Bylaw will contain a list of required elements for a valid surcharge. Required elements include items such as date, vehicle licence plate information, material type etc. Any person who wishes to dispute a surcharge notice can do so within 45 days of the notice being given. A surcharge dispute review fee of $25 will be applied. |
<table>
<thead>
<tr>
<th><strong>Unsecured Loads</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Enforcement for unsecured loads</strong></td>
<td>Surcharges for unsecured loads would be issued at the scale house. Similar to the reduced enforcement thresholds for organics and clean wood waste, a 6-month educational period from January to June 2017 would apply, where information on new requirements would be provided but no surcharges would be applied.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Waste Flow</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Solid waste system funding in light of waste export and declining waste quantities due to increased recycling</strong></td>
<td>In 2015 Metro Vancouver restructured the tipping fees to better reflect the true cost of processing loads based on their size. This has decreased the cost per tonne for larger loads and has helped to stabilize the waste flow.</td>
</tr>
</tbody>
</table>
Figure 1. Email to invite stakeholders to a webinar and workshop on Proposed Tipping Fee Bylaw Changes:

Dear Stakeholder,

The Tipping Fee and Solid Waste Disposal Regulation Bylaw describes solid waste regulations as well as tipping fees for waste and recycling at Metro Vancouver Transfer Stations, and is revised annually.

Metro Vancouver is proposing several changes to the current Tipping Fee and Solid Waste Disposal Regulation Bylaw for 2017, as described in the Zero Waste Committee July 14th, 2016 Agenda Report, Item 5.2, titled “Proposed 2017 Tipping Fee Bylaw Changes”. Proposed changes are related to:

- Organics and Clean Wood Disposal Ban Enforcement Thresholds
- Personal Hygiene Products
- Disposal ban surcharges for loads containing Hazardous and Operational Impact Materials or Product Stewardship Materials
- Surcharges for unsecured loads

(Note that proposed 2017 tipping fees will be brought to the Board in October along with the proposed budget.)

You are invited to hear about, provide feedback on, and ask questions about the proposed changes at the following events:

1. Webinar on Monday, August 29, 2016 at 2:00pm (PDT): Approximately 1 hour in length, including a 15 minute presentation by Metro Vancouver staff, followed by time for questions and comments.

   After registering, you will be redirected to a confirmation page containing instructions on joining the webinar, with an option to add it to your Outlook calendar. If you have any technical questions related to joining the meeting, please email Chris.Chong@metrovancouver.org.

   Register for the webinar here

2. Workshop at Metro Vancouver head office on Thursday, September 15, 2016 at 10:00 am (PDT): Approximately 2 hours in length, including a presentation by Metro Vancouver, followed by group discussion, questions, and comments.

   Written feedback on the proposed changes to the Tipping Fee Bylaw may also be submitted to solidwasteoperations@metrovancouver.org

   Register for the workshop here

Website
Email

SERVICES AND SOLUTIONS FOR A LIVABLE REGION
Figure 2. Workshop Presentation Slides – Proposed Tipping Fee Bylaw changes for 2017:

- Organics (Food) Disposal Ban enforcement threshold (5%)
- Clean Wood Disposal Ban enforcement threshold (5%)
- Wax coated cardboard
- Personal hygiene products
- Single item surcharges
- Unsegregated loads

*Note: 2017 Tipping Fees to be set as part of October budget process

Food Disposal Ban enforcement thresholds

- High compliance to date
- Supported by testing of thresholds
- Few additional surcharges expected
- Increased incentive for recycling

<table>
<thead>
<tr>
<th></th>
<th>Food Waste Surcharge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education Rate</td>
<td></td>
</tr>
<tr>
<td>Jan – Jun 2015</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Surcharge Rate</td>
<td></td>
</tr>
<tr>
<td>Jul – Dec 2015</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Surcharge Rate</td>
<td></td>
</tr>
<tr>
<td>Jan – Jun 2015</td>
<td>8</td>
</tr>
</tbody>
</table>
Access to a food scraps recycling program (2016)

- 97% 90%
- 90% 79%

In 2013, only 25% of restaurants were recycling food scraps.

