

**METRO VANCOUVER REGIONAL DISTRICT
ZERO WASTE COMMITTEE**

REGULAR MEETING

Friday, June 14, 2019

9:00 a.m.

28th Floor Committee Room, 4730 Kingsway, Burnaby, British Columbia

A G E N D A¹

1. ADOPTION OF THE AGENDA

1.1 June 14, 2019 Regular Meeting Agenda

That the Zero Waste Committee adopt the agenda for its regular meeting scheduled for June 14, 2019 as circulated.

2. ADOPTION OF THE MINUTES

2.1 May 17, 2019 Regular Meeting Minutes

That the Zero Waste Committee adopt the minutes of its regular meeting held May 17, 2019 as circulated.

3. DELEGATIONS

4. INVITED PRESENTATIONS

4.1 Tony Moucachen, Merlin Plastics

Subject: Merlin Plastics Overview

5. REPORTS FROM COMMITTEE OR STAFF

5.1 Illegal Dumping Update

Designated Speaker: Marian Kim, Lead Senior Engineer, Solid Waste Services

That the Zero Waste Committee receive for information the report dated June 7, 2019, titled "Illegal Dumping Update".

5.2 Potential Regulatory Approaches for Priority Plastic Wastes

Designated Speaker: Andrew Marr, Director of Solid Waste Planning, Solid Waste Services

That the Zero Waste Committee receive for information the report dated June 7, 2019, titled "Potential Regulatory Approaches for Priority Plastic Wastes".

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

5.3 Waste-to-Energy Facility Environmental Monitoring and Reporting, 2018 Update

Designated Speaker: Brent Kirkpatrick, Lead Senior Engineer, Solid Waste Services

That the Zero Waste Committee receive for information the report dated June 5, 2019, titled "Waste-to-Energy Facility Environmental Monitoring and Reporting, 2018 Update".

5.4 2018 Waste Composition Monitoring Program Results

Designated Speaker: Terry Fulton, Project Engineer, Solid Waste Services

That the Zero Waste Committee receive for information the report dated June 7, 2019, titled "2018 Waste Composition Monitoring Program Results".

5.5 2019 Regional "Think Thrice About Your Clothes" Campaign Results

Designated Speaker: Larina Lopez, Corporate Communications Division Manager, External Relations

That the Zero Waste Committee receive for information the report dated June 5, 2019, titled "2019 Think Thrice About Your Clothes Campaign Results."

5.6 Manager's Report

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

That the Zero Waste Committee receive for information the report dated June 5, 2019, titled "Manager's Report".

6. INFORMATION ITEMS

6.1 Letter to GVS&DD Chair Dhaliwal Re Support for a Provincial Single-Use Item Reduction Strategy Aligned with Federal Goals for Reduction of Plastic Waste, dated May 14, 2019

7. OTHER BUSINESS

8. BUSINESS ARISING FROM DELEGATIONS

9. RESOLUTION TO CLOSE MEETING

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

10. ADJOURNMENT/CONCLUSION

That the Zero Waste Committee adjourn/conclude its regular meeting of June 14, 2019.

Membership:

Froese, Jack (C) - Langley Township
Hodge, Craig (VC) - Coquitlam
Calendino, Pietro - Burnaby
Cameron, Craig - West Vancouver
Elford, Doug - Surrey

Fathers, Helen - White Rock
Fry, Pete - Vancouver
Little, Mike - North Vancouver District
Madsen, Hunter - Port Moody

Martin, Gayle - Langley City
Morden, Mike - Maple Ridge
Steves, Harold - Richmond
Trentadue, Mary - New Westminster

**METRO VANCOUVER REGIONAL DISTRICT
ZERO WASTE COMMITTEE**

Minutes of the Regular Meeting of the Metro Vancouver Regional District (MVRD) Zero Waste Committee held at 9:01 a.m. on Friday, May 17, 2019 in the 28th Floor Committee Room, 4730 Kingsway, Burnaby, British Columbia.

MEMBERS PRESENT:

Chair, Mayor Jack Froese, Langley Township
Councillor Pietro Calendino, Burnaby
Councillor Doug Elford, Surrey
Mayor Mike Little, North Vancouver District
Councillor Hunter Madsen, Port Moody (arrived at 9:03 a.m.)
Councillor Gayle Martin, Langley City
Mayor Mike Morden, Maple Ridge
Councillor Harold Steves, Richmond
Councillor Mary Trentadue, New Westminster

MEMBERS ABSENT:

Vice Chair, Councillor Craig Hodge, Coquitlam
Councillor Craig Cameron, West Vancouver
Councillor Helen Fathers, White Rock
Councillor Pete Fry, Vancouver

STAFF PRESENT:

Paul Henderson, General Manager, Solid Waste Services
Ann Marie Lanz, Legislative Services Coordinator, Board and Information Services

1. ADOPTION OF THE AGENDA

1.1 May 17, 2019 Regular Meeting Agenda

It Was MOVED and SECONDED

That the Zero Waste Committee adopt the agenda for its regular meeting scheduled for May 17, 2019 as circulated.

CARRIED

2. ADOPTION OF THE MINUTES

2.1 April 12, 2019 Regular Meeting Minutes

It was MOVED and SECONDED

That the Zero Waste Committee adopt the minutes of its regular meeting held April 12, 2019 as circulated.

CARRIED

9:03 a.m. Councillor Madsen arrived at the meeting.

3. DELEGATIONS

3.1 Sam Scoten, CEO and Director, CheckSammy

Sam Scoten spoke to the Committee about CheckSammy, a company that manages excess consumer goods by utilizing a variety of technological platforms for redistribution to individuals and charitable organizations.

In response to questions, the delegation informed members about operational details of the CheckSammy business model.

Presentation material titled "CheckSammy Reuse Program" is retained with the May 17, 2019 Zero Waste Committee regular agenda.

4. INVITED PRESENTATIONS

No items presented.

5. REPORTS FROM COMMITTEE OR STAFF

5.1 Solid Waste Energy Policy

Report dated May 7, 2019 from Sarah Wellman, Senior Engineer, Solid Waste Services, seeking GVS&DD Board approval of the proposed Solid Waste Energy Policy and a business case for a district heating system for the-Waste-to-Energy Facility.

Distinct Propositions

At the request of Councillor Trentadue, the motion was separated into distinct propositions.

Part a) of the recommendation was before the Committee.

It was MOVED and SECONDED

That the GVS&DD Board approve the Solid Waste Energy Policy.

DEFEATED

Part b) of the recommendation was before the Committee.

It was MOVED and SECONDED

That the GVS&DD Board direct staff to prepare a business case, including a recommended ownership model, for a district energy system using heat from the Waste-to-Energy Facility

CARRIED

5.2 2018 Disposal Ban Program Update

Report dated May 7, 2019 from Brandon Ho, Senior Project Engineer, Solid Waste Services, updating the Zero Waste Committee on the 2018 results of the Metro Vancouver Disposal Ban Program.

It was MOVED and SECONDED

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

CARRIED

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

Report dated April 30, 2019 from Larina Lopez, Division Manager, Corporate Communications, External Relations, updating the committee on Metro Vancouver’s engagement with the *Love Food Hate Waste Canada* behaviour change campaign.

Members were provided with information regarding the status of *Metro Vancouver’s Love Food Hate Waste* campaign.

Discussion ensued on educational initiatives to reinforce campaign objectives, current food waste and composting waste trends and the *National Love Food Hate Waste* campaign activities.

Presentation material titled “Update on Metro Vancouver’s Engagement with the Love Food Hate Waste Canada Campaign” is retained with the May 17, 2019, Zero Waste regular committee agenda.

It was MOVED and SECONDED

That the Zero Waste Committee receive for information the report dated April 30, 2019, titled “Update on Metro Vancouver’s Engagement with the Love Food Hate Waste Canada Campaign.”

CARRIED

Mayor Little absent at the vote.

5.4 Manager's Report

Report dated May 9, 2019 from Paul Henderson, General Manager, Solid Waste Services, providing the Committee with updates on the *Residential Used Gypsum Disposal Program* and the 2019 Zero Waste Committee work plan.

It was MOVED and SECONDED

That the Zero Waste Committee receive for information the report dated May 9, 2019, titled "Manager's Report".

CARRIED

6. INFORMATION ITEMS

It was MOVED and SECONDED

That the Zero Waste Committee receive for information the following information items:

- 6.1 Correspondence re Bylaw 181 Update and Commercial Waste Hauler Licensing Bylaw Overview addressed to The Honourable George Heyman dated April 15, 2019
- 6.2 Correspondence re: 2018 Zero Waste Conference from Mayor Malcolm Brodie, City of Richmond dated February 16, 2019
- 6.3 Metro Vancouver Odour Management Communication and Engagement Strategy
- 6.4 Correspondence re Vancouver Landfill Technical Liaison Committee from Mayor George V. Harvie, City of Delta, dated May 6, 2019

CARRIED

7. OTHER BUSINESS

No items presented.

8. BUSINESS ARISING FROM DELEGATIONS

No items presented.

9. RESOLUTION TO CLOSE MEETING

It was MOVED and SECONDED

That the Zero Waste Committee close its regular meeting scheduled for May 17, 2019 pursuant to the *Community Charter* provisions, Section 90 (2) (b) as follows:

"90(2) A part of a regional district meeting must be closed to the public if the subject matter

being considered relates to one or more of the following:

- (b) the consideration of information received and held in confidence relating to negotiations between the regional district and a provincial government or the federal government or both, or between a provincial government or the federal government or both and a third party".

CARRIED

10. ADJOURNMENT/CONCLUSION

It was MOVED and SECONDED

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

CARRIED

(Time: 10:37 a.m.)

Ann Marie Lanz,
Legislative Services Coordinator

Jack Froese, Chair

To: Zero Waste Committee

From: Marian Kim, Lead Senior Engineer, Solid Waste Services

Date: June 7, 2019 Meeting Date: June 14, 2019

Subject: **Illegal Dumping Update**

RECOMMENDATION

That the Zero Waste Committee receive for information the report dated June 7, 2019, titled “Illegal Dumping Update”.

PURPOSE

The purpose of this report is to update the Zero Waste Committee on illegal dumping trends and initiatives in the region.

BACKGROUND

Illegal dumping is a concern across the region and is the focus of significant planning, prevention and enforcement efforts by Metro Vancouver and its member municipalities. Illegal dumping causes environmental, health and social impacts, and is a considerable resource and financial burden on governments, businesses and residents.

Committee members have asked for more information on illegal dumping. This report therefore provides an update on regional illegal dumping trends and local government initiatives to discourage illegal dumping.

ILLEGAL DUMPING STATISTICS AND PROGRAMS

As a shared issue across the region, Metro Vancouver facilitates regional information sharing, collaboration and data collection, and the development of regional awareness and education resources. Metro Vancouver also provides convenient and accessible disposal and recycling services at its transfer stations across the region. Metro Vancouver municipalities continue to implement a range of complementary regulatory, prevention and enforcement approaches.

Illegal Dumping Data

In 2018, member municipalities reported approximately 43,800 incidents of illegal dumping and collectively spent approximately \$3.2 million to clean up and properly dispose of the abandoned waste. In addition, municipalities report spending approximately \$2.5 million per year on bulky item pick-up in the region for a total of approximately \$5.7 million spent annually on removing illegally dumped material and managing bulky item pick-up programs.

Table 1 shows an overall increase in the annual number of incidents and cleanup costs associated with illegal dumping over the last number of years. Despite the overall increase in illegal dumping activities in the region, some municipalities are experiencing a downward trend in the number of incidents. Some activities that have been credited with reducing illegal dumping include increased

monitoring, enhancing bulky item pick-up programs and community material drop-off events. More detail on illegal dumping prevention initiatives is included later in this report. Some of the increases in the number of incidents recorded may not necessarily reflect an increase in the actual number of incidents but rather an increase in reporting efficiency, such as online reporting tools, which has led to more incidents being recorded.

Table 1: Annual Incidents and Costs of Illegal Dumping in the Region

Year	Number of Incidents	Total Clean Up Cost
2015	35,300	\$2.54 million
2016	37,000	\$2.31 million
2017	39,500	\$2.96 million
2018	43,800	\$3.20 million

Gypsum

Gypsum is a particularly challenging material from an illegal dumping perspective because it may contain asbestos. Asbestos-containing materials present a worker and public health risk and can be expensive to remediate. The number of incidents of abandoned gypsum increased between 2016 and 2017 and stayed stable in 2018, as shown in Table 2. The initial rise in 2016 coincided with the change in requirements to accept only new gypsum for recycling, due to concerns with potential asbestos-containing gypsum. In September 2016, Metro Vancouver launched a used residential gypsum disposal pilot program at the Maple Ridge and Langley transfer stations to provide residents with a safe and convenient option to dispose of small quantities of used gypsum that may potentially contain asbestos. The program was expanded to the rest of the regional transfer stations in November 2018. Residents can drop off up to 10 bags of used gypsum per trip, up to five times per year. Any reductions in illegal dumping resulting from the regional used gypsum program will be more evident over the coming months.