Annual Tonnes of Organics Processed in Metro Vancouver

Clean Wood Disposal Ban Enforcement Threshold

In 2015 there was less food waste in the garbage compared to 2014.

Clean Wood Disposal Ban enforcement threshold

- High compliance to date
- Supported by testing of thresholds
- Relatively few additional surcharges expected
- Increased incentive for recycling

High level of compliance observed

<table>
<thead>
<tr>
<th>Clean Wood +19%</th>
<th>64</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education Notice Jan – Jun 2015 (Monthly Average)</td>
<td>64</td>
</tr>
<tr>
<td>Surcharge Jan – Dec 2015 (Monthly Average)</td>
<td>24</td>
</tr>
<tr>
<td>Surcharge Jan – Jun 2016 (Monthly Average)</td>
<td>15</td>
</tr>
</tbody>
</table>
Annual tonnes of clean wood diverted (public facilities)

Single item surcharges
- Hazardous, operational impact
- Product Stewardship materials
- $50 flat surcharge (2009)
- Inflationary increase ~$65

Personal hygiene products
- Personal hygiene products will be present in the waste
- Require proper containment for loads with 10% or more personal hygiene products
- Primarily for care facilities
- Engage with large volume producers
Encourage properly secured loads
Motivation:
- Reduce escaped waste, associated cleanup costs and danger to motorists/pedestrians

Results: Secured loads – commercial
Field/Visi Snapshots between Sept. 21, 2015 to Oct. 2, 2015

Results: Secured loads – self-haul
Field/Visi Snapshots between Sept. 21, 2015 to Oct. 2, 2015

TFB Changes to be introduced
- With 6 month educational period:
  - Organics and Clean Wood Waste Disposal Ban Thresholds
  - Personal Hygiene Products Containment Requirement for loads containing 15% or more
  - Unsecured Loads
  - Ban exemption on Waxy Cardboard
- All new fees (i.e. tipping fees and single item surcharge fees) to be effective January, 2017

Disposal ban prerequisites
- Provides a regional benefit
- Sufficient recycling alternatives available
**Future disposal bans**

Under evaluation:
- Textiles
- Expanded Polystyrene Packaging
- Asphalt Shingles
- Carpet
- Furniture
- Additional MMEC materials

---

**Potential diversion benefit of disposal bans**

<table>
<thead>
<tr>
<th>Potential Future Disposal Ban</th>
<th>Approximately % of Municipal Solid Waste (SWA Solid Waste Composition Study)</th>
<th>Estimated Tonnage/Years (Based on 22 Dispositions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Textiles</td>
<td>~4%</td>
<td>~62,000</td>
</tr>
<tr>
<td>Expanded Polystyrene Packaging</td>
<td>~2%</td>
<td>~17,000</td>
</tr>
<tr>
<td>Asphalt Shingles</td>
<td>~1%</td>
<td>~8,000</td>
</tr>
<tr>
<td>Carpet</td>
<td>~2%</td>
<td>~17,000</td>
</tr>
<tr>
<td>Furniture</td>
<td>~2%</td>
<td>~17,000</td>
</tr>
<tr>
<td>Additional MMEC EPR Materials</td>
<td>~4%</td>
<td>~82,000</td>
</tr>
<tr>
<td>Total</td>
<td>~12%</td>
<td>~145,000 tons/year</td>
</tr>
</tbody>
</table>

Questions?
To: Zero Waste Committee

From: Paul Remillard, Director, Solid Waste Operations, Solid Waste Services

Date: October 7, 2016

Meeting Date: October 13, 2016

Subject: Status of Sewerage and Drainage District (Solid Waste) Capital Expenditures to August 31, 2016

RECOMMENDATION
That the Zero Waste Committee receive the report dated October 7, 2016, titled “Status of Sewerage and Drainage District (Solid Waste) Capital Expenditures to August 31, 2016” for information.

PURPOSE
The purpose of this report is to communicate the status of utilities capital expenditures for the Sewerage and Drainage District (Solid Waste).