Table 2: Annual Incidents of Abandoned Gypsum in the Region

Year	Number of Incidents
2016	628
2017	936
2018	935

Municipal Illegal Dumping Enforcement Initiatives

Illegal dumping contravenes a number of municipal bylaws. Examples of municipal bylaws that are intended to reduce illegal dumping include; Littering Bylaw; Solid Waste and Recycling Bylaw; Unsightly Premises Bylaw; Nuisance Abatement Bylaw; among others.

Administrative penalties for illegal dumping are set either through Notice of Bylaw Enforcement or Municipal Ticket Information regulatory mechanisms. Table 3 provides data on bylaw enforcement activities used to discourage illegal dumping. Not all member municipalities reported enforcement

activities and therefore it is likely that the actual number of enforcement actions taken in 2018 is higher than shown.

Warning notices to property owners if the abandoned waste is located on a private property or further investigation of presumed owners of the abandoned waste are also used to deter illegal dumping. A number of municipalities have monitoring cameras in place which can support enforcement actions.

Table 3: Municipal Illegal Dumping Enforcement Activities

Initiative	Description	Enforcement Activities in 2018
Municipal Ticket/Bylaw Notices	<ul style="list-style-type: none"> • Issue fines for illegal dumping or warnings for unsightly premises. • Investigation based on evidence such as personal contact information present in waste. • Clean-up and recover the cost from the owner of the abandoned waste ("Clean and Bill"). 	<ul style="list-style-type: none"> • 41 municipal tickets/bylaw notices. • 2 "Clean and Bill" charges. • 2 warnings for "fail to dispose of waste properly". • 187 follow-up inquiries.
Monitoring and Collaboration with various departments and agencies	<ul style="list-style-type: none"> • Monitoring cameras in areas with high level of illegal dumping incidents. • Collaboration with Bylaw Enforcement, RCMP, Fire, Public Works and Environmental Programs. 	<ul style="list-style-type: none"> • 25 monitoring cameras currently in place, with more being installed or being considered. • Increased patrols in areas prone to illegal dumping.

Illegal Dumping Prevention Initiatives

In addition to enforcement actions, a variety of initiatives are underway to discourage illegal dumping. Metro Vancouver's region-wide waste education and awareness program *Waste in Its Place* educates residents on legal disposal methods and programs. Municipalities also have implemented initiatives to discourage illegal dumping, which are summarized in Table 4 below. For municipalities experiencing illegally-dumped household garbage in public spaces, continuing education, investigating to identify the source of waste and adding streetscape recycling bins have helped to stabilize illegal dumping.

Table 4: Municipal Prevention Initiatives for Reducing Illegal Dumping

Initiative	Description	Activities in 2018
Large Item Pick-up Program	<ul style="list-style-type: none"> • Municipal collection of large household items by appointment for households that receive municipal curbside collection service. • Some programs include collection fees and limit on number of pick-ups. 	<ul style="list-style-type: none"> • Some municipalities expanded the list of accepted items and increased the limit of collected items per year. • Some municipalities started offering access to large item pick-up programs to apartment buildings.

Initiative	Description	Activities in 2018
Restricted Access and Signage	<ul style="list-style-type: none"> • Installation of barriers and fencing at frequent dump sites. • Signage at popular illegal dumping sites and at highly visible intersections. 	<ul style="list-style-type: none"> • Reconfiguration of barriers to better restrict access. • New signs were placed at locations experiencing frequent dumping occurrences.
Education Campaign	<ul style="list-style-type: none"> • Public education campaigns including <i>Waste in its Place</i>. • Door-to-door notifications to homes close to illegal dumping sites. 	<ul style="list-style-type: none"> • Ongoing education campaigns in most municipalities. • Some municipalities have used social media to support education campaigns.
Drop-off of Unwanted Items at Recycling Depots and Events	<ul style="list-style-type: none"> • Scheduled events for dropping off unwanted household items. • Expanding acceptable items at a recycling depot such as furniture, tires, fire extinguishers, etc. 	<ul style="list-style-type: none"> • Recycling depots accepting new items. • Addition of streetscape recycling bins. • Continue to hold community drop-off events.

Metro Vancouver continues to facilitate information sharing and will be hosting a municipal workshop in the fall of 2019 to explore further strategies and initiatives to reduce illegal dumping.

ALTERNATIVES

This is an information report. No alternatives are presented.

FINANCIAL IMPLICATIONS

Metro Vancouver's initiatives related to illegal dumping monitoring, reporting and education are carried out within existing budgets for Solid Waste Services and External Relations. Illegal dumping clean-up costs are borne by municipalities and private land owners.

SUMMARY / CONCLUSION

In 2018, member municipalities reported approximately 43,800 incidents of illegal dumping and collectively spent approximately \$3.2 million to clean up and properly dispose of the abandoned waste. In addition, municipalities report spending approximately \$2.5 million per year on bulky item pick-up in the region for a total of approximately \$5.7 million spent annually on removing illegally dumped material and managing bulky item pick-up programs.

Illegal dumping contravenes a number of municipal bylaws with approximately 41 enforcement tickets/bylaw notices issued in 2018 in the region. A number of warning notices were also issued where the retrieval of personal contact information from the abandoned waste was possible. The combination of enforcement actions, community drop-off programs and education have stabilized or decreased illegal dumping in some municipalities.

To: Zero Waste Committee

From: Andrew Marr, Director of Solid Waste Planning, Solid Waste Services

Date: June 7, 2019 Meeting Date: June 14, 2019

Subject: **Potential Regulatory Approaches for Priority Plastic Wastes**

RECOMMENDATION

That the Zero Waste Committee receive for information the report dated June 7, 2019, titled “Potential Regulatory Approaches for Priority Plastic Wastes”.

PURPOSE

The purpose of this report is to update the Zero Waste Committee on potential regulatory approaches for priority plastic wastes, recently submitted by the National Zero Waste Council to the Canadian Council of Ministers of the Environment (CCME).

BACKGROUND

The CCME is developing an Action Plan for a Zero Plastic Waste Strategy. The National Zero Waste Council provided recommendations into that federal process, which are being brought to the Zero Waste Committee for information because of the importance of taking actions to reduce plastic waste.

NATIONAL ZERO WASTE COUNCIL

The National Zero Waste Council is an initiative created, funded and administered by Metro Vancouver. The Council brings together governments, businesses, and non-governmental organizations across Canada to advance waste prevention and the transition to a circular economy.

PLASTICS ADVISORY PANEL

The National Zero Waste Council formed a Plastics Advisory Panel co-chaired by Metro Vancouver and Maja Vodanovic of the Communauté Métropolitaine de Montréal. The panel members included representatives and subject matter experts from local governments and affiliate organizations from across Canada, including the Federation of Canadian Municipalities.

The Panel had two main objectives:

- identify a list of priority plastics, some of which are single-use items and some of which are ‘durable’ goods. Ten plastic items were chosen on the basis of (a) their direct impacts for local governments (e.g. littering, illegal dumping, wastewater treatment), and/or (b) notable impact on ocean environments.
- consider the range of regulatory actions that could be adopted and make recommendations as to what could be the most effective and feasible to enact in the short to medium term.

POTENTIAL REGULATORY APPROACHES

In the linked document titled “Regulatory Approaches for Priority Plastic Wastes,” the panel outlined a set of recommendations that they believe should be enacted, and identified the levels of government that would be responsible.

The ten priority plastics identified were (in alphabetical order):

- bags
- balloons
- bottles & caps
- cigarette filters
- clothing & other textiles
- fishing gear (especially nets)
- foam cushions (especially mattresses and furniture)
- foodware (takeout containers, cups, lids, straws, utensils)
- food wrappers
- tires

As described in the linked document, the range of recommended regulatory actions included:

- controlled usage (bans/prohibitions, restrictions on use)
- economic incentives (e.g. mandatory fees at point of sale)
- increased littering fines
- Inclusion in Extended Producer Responsibility (EPR) programs, harmonized at a provincial or preferably federal level
- Modified EPR (e.g. to require industry contribution to local government costs and/or industry research into plastic waste prevention and management).

Guiding principles were described in the document, but in conveying it to the CCME, particular emphasis was made for the importance of:

- including source reduction requirements within EPR and other measures;
- harmonizing requirements across the Canadian landscape (at a Provincial level at the least, but preferably at a Federal level); and
- considering unintended consequences.

Alignment with Metro Vancouver Initiatives

Metro Vancouver has pursued a number of initiatives that advance the reduction and recycling of materials included in the list of priority plastic items identified by the National Zero Waste Council panel. For instance, Metro Vancouver receives approximately 60,000 mattresses per year at regional transfer stations, with recycling fees paid by customers lower than the cost to process the mattresses. Metro Vancouver has advocated for an EPR program for mattresses for a number of years.

Metro Vancouver is also working to assist municipalities in developing programs to help reduce single-use items. A municipal staff workshop was held on May 15, 2019, to provide information and review options. A toolkit is under development, with elements of the toolkit being provided to municipal staff as the elements are developed.

ALTERNATIVES

This is an information report, and therefore no alternatives are presented.

FINANCIAL IMPLICATIONS

Metro Vancouver funds the National Zero Waste Council through the Metro Vancouver Regional District General Government function.

SUMMARY / CONCLUSION

The National Zero Waste Council, an initiative created, funded and administered by Metro Vancouver, formed a Plastics Advisory Panel that included representatives from local governments and affiliate organizations from across Canada. The Panel identified a list of priority plastics that adversely affect local governments (e.g. as litter or in wastewater), and/or the environment (particularly as ocean plastics). The Panel then considered possible regulatory actions and recommended those they considered most effective and feasible to enact in the short to medium term. Those recommendations were forwarded to the CCME as the federal government develops its Zero Plastic Waste Strategy. Staff will provide additional updates to the Zero Waste Committee as more information is available on the CCME Zero Plastic Waste Strategy.

Reference

Regulatory Approaches for Priority Plastic Wastes

<http://www.nzwc.ca/Documents/RegulatoryApproachesforPriorityPlasticWastes.pdf>

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To: Zero Waste Committee

From: Brent Kirkpatrick, Lead Senior Engineer, Solid Waste Services

Date: June 5, 2019 Meeting Date: June 14, 2019

Subject: **Waste-to-Energy Facility Environmental Monitoring and Reporting, 2018 Update**

RECOMMENDATION

That the Zero Waste Committee receive for information the report dated June 5, 2019, titled "Waste-to-Energy Facility Environmental Monitoring and Reporting, 2018 Update".

PURPOSE

The purpose of this report is to provide the Zero Waste Committee with an overview of the Waste-to-Energy Facility's environmental monitoring program and implementation of Operational Certificate requirements.

BACKGROUND

Metro Vancouver continuously monitors environmental performance of the Metro Vancouver Waste-to-Energy Facility and since 2010, annual environmental performance summaries have been provided to the Zero Waste Committee for information.

This report provides updates on the facility's 2018 environmental performance and the implementation of the Waste-to-Energy Facility Operational Certificate requirements. The report is identified in the Zero Waste Committee annual work plan and as such is being brought forward at this time.

ENVIRONMENTAL MONITORING AND REPORTING UPDATE

Since Waste-to-Energy Facility operations commenced in 1988, Metro Vancouver has strived to continually reduce emissions through assessment and improvement of operations, plant infrastructure and environmental controls. The Waste-to-Energy Facility is certified on an annual basis by the International Standards Organization Environmental Standard 14001, an independent review requiring continuous improvement and compliance with all environmental regulations. In addition to satisfying regulatory requirements, environmental monitoring provides Metro Vancouver with valuable data to assess existing plant operations and potential capital improvements.

To assess regulatory compliance, measurements from the environmental monitoring program are compared to the regulatory limits specified in the Waste-to-Energy Facility Operational Certificate 107051 issued by the BC Ministry of Environment and Climate Change Strategy. Results are reported in the following ways:

- Monthly compliance reports, which provide a summary of all air emissions monitoring results for each month are provided to the BC Ministry of Environment and Climate Change Strategy, the City of Burnaby and the Fraser Health Authority, and are posted publicly on the Metro Vancouver website;

- Manual stack testing is conducted by an independent stack testing company four times per year for particulate matter, trace metals, total hydrocarbons, hydrogen fluoride, methane, and nitrous oxide; and results are provided to the BC Ministry of Environment and Climate Change Strategy, City of Burnaby, Fraser Health Authority and posted publicly on the Metro Vancouver website;
- Stack testing for semi-volatile organic compounds is conducted once per year, and results are provided to the BC Ministry of Environment and Climate Change Strategy, City of Burnaby and Fraser Health Authority, and are posted publicly on the Metro Vancouver website;
- Annual reporting of greenhouse gas emissions is provided to both the BC Ministry of Environment and Climate Change Strategy and Environment and Climate Change Canada by June 1st of each year; and
- Annual reporting of substances emitted to air and contained in ash transferred for off-site disposal is provided to Environment and Climate Change Canada for National Pollutant Release Inventory reporting by June 1st of each year.