BACKGROUND
The Capital Expenditure reporting process as approved by the Board provides for regular status reports on capital expenditures with interim reports sent to the Zero Waste and Performance and Audit Committees in June/July and October/November and a final year-end report to the Committees and Board in April. This is the second in a series of three reports on capital expenditures for 2016.

STATUS OF SOLID WASTE CAPITAL PROJECTS
Capital projects are generally proceeding on schedule and within budget. Additional details on solid waste capital projects, including projected costs to completion compared to the approved budget, are included in Attachment 1. Attachment 2 highlights the status of key capital projects.

Table 1 summarizes information on ongoing and completed projects. The information presented is for total project completion which will generally cover multiple years. Capital project budgets typically include a minimum contingency of 10%. The project variance included in Table 1 is primarily due to two projects: the Waste-to-Energy Facility NOx upgrades and the North Shore Transfer Station reconfiguration. The NOx project was completed under the initial project budget, which was developed prior to the project scope being clearly defined. The North Shore Transfer Station reconfiguration is also expected to be completed under budget.

Table 1

<table>
<thead>
<tr>
<th>Solid Waste Projects</th>
<th>Total Projected Expenditures to Completion</th>
<th>ACE*/ Total Budget</th>
<th>Projected Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ongoing Projects</td>
<td>$32,900,000</td>
<td>$35,900,000</td>
<td>$3,000,000</td>
</tr>
<tr>
<td>Completed Projects</td>
<td>$6,228,093</td>
<td>$ 9,400,000</td>
<td>$3,171,907</td>
</tr>
</tbody>
</table>

* Authorized Capital Expenditures
ALTERNATIVES
This is an information report. No alternatives are presented.

FINANCIAL IMPLICATIONS
Capital expenditures are funded internally through debt charges. Solid Waste debt is financed short-term until the end of the year when the capital position is reviewed to determine if enough debt has been incurred to convert to long term debt through the Municipal Finance Authority or to continue to finance short-term. If capital expenditures are less than budgeted for the year, the savings in debt charges creates a surplus which by Board policy will be used to reduce future capital debt financing charges through an additional contribution to capital to reduce future debt borrowing requirements.

As of the end of 2015, Solid Waste had $24M in debt remaining which will mature by the end of 2018. While a significant investment in infrastructure for the GVS&DD (Solid Waste), the projects identified in Attachment 2 represent approximately 80 person years of employment and, over their life (development and construction), make up about $7 million of the Gross Domestic Product of the region.

SUMMARY / CONCLUSION
Solid Waste capital projects are generally proceeding on schedule and within budget. The Sewerage and Drainage District (Solid Waste) is projected to be under spent for ongoing capital projects and under spent for completed capital projects for 2016.

This is the second in a series of three reports on capital expenditures for 2016.

Attachments:
1: Sewerage and Drainage District (Solid Waste) Capital Expenditures
2: Capital Project Status Information as of August 31, 2016

19203774
### Sewerage and Drainage District Capital Expenditures
#### Solid Waste
As of Aug 31, 2016