Environmental Monitoring Program and Results

The 2018 Waste-to-Energy Facility environmental monitoring program consisted of the following:

- Air Emissions Monitoring – Continuous Emission Monitoring System:
 - The Waste-to-Energy Facility is equipped with a real-time flue gas continuous emission monitoring system that measures and records emission parameters at the exit of the air pollution control plant 24 hours per day, seven days a week, using a United States Environmental Protection Agency certified and auditable tracking system.
 - The following parameters are measured: sulphur dioxide, nitrogen oxides, carbon monoxide, carbon dioxide, hydrogen chloride, total hydrocarbons, and opacity.
 - The following key operational parameters are also monitored: furnace temperature, total flue gas flow, flue gas moisture and flue gas oxygen. This monitoring provides an indication of plant conditions and helps confirm that emissions monitored by manual stack testing are representative of year round conditions.
- Air Emissions Monitoring – Periodic Manual Stack Testing:
 - Four tests are conducted annually, one per quarter, in triplicate on each of the three plant lines to monitor for particulate matter, trace metals, total hydrocarbons, hydrogen fluoride, methane and nitrous oxide; and
 - A single test is conducted annually on one boiler (rotating between boilers each year) in triplicate to monitor for semi-volatile organic compounds, including dioxins and furans, chlorobenzenes, chlorophenols, polychlorinated biphenyls and polycyclic aromatic hydrocarbons.
- Fly and Bottom Ash Monitoring:
 - Each fly ash load is tested prior to transport and disposal.
 - Composite testing of bottom ash is conducted weekly.

2018 Results

All air emission related parameters monitored during 2018 were in compliance with the requirements of Operational Certificate 107051, except one exceedance of carbon monoxide. The 24 hour average carbon monoxide emission on January 29, 2018 was 51.2 mg/dscm, compared to the limit of 50

mg/dscm. The exceedance was due to unusually wet garbage and was immediately reported to the BC Ministry of Environment and Climate Change Strategy. A summary of historic annual emission performance, including 2018 data, is included in the attachment.

Operational Certificate Implementation

The Operational Certificate for the Waste-to-Energy Facility was issued by the BC Ministry of Environment and Climate Change Strategy on December 15, 2016. It includes response limits, updated discharge limits and other requirements. A contaminant dispersion evaluation and public health risk assessment was completed in 2018 and was provided to the BC Ministry of Environment and Climate Change Strategy, the Public Health Authorities, and posted on the Metro Vancouver website.

Greenhouse Gas Emissions Reporting

In mid-2009, the federal and provincial governments each enacted legislation for mandatory reporting of greenhouse gas emissions for facilities with annual emissions above specified thresholds (50,000 (federal) and 10,000 (provincial) tonnes of carbon dioxide equivalent per year). Based on these thresholds, the Waste-to-Energy Facility is subject to federal and provincial reporting on both biogenic (renewable) and anthropogenic (man-made or non-renewable) greenhouse gas emissions.

2018 greenhouse gas emissions were verified by PwC Canada, and reported to the provincial and federal governments by June 1, 2019. Greenhouse gas emissions from the Waste-to-Energy Facility are comprised mainly of carbon dioxide with small amounts of methane and nitrous oxides. Total emissions are reported as carbon dioxide equivalents. Total 2018 greenhouse gas emissions were 276,698 tonnes, a decrease of approximately 3% compared to 2017. Of these emissions, 45% are anthropogenic and 55% are biogenic.

Anthropogenic greenhouse gas emissions for 2018 were 122,201 tonnes. Over the past three years, the anthropogenic portion of greenhouse gas emissions ranged from 40% to 45%. As in past reporting years, the Waste-to-Energy Facility accounted for less than one percent of all anthropogenic greenhouse gas emissions in the region.

National Pollutant Release Inventory Reporting

The National Pollutant Release Inventory is Canada's legislated, publicly accessible inventory of pollutant releases to air, water and land, as well as from disposal and transfer for recycling. The National Pollutant Release Inventory is managed by Environment and Climate Change Canada and currently tracks over 300 substances and groups of substances. Metro Vancouver is required to report air emissions (e.g., particulate matter, metals, organic compounds and acid gases) and substances transported for off-site disposal in fly ash and bottom ash for the preceding calendar year to the National Pollutant Release Inventory by June 1st of each year.

The following table summarizes the 2018 National Pollutant Release Inventory reporting.

Table 1: 2018 National Pollutant Release Inventory Substance Reporting Summary

Substance	Reported Quantity (tonnes)	
	Stack Emissions	Ash Disposal
Nitrogen Oxides	215.8	N/A
Carbon Monoxide	49.1	N/A
Sulphur Dioxide	95.4	N/A
Hydrogen Chloride/Hydrochloric Acid	81.1	N/A
Aluminum (dust)	0.013	N/A
Arsenic	0.00063	1.83
Cadmium	0.00016	1.75
Cobalt	0.00016	1.35
Copper	0.0011	115.0
Lead	0.0013	31.3
Manganese	0.00061	30.0
Mercury	0.00032	0.082
Phosphorus	0.0017	608.4
Zinc	0.0070	233.5
Particulate Matter ≤ 10µm	0.63	N/A
Particulate Matter ≤ 2.5µm	0.51	N/A
Dioxins and Furans	N/A	N/A
Hexachlorobenzene	N/A	N/A

- Notes:**
- All other substances are below the National Pollutant Release Inventory level of quantification and are not required to be reported.
 - 'N/A' indicates value is either below the level of quantification, below the detection limit, or the substance is not found in ash.
 - Ash tonnages reported on a dry basis.

Waste-to-Energy Facility in a Regional Context

Figure 1 compares Waste-to-Energy Facility emissions to total emissions from all regional sources for two key air contaminants in the Lower Fraser Valley – fine particulate matter and nitrogen oxides (a key smog forming pollutant). In 2018, the Waste-to-Energy Facility accounted for 0.007% of regional fine particulate matter emissions and 0.4% of regional nitrogen oxide emissions. The Nitrogen Oxide Reduction Project, completed in October 2014, reduced nitrogen oxide emissions from 0.9% of the regional total in 2013 to 0.4% in 2018.

Figure 1: Regional Emissions Distribution (2018) – Fine Particulate Matter and Nitrogen Oxides

2018 Lower Fraser Valley Fine Particulate Matter Emission Sources



2018 Lower Fraser Valley Nitrogen Oxide Emission Sources



ALTERNATIVES

This is an information report. No alternatives are presented.

FINANCIAL IMPLICATIONS

Activities related to emissions monitoring and reporting are included in the approved Solid Waste Services operational budget.

SUMMARY / CONCLUSION

The Waste-to-Energy Facility operates well within environmental standards and limits. A range of projects that continuously improve the facility's environmental performance have been completed or are underway. All air emission related parameters monitored during 2018 were in compliance with Operational Certificate 107051, except one 24-hour exceedance of carbon monoxide on January 29, 2018. Continuous emissions monitoring data and all compliance reports are available on the Metro Vancouver website.

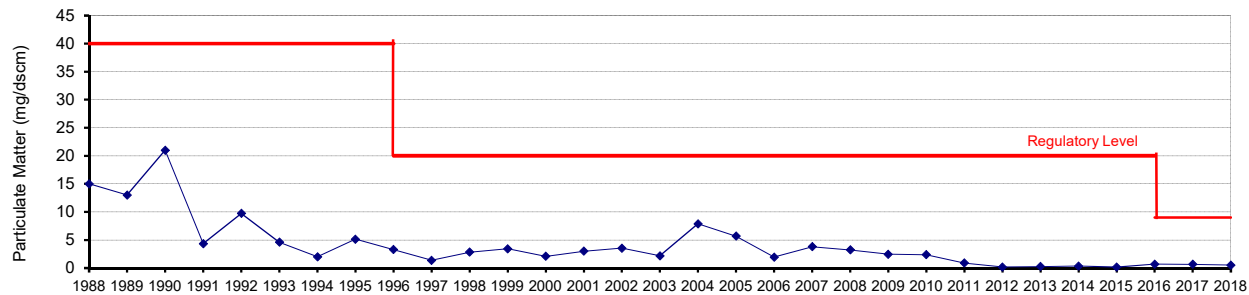
Attachment

Metro Vancouver Waste-to-Energy Facility Summary of Air and Metals Emissions 1988-2018