<table>
<thead>
<tr>
<th>Program</th>
<th>Project ID</th>
<th>Project Description</th>
<th>Project Location</th>
<th>Project Actuals</th>
<th>Total Projected Project Actuals</th>
<th>ACE / Total Project Budget</th>
<th>Total Projected Project Complete</th>
<th>Percent Complete</th>
<th>Expected Year of Project Completion</th>
<th>Project on Schedule?</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.8</td>
<td>L0029</td>
<td>CLF LFG Upgrades Design</td>
<td>Coquitlam</td>
<td>242,788</td>
<td>250,000</td>
<td>250,000</td>
<td>-</td>
<td>97%</td>
<td>2016</td>
<td>Y</td>
</tr>
<tr>
<td></td>
<td>L0033</td>
<td>CLF LFG Upgrade Construction</td>
<td>Coquitlam</td>
<td>2,198,196</td>
<td>2,850,000</td>
<td>2,850,000</td>
<td>-</td>
<td>(3)</td>
<td>2017</td>
<td>N</td>
</tr>
<tr>
<td></td>
<td>L0044</td>
<td>CLF LFG Upgrade Phase 2</td>
<td>Coquitlam</td>
<td>-</td>
<td>300,000</td>
<td>300,000</td>
<td>-</td>
<td>(3)</td>
<td>2017</td>
<td>N</td>
</tr>
<tr>
<td></td>
<td>L0049</td>
<td>Coquitlam Landfill Closure</td>
<td>Coquitlam</td>
<td>64,894</td>
<td>100,000</td>
<td>100,000</td>
<td>-</td>
<td>90%</td>
<td>2017</td>
<td>Y</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2,505,678</td>
<td>3,500,000</td>
<td>3,500,000</td>
<td>-</td>
<td>73%</td>
<td>2018</td>
<td>Y</td>
</tr>
<tr>
<td>SW Landfills Capital</td>
<td>L0047</td>
<td>Coq Trans Sta Replacement</td>
<td>Coquitlam</td>
<td>581,424</td>
<td>800,000</td>
<td>800,000</td>
<td>-</td>
<td>20%</td>
<td>2016</td>
<td>Y</td>
</tr>
<tr>
<td></td>
<td>L0048</td>
<td>NSTS Reconfiguration</td>
<td>North Vancouver</td>
<td>455,383</td>
<td>4,000,000</td>
<td>7,000,000</td>
<td>3,000,000</td>
<td>(2)</td>
<td>2016</td>
<td>Y</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1,036,807</td>
<td>4,800,000</td>
<td>7,800,000</td>
<td>3,000,000</td>
<td>1,636,412</td>
<td>12,600,000</td>
<td>12,600,000</td>
</tr>
<tr>
<td>SW Transfer Station System Cap</td>
<td>L0045</td>
<td>Scrubber - Design</td>
<td>Burnaby</td>
<td>378,322</td>
<td>1,500,000</td>
<td>1,500,000</td>
<td>-</td>
<td>25%</td>
<td>2017</td>
<td>Y</td>
</tr>
<tr>
<td></td>
<td>L0050</td>
<td>Soot Blower Replacement</td>
<td>Burnaby</td>
<td>365,242</td>
<td>800,000</td>
<td>800,000</td>
<td>-</td>
<td>46%</td>
<td>2017</td>
<td>Y</td>
</tr>
<tr>
<td></td>
<td>L0052</td>
<td>Bottom Ash Processing</td>
<td>Burnaby</td>
<td>300,000</td>
<td>6,000,000</td>
<td>6,000,000</td>
<td>-</td>
<td>(3)</td>
<td>2017</td>
<td>N</td>
</tr>
<tr>
<td></td>
<td>L0054</td>
<td>WTEF Gas Burner Replacement</td>
<td>Burnaby</td>
<td>87,730</td>
<td>2,800,000</td>
<td>2,800,000</td>
<td>-</td>
<td>(3)</td>
<td>2017</td>
<td>Y</td>
</tr>
<tr>
<td></td>
<td>L0055</td>
<td>CEMS Upgrade Construction</td>
<td>Burnaby</td>
<td>505,118</td>
<td>1,500,000</td>
<td>1,500,000</td>
<td>-</td>
<td>34%</td>
<td>2016</td>
<td>Y</td>
</tr>
<tr>
<td>SW Waste to Energy Fac Cap</td>
<td>L0042</td>
<td>New Waste to Energy Capacity</td>
<td>Regional</td>
<td>-</td>
<td>12,000,000</td>
<td>12,000,000</td>
<td>-</td>
<td>(3)</td>
<td>2021</td>
<td>N</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-</td>
<td>12,000,000</td>
<td>12,000,000</td>
<td>-</td>
<td>1,636,412</td>
<td>12,600,000</td>
<td>12,600,000</td>
</tr>
<tr>
<td>SW Mgmt Plan Initiatives Cap</td>
<td>L0020</td>
<td>NOx Reduction Project Design</td>
<td>Burnaby</td>
<td>443,567</td>
<td>443,567</td>
<td>900,000</td>
<td>456,433</td>
<td>(1)</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>L0034</td>
<td>WTEF NOx Project Construction</td>
<td>Burnaby</td>
<td>4,976,050</td>
<td>4,976,050</td>
<td>7,000,000</td>
<td>2,023,950</td>
<td>(1)</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>L0046</td>
<td>CEMS Upgrade - Design</td>
<td>Burnaby</td>
<td>115,372</td>
<td>115,372</td>
<td>500,000</td>
<td>384,628</td>
<td>(1)</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>L0051</td>
<td>Diesel Generator Replacement</td>
<td>Burnaby</td>
<td>683,104</td>
<td>693,104</td>
<td>1,000,000</td>
<td>306,896</td>
<td>(2)</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6,228,093</td>
<td>6,228,093</td>
<td>9,400,000</td>
<td>3,171,907</td>
<td>6,228,093</td>
<td>6,228,093</td>
<td>9,400,000</td>
</tr>
</tbody>
</table>