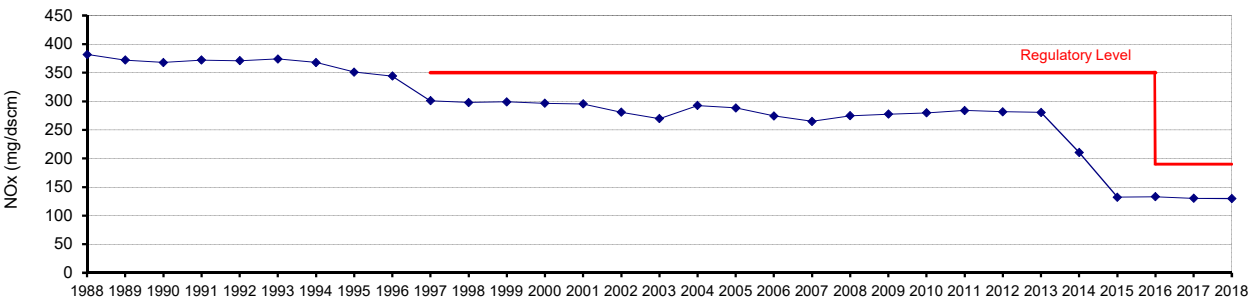
29766670

Metro Vancouver Waste-To-Energy Facility Summary of Air Emissions 1988 - 2018

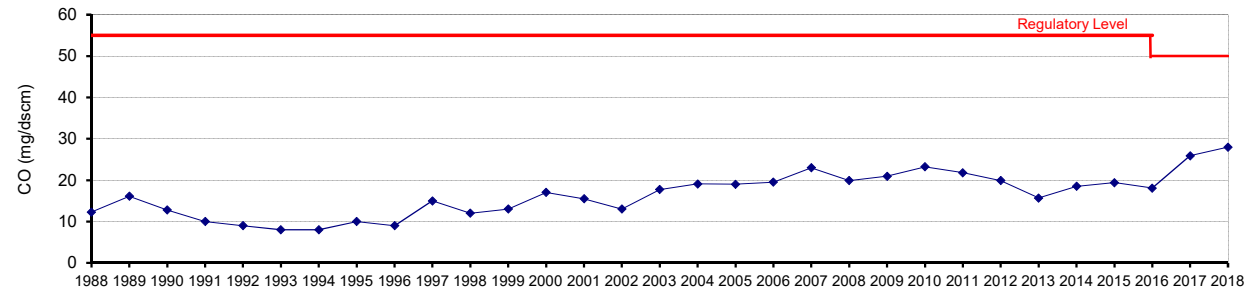
Particulate Matter



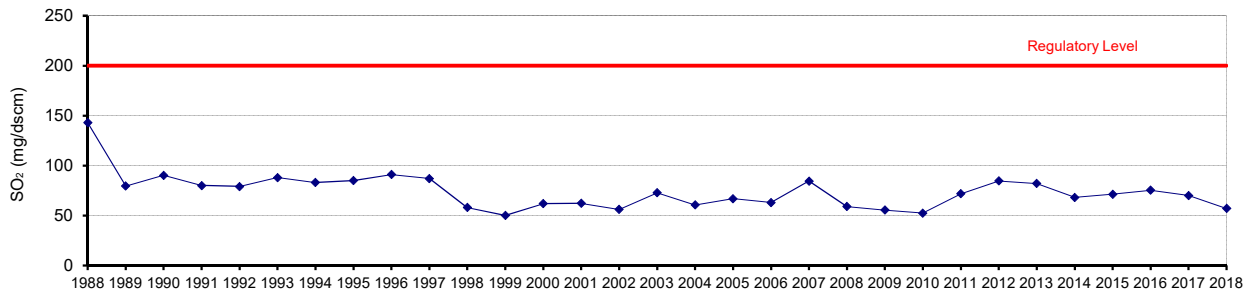
Nitrogen Oxides



Carbon Monoxide

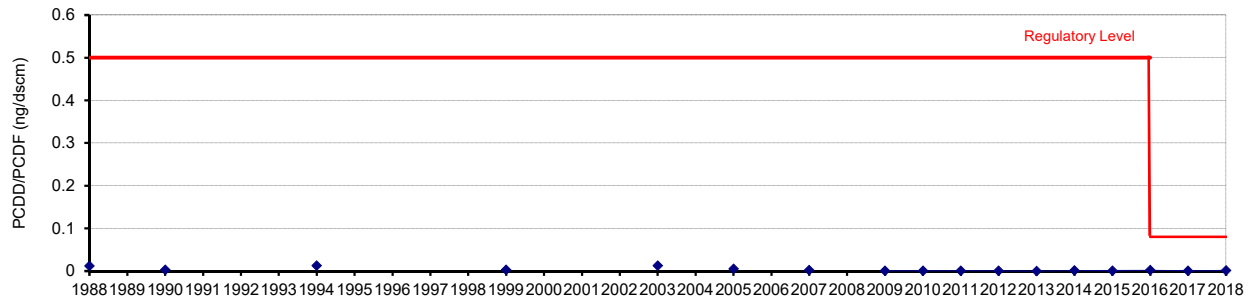


Sulfur Dioxide

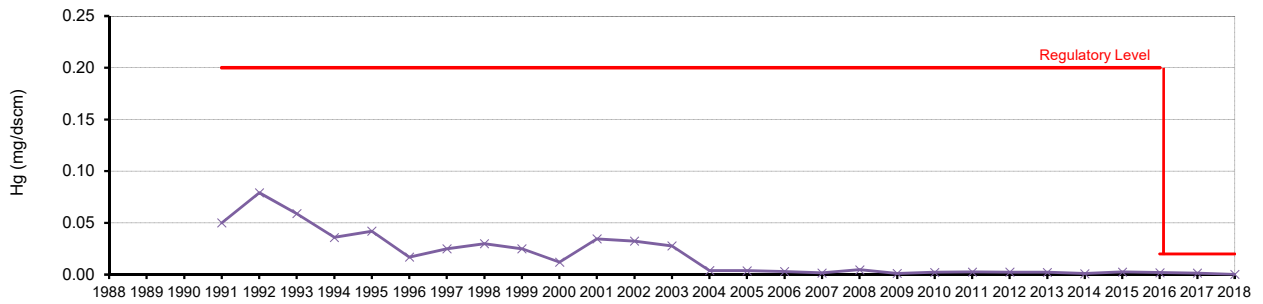


Metro Vancouver Waste-To-Energy Facility Summary of Air Emissions 1988 - 2018

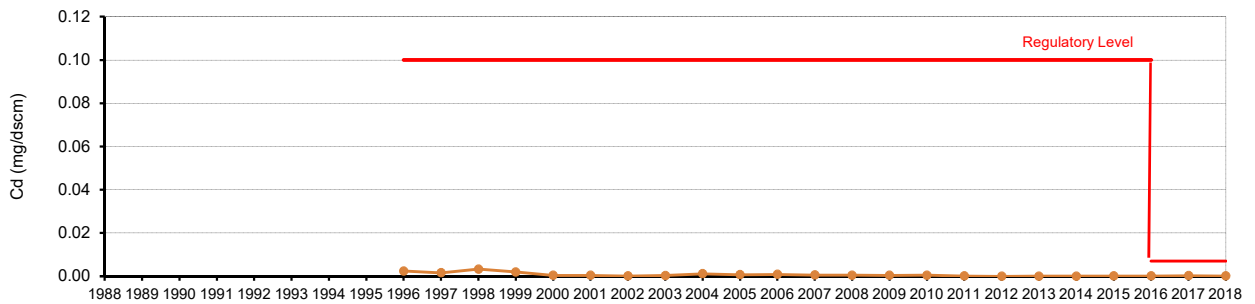
Dioxins/Furans



Mercury



Cadmium



To: Zero Waste Committee

From: Terry Fulton, Project Engineer, Solid Waste Services

Date: June 7, 2019 Meeting Date: June 14, 2019

Subject: **2018 Waste Composition Monitoring Program Results**

RECOMMENDATION

That the Zero Waste Committee receive for information the report dated June 7, 2019, titled “2018 Waste Composition Monitoring Program Results”.

PURPOSE

The purpose of this report is to update the Zero Waste Committee on the results of the 2018 regional waste composition monitoring program.

BACKGROUND

Metro Vancouver monitors the composition of some elements of the municipal solid waste stream annually and a full waste composition study is conducted every two years. This report provides the results of the full 2018 composition study of residential, commercial/institutional and drop-off sectors, including streetscape bins and single-use items.

The report is being brought forward at this time for the Zero Waste Committee’s information so that the most recent information on waste composition is available to the Zero Waste Committee and the public.

2018 WASTE COMPOSITION MONITORING PROGRAM RESULTS

Metro Vancouver monitors the region’s municipal solid waste composition on a regular basis to track progress against the *Integrated Solid Waste and Resource Management Plan* (ISWRMP). The ISWRMP has a target to increase the regional diversion rate to 80% by 2020 and identifies specific materials for diversion programs.

The 2018 waste composition monitoring program analyzed the waste stream across all sectors (single-family, multi-family, commercial/institutional and drop-off) and 161 material categories. Drop-off includes waste delivered in small, typically hand-unloaded vehicles. In addition, a limited number of streetscape bins were analyzed across 56 material categories in eight municipalities. Other municipalities within the region have also completed dedicated streetscape composition studies with more comprehensive results for their specific streetscape bin configurations and design that may better reflect the content of streetscape bins in those communities. In 2018, data for 19 categories of single-use items was collected and analyzed for the first time, establishing a baseline on the prevalence of single-use items in the region. An overview of the single use data is included in this report and more detail will be provided in another report later this year. Construction and demolition waste was analyzed as part of a separate study that will be reported on later this year. Sampling was completed between October and December 2018.

The 2018 waste composition monitoring program identified the following key results:

Overall Waste Composition

The most common materials in the overall waste stream were compostable organics (26%), paper (18%) and plastic (16%). Table 1 shows materials disposed per capita and as a percentage of the waste stream in 2016 and 2018. A more detailed waste composition summary is provided in the Attachment and the link to the *Metro Vancouver 2018 Waste Composition Monitoring Program Report* is available as a Reference.

Table 1: Regional Waste Disposal by Material				
	2016¹		2018²	
Material	kg/capita	Percent³	kg/capita	Percent
Paper	64	19	63	18
Plastic	63	19	57	16
Compostable Products and Packaging	<1	<1	<1	<1
Compostable Organics	91	27	91	26
Non-Compostable Organics	35	11	57	16
Metal	10	3	13	4
Glass	9	3	8	2
Building Material	30	9	20	6
Electronic Waste	5	2	4	1
Household Hazardous	2	1	3	<1
Household Hygiene	20	6	26	7
Bulky Objects	0	<1	2	<1
Fines	4	1	5	2
Total - Residential and Commercial/Institutional	333	100	349	100
Total Construction and Demolition⁴	156		157	
Total Disposal	489		506	

¹ 2016 Waste Composition kg/capita estimates use 2015 waste disposal quantities

² 2018 Waste Composition kg/capita estimates use 2017 waste disposal quantities

³ Calculated by weight

⁴ Waste composition data excludes construction and demolition waste

Compostable Organics

Twenty-six percent of the waste stream was compostable organics, corresponding to 230,000 tonnes disposed. This represents an increase of approximately 6,000 tonnes from 2016. However, the per capita disposal rate has remained the same at 91 kg/capita, pointing to population increase as a possible reason for the slight increase in the total estimated tonnage of organics.

As shown in Attachment 1, compostable organics in the commercial/institutional waste stream was substantially higher at 32% compared to an average of 24% for single-family and multi-family waste streams. The Commercial Waste Hauler Licensing Bylaw, if approved by the Minister of Environment and Climate Change Strategy, will encourage further organics recycling by requiring that haulers

provide separate organic and non-organic recycling containers to their clients when collecting garbage.

Paper

Eighteen percent of the waste stream was paper, corresponding to 160,000 tonnes disposed. This represents an increase of approximately 2,000 tonnes from 2016. As shown in Attachment 1, approximately 25% of the paper disposed was compostable.