### Notes:
1. Reduction in scope.
2. Bids lower than expected.
3. For project comments refer to Attachment 2.
Capital Project Status Information as of August 31, 2016

Major GVS&DD solid waste capital projects are generally proceeding on schedule and within budget. The following capital program exceptions are highlighted:

1) Landfills Program
   The completion of the Coquitlam Landfill (CLF) Gas Phase Upgrade for the north half of the landfill is planned for the winter of 2016/2017. The Phase 2 upgrade (for the south half of the landfill) will be completed with the proposed development of the Coquitlam Transfer Station.

   The CFL Landfill Gas Utilization project has been terminated as a result of limited gas production and will be reassessed as part of the transfer station development project.

2) Waste to Energy Program
   The Bottom Ash Processing project went forward to the Zero Waste Committee in February 2016 at which point direction was provided for a third party review of costing and business case to be brought back to the Zero Waste Committee. It is anticipated that this report will occur in September 2016.

3) New WTE Capacity Project (Material & Energy Recovery Facility)
   The procurement process for the New WTE Capacity Project has been discontinued. Staff will report back with recommendations on Waste-to-Energy development options in late 2016/early 2017.
To: Zero Waste Committee

From: Larina Lopez, Division Manager, Corporate Communications

Date: September 23, 2016

Subject: 2016 Christmas Campaign – Create Memories, Not Garbage

RECOMMENDATION
That the GVRD Board receive the report dated September 23, 2016, titled “2016 Christmas Campaign – Create Memories, Not Garbage” for information.

PURPOSE
To inform the Zero Waste Committee and GVRD Board of the 2016 Christmas Campaign – Create Memories, Not Garbage -- in support of the zero waste objectives of Metro Vancouver’s Integrated Solid Waste and Resource Management Plan.

BACKGROUND
Metro Vancouver undertakes, in collaboration with Members, communications and behaviour change campaigns in support of zero waste objectives and waste reduction and diversion targets established in the Integrated Solid Waste and Resource Management Plan. 2016 marks the ninth year that Metro Vancouver will execute a Christmas season waste reduction campaign, and the sixth year of the “Create Memories, Not Garbage” campaign. In 2011, the theme shifted away from how much garbage we create to the message that Christmas memories are created by spending time with loved ones, giving experiences or purchasing quality gifts that last.

This report provides an update on the 2016 “Create Memories, Not Garbage” campaign as identified in the 2016 Zero Waste Work Plan.

2016 CHRISTMAS CAMPAIGN – CREATE MEMORIES, NOT GARBAGE
2015 Post Campaign Survey
The methodology for the 2015 post campaign survey was adjusted in order to obtain a total of 1,500 survey responses from five sub-regions as opposed to the more traditional region-wide sample of 500. This resulted in lower margins of error in the 2015 post-campaign survey. This decreased margin of error, combined with a reduction in the campaign budget, contributed to lower reported recall and awareness when compared to previous years.

Overall campaign awareness in 2015 was similar to the 2013 campaign but lower than the 2014 campaign. However, the percentage of respondents that reported changing their purchasing behaviour as a result of seeing the campaign was significantly higher than 2014. Awareness of Metro Vancouver as the sponsor was also similar.

Assessment of “Create Memories, Not Garbage” Campaign
Recall and awareness results suggest that the “Create Memories, Not Garbage” waste reduction campaign may have plateaued in the marketplace. The message still resonates with residents as those who do recall the campaign report changing their behaviour, but it was important that the creative
be assessed to see how it could be strengthened, especially in an ever-increasing competitive marketplace.

Metro Vancouver assessed its current creative with qualitative focus groups to understand what was/wasn’t working with the current creative. Key findings were as follows:

**Current Consumer/Resident Mindset**

- **Gift Giving**
  - The factors that go into making a gift decision are affordability, what the recipient might need (practicality), and how much surprise would come from the gift.
  - Wrapping gifts is a key element of gift-giving (creates anticipation and surprise).
  - Blame excessive packaging as the key contributor of solid waste at Christmas.
  - They put as much as they can into recycling, and so think waste can’t be that much of a problem.

- **Barriers to Change**
  - Emotional adherence to tangible gift-giving. Many prefer tangible gifts because they offer an immediate experience of seeing someone unwrap their presents.
  - Think that tangible gifts carry more value while something experiential is conceptual and less “in the moment.”

- **Alternative Gift Giving**
  - Adults may be more open to alternative gifts than children.
  - Takes a higher level of creativity, which can be intimidating.
  - Fear that the gift will be disliked or seen as cheap.
  - Would like to see specific ideas to help inspire them.

- **Incentives to Change**
  - May feel guilty about the amount of waste the holiday season involves.
  - May be surprised to learn about the extent of the holiday waste problem.
  - Like the idea of refocusing Christmas away from commercialism and over to the true spirit of giving from the heart.
  - They see some level of personal responsibility in addressing this issue and reducing Christmas trash that finds its way into landfills.

**Creative Assessment**

- **Continue with the current “Create Memories, Not Garbage” campaign.**
  - In general, respondents believed the campaign does get the message of reducing Christmas waste across and at the same time, suggests tactics with which to do it.
  - Respondents generally considered that the overall tone of the executions fits well with the Christmas spirit and does create a level of awareness that Christmas waste is an issue.

- **Complement the campaign with a list of ideas for alternative gift-giving.**
  - One of the main concerns for participants is that they might lack the creativity necessary to come up with alternative gift ideas. Creating a web page that provides suggestions or invites people to add their ideas would help overcome that.

- **Reconsider the green banner design to make the final message more noticeable.**
  - Respondents tended to “miss” this green bar in favour of the script over top of the image.

- **Continue using humour.**
  - Humour and a light-hearted approach to the message was appreciated. Respondents didn’t want to hear about difficult messages about how the landfill and environment are
impacted by our gift-giving at this time of year. They wanted the message to stay up-beat and with a clear call to action.

These findings helped to conclude that the “Create Memories, Not Garbage” creative was still impactful but some refinement was needed to give the campaign a fresh look and ability to stand out in a competitive marketplace.

**Campaign Creative for 2016**

The new concept for 2016 is based on having people reflect on what makes a gift special through a thought that captures the spirit of the campaign – *Best Gift Ever*. This new platform shifts the focus of the creative from the gift-giver to the gift recipient. It allows for less copy and helps to demonstrate how people feel when receiving the kind of gifts that the campaign promotes.

The new concept also allows for integration of previous campaigns with the opportunity to present new ideas and tactics. A new website [www.creatememoriesnotgarbage.ca](http://www.creatememoriesnotgarbage.ca) will be the hub for the campaign and will include helpful tips from gift ideas to gift wrapping and customizable gift coupons. Featured on the website will be individuals sharing their *Best Gifts Ever* – Metro Vancouver staff have been invited to be part of the campaign by being featured on the new website bringing a more personal touch to the campaign.

As with previous years, campaign materials will be offered to members through the Municipal Waste Reduction Coordinators Committee and Communications contacts at each municipality. Metro Vancouver also shares the Christmas Campaign beyond our region to other jurisdictions, and through the National Zero Waste Council. Other jurisdictions that have taken part in previous years include: Capital Regional District, Powell River Regional District, Cariboo Regional District, Regional District of Central Okanagan, Resort Municipality of Whistler, the City of Lethbridge and the City of Portland.

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

**FINANCIAL IMPLICATIONS**
The “Create Memories, Not Garbage” campaign budget is $200,000 and consists of expenses associated with focus testing, creative development, advertising and post-campaign awareness research. These are included in the 2016 General Government Zero Waste Communications Program, with select traditional media, social media and online content produced in-house.

**SUMMARY / CONCLUSION**
In support of Metro Vancouver’s waste reduction targets outlined in the Integrated Solid Waste and Management and Resource Management Plan, the 2016 Christmas Campaign, “Create Memories, Not Garbage” focuses on reducing waste during the Christmas season. The campaign reminds residents to celebrate the holidays with gifts of time and high-quality, long-lasting gifts.

Responding to the results of a recent assessment, the 2016 campaign will continue to use positive and humourous behaviour and will integrate some creative from previous years. “Best Gift Ever” is the new umbrella idea that supports the existing theme for the campaign and encourages people to reflect on their own best gift ever, while at the same time inspiring them to think how they might do the same for someone else through helpful tips on the new website: [www.creatememoriesnotgarbage.ca](http://www.creatememoriesnotgarbage.ca). The campaign website will be focused on all the different ways
people can create less waste this Christmas – from customizable coupons, to experiences, to giving food.

This campaign will be the sixth year of the “Create Memories, Not Garbage” campaign and will be monitored both in and out of market to ensure engagement, recall of message and impact on behaviour.
To: Zero Waste Committee

From: Paul Henderson, General Manager, Solid Waste Services

Date: October 7, 2016

Meeting Date: October 13, 2016

Subject: Manager’s Report

RECOMMENDATION
That the Zero Waste Committee receive the report dated October 7, 2016, titled “Manager’s Report” for information.

On Thursday, September 22, 2016, The BC Ministry of Environment published the final Guide to Solid Waste Management Planning. This document replaces the 1994 Guide to the Preparation of Regional Solid Waste Management Plans for Regional Districts. As part of the consultation process, Metro Vancouver staff participated in workshops, presentations and submitted two rounds of comments on the intentions paper and draft guide. The guide and summary of received comments have been posted on the Ministry website.

Waste Flow Update and Year End Projections
The current projection for 2016 is 875,000 tonnes per year, up 6% from 822,000 tonnes in 2015. Drivers for increased waste flows include the change to a variable tipping fee part way through 2015 and temporary restrictions to the amount of waste received at the Ecowaste Landfill in Richmond due to Operational Certificate volume limits.

Gypsum Management Update: Used Gypsum Pilot Project at Maple Ridge and Langley Residential Transfer Stations
In the fall of 2015, requirements for gypsum management in the region changed due to concerns of potential asbestos contamination. Since early 2016 Metro Vancouver transfer stations have only been accepting new gypsum for recycling. Following this change, transfer stations have observed more gypsum in the garbage and less gypsum recycled, while municipalities around the region have experienced increased illegal dumping.

To provide residents with a safe and convenient option to dispose of small quantities of used gypsum, Metro Vancouver initiated a pilot project at the Maple Ridge and Langley Transfer Stations. Residents can drop off up to 10 bags of used gypsum per trip, up to 5 times per year, without requiring declaration forms. The used gypsum must be double bagged and sealed using custom-printed 6-mil poly bags available at retailers close to the transfer stations. The sealed bags are disposed of by residents in a separate bin at the same tipping fee as new gypsum. The gypsum will be sent for disposal outside of the region.

In parallel to Metro Vancouver’s pilot, the City of Vancouver is also accepting small quantities of used gypsum for disposal. Metro Vancouver hopes to expand the pilot to all its transfer stations early in 2017. New gypsum continues to be accepted for recycling at all Metro Vancouver transfer stations.
2016 Metro Vancouver Zero Waste Conference Update


Opening Keynote: Neri Oxman, Architect, Designer and Associate Professor from MIT Media Lab, where she founded and directs the Mediated Matter research group. Oxman will explore her award winning work around design and how it can bring together biology and technology to create products and buildings that are consistent with the circular systems of the natural world.

Rapidly shifting from the periphery to the mainstream, the circular economy signals a new era of innovation – offering a systems approach to eliminating waste and creating value, while reshaping our world to one that is regenerative by design – requiring new thinking, disruption and scale – it requires Innovation.

Featuring leaders at the intersect of science, politics and economics, this years’ conference will showcase thought leadership and best practices from across the globe as well as our own backyard. From cross-cutting discussions on Innovation in the Marketplace, rethinking material inputs to scaling transformative business models, to instigating a Repair and Reuse Revolution, designing products for repair and reuse, looking at the Built Environment, excellence in integrated design and material, and initiating ways to dramatically reduce Food Waste in Canada, participants will leave inspired and equipped to forge new solutions and collaborations in support of a world without waste.

Learn more and register at zwc.ca.

Contingency Landfill Disposal

A Request for Proposals for Contingency Landfill Disposal was issued on August 18, 2016. One condition for participation in the request for proposals was submission of a Participation Agreement to Metro Vancouver by September 16, 2016.

The Participation Agreement required that Proponents be bound by a Conflict of Interest provision. The Conflict of Interest provision restricted the Contractor, its affiliates or officers from carrying out the following actions:

a) operating any facility that receives mixed municipal solid waste originating from any source(s) within the region except that received pursuant to a contract with the GVS&DD;
b) hauling mixed municipal solid waste generated within the region to a facility not under contract with GVS&DD; and
c) engaging in activities inconsistent with the goals and strategies set out in the GVS&DD’s Integrated Solid Waste and Resource Management Plan.

Metro Vancouver received no Participation Agreements as of the deadline of September 16, 2016; therefore, the Request for Proposals was cancelled. Staff are investigating options to provide contingency landfill capacity and will report back with alternatives in early 2017.
Zero Waste Committee 2016 Workplan
The attachment to this report sets out the Committee’s Workplan for 2016. The status of work program elements is indicated as pending, in progress, or complete. The listing is updated as needed to include new issues that arise, items requested by the Committee and changes in the schedule.

Attachment:
Zero Waste Committee 2016 Workplan
## Priorities

### 1st Quarter

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<th>Priority</th>
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<tr>
<td>North Shore Transfer Station Reconfiguration Update</td>
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<tr>
<td>Coquitlam Wood Recycling Facility Operations Update</td>
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<td>2015 Disposal Ban Inspection Program Update</td>
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### 2nd Quarter

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<td>Food Isn’t Garbage: 2015 Campaign Results</td>
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<td>2017 Tipping Fee Bylaw Revisions</td>
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<td>Waste Flow Update and End of Year Waste Projections</td>
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<td>GVS&amp;DD/Wastech Comprehensive Agreement – 2015 Financial Results</td>
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<td>Surrey RDO Update</td>
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<td>Municipal Regulatory Tools/Programs to Encourage Diversion Update</td>
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<td>Recycling Bins/Streetscape Update/EPR Programs Update</td>
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<td>2016 Metro Vancouver Zero Waste Conference: Results</td>
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September 30, 2016

Metro Vancouver  
c/o Paul Henderson  
GM Solid Waste Services  
4330 Kingsway  
Burnaby, BC  
V5H4G8

Dear Sirs/Madames:

FoamOnly Recycling Corp was established in 2011 to provide an alternative to the land-filling of EPS (Styrofoam) waste in Metro Vancouver. As EPS is bulky and is engineered not to degrade, keeping it out of landfills should be a priority.

Since inception, FoamOnly has achieved the following milestones:

- We have diverted over 300,000 cubic meters of EPS waste, which is the equivalent to 3,000 truckloads (53 ft trailer or 100 m³) since 2011.
- We expect to divert over 140,000 cubic meters of EPS waste, or 1,400 truckloads during 2016.
- We are the largest recycler of EPS material in Canada.

While significant, this still represents less than 10% of the volume of EPS material generated in Vancouver.
When we opened, we believed that when we demonstrated that EPS can be recycled, Metro Van would want to ban the material from landfills. We have proven our ability to recycle this material and are now ready to scale up help you divert a larger percentage of this material from the waste stream.

We would ask for an opportunity to appear before your committee as a delegation to begin this dialogue.

Thank you.

Sincerely,

Mark Obedzinski
President
FoamOnly Recycling Corporation