Plastic

Sixteen percent of the waste stream was plastic, corresponding to 146,000 tonnes disposed. This has decreased by 7% since 2016 when approximately 158,000 tonnes of plastics were disposed. As shown in Attachment 1, approximately 40% of disposed plastics from the residential sector and 47% from the commercial/institutional sector is film plastic. The remaining plastics include synthetic textiles and rigid non-beverage containers. Through the Recycle BC program for packaging and paper products, film plastic and other flexible plastic packaging are collected at depots. Film plastic is recycled and other flexible plastic packaging is processed into an engineered fuel.

The Extended Producer Responsibility programs in the region collected approximately 13,600 tonnes of plastic packaging, including items such as beverage and food containers and oil containers. Another 20,000 tonnes of plastic such as durable products, containers and polyurethane foam were diverted from the commercial/institutional and the construction and demolition sectors.

At the national level, Metro Vancouver works through the National Zero Waste Council towards a circular economy for plastics, including participation on a plastics advisory panel which has developed recommendations for over a dozen specific problematic plastics and submitted those recommendations to the Canadian Council of Ministers of the Environment.

Non-Compostable Organics

Sixteen percent of the waste stream was non-compostable organics, the majority of which was treated and finished wood. Since 2016, non-compostable organics disposal has increased from 35 kg/capita to 57 kg/capita. This equates to an additional 55,000 tonnes of primarily treated and finished wood disposed of at Metro Vancouver facilities. The increase in treated and finished wood in the waste stream may be indicative of challenges processing construction and demolition waste at private facilities in the region.

Streetscape Waste

Table 2 summarizes the composition of streetscape garbage receptacles. Pet waste was the most commonly disposed material by weight in the streetscape receptacles audited, however the presence of pet waste is highly dependent on whether or not the receptacle is located near dog-walking areas. Pet waste also tends to have a relatively high density compared to other items found in streetscape receptacles, and would typically not compose a large proportion by volume. Compostable materials were the second most commonly disposed material.

Table 2: Streetscape Garbage Receptacle Composition by Material	
Pet Waste	49%
Compostable Material	19%
Recyclable Containers	13%
Recyclable Paper	10%
Garbage	6%
Depot Recyclables	3%

Streetscape Recyclables

The study also analyzed a limited number of recycling receptacles of different types such as paper, containers, organics and single-stream recycling. Contamination from non-recyclable materials ranged from an average of 5% in the paper receptacles to 23% in the container recycling receptacles and 38% in single-stream recycling receptacles. However, the variability of contamination rates between individual bins was high.

Single-Use Items

The 2018 waste composition monitoring program is Metro Vancouver's first study of a full suite of single-use item categories, including disposable cups, retail bags, takeout containers, utensils and straws. Single-use items represented 2.4% of the total regional waste stream (by weight) when single-use items from all material categories are combined. Table 3 summarizes the number of single-use items disposed annually in the region by type. Total single-use item disposal is equivalent to approximately 440 single-use items per person per year.

Table 3: Single-Use Item Disposal (millions of items)	
Retail Bags	260
Disposable Cups	260
Takeout Containers	180
Straws	96
Utensils	330
Total	1.1 billion

The estimates presented in Table 3 are based on a weighted average of single-family, multi-family, commercial/institutional and residential drop-off waste and may not fully account for streetscape waste, which in many locations contains a relatively high proportion of disposable cups and takeout containers but is not easily quantified as a proportion of total regional solid waste using the available data. A more detailed analysis including the prevalence of single-use items in streetscape receptacles and a breakdown of single-use item types and quantities by number of items will be included in a future Zero Waste Committee report.

ALTERNATIVES

This is an information report, and therefore no alternatives are presented.

FINANCIAL IMPLICATIONS

The waste composition monitoring program is ongoing and is included in the Solid Waste Services annual operating budget.

SUMMARY / CONCLUSION

Metro Vancouver monitors the composition of the region's municipal solid waste stream on a regular basis. The 2018 waste composition monitoring program analyzed the composition of the waste stream across all sectors in 161 material categories.

The most common materials in the waste were compostable organics (26%), paper (18%), plastic (16%) and non-compostable organics (16%). While the amount of compostable organics disposed has remained stable since 2016, disposal of non-compostable organics, such as treated and finished wood, has increased, likely due to the challenges processing construction and demolition waste at private facilities in the region. There have been slight decreases in the total tonnages of paper and plastic disposed since 2016. Common single-use items such as disposal cups, retail bags and disposable foodware represent about 2.4% of the overall waste stream, and approximately 1.1 billion single-use items are disposed each year. More detailed information on single-use items and construction and demolition waste composition data will be provided to the Zero Waste Committee later this year as the data is available.

Attachment

Detailed Results of 2018 Waste Composition Monitoring Study

Reference

[Metro Vancouver 2018 Waste Composition Monitoring Program Report](#)

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Detailed Results of 2018 Waste Composition Monitoring Study: Weighted Average - All Material Categories and Sectors

Material Category		Regional	SF	MF	C/I	DO
Total Paper		18.1%	17.3%	21.4%	21.6%	3.0%
Fine, Office, Envelopes	Junk Mail, Flyers, Unaddressed Mail	0.3%	0.7%	0.4%	0.1%	0.0%
	Other Fine Office Paper to Envelopes	1.7%	1.5%	2.1%	2.0%	0.2%
Newsprint		1.0%	0.7%	1.8%	0.9%	0.0%
OCC	Clean Recyclable OCC	1.8%	0.5%	0.4%	3.1%	1.7%
	Waxed OCC	0.0%	0.0%	0.1%	0.1%	0.0%
	Other Soiled OC	2.4%	1.3%	1.9%	4.0%	0.0%
Boxboard		1.4%	1.7%	2.0%	1.2%	0.5%
Bound Paper Products	Telephone Books	0.2%	0.0%	0.0%	0.4%	0.0%
	Magazines	0.3%	0.7%	0.3%	0.2%	0.0%
	Books	0.8%	0.6%	2.2%	0.4%	0.1%
Beverage Containers - Gabletop/ Drink box/ Aseptic	Dairy or Dairy Substitute	0.1%	0.1%	0.1%	0.0%	0.0%
	Non-dairy/Deposit	0.0%	0.1%	0.1%	0.0%	0.0%
Other Paper	Single-Use Cups - Hot	0.4%	0.3%	0.5%	0.5%	0.0%
	Single-Use Cups - Cold	0.1%	0.1%	0.1%	0.1%	0.0%
	Single-Use Cups - Compostable	0.0%	0.0%	0.0%	0.0%	0.0%
	Single-Use Straws	0.0%	0.0%	0.0%	0.0%	0.0%
	Compostable Takeout Containers	0.1%	0.1%	0.1%	0.0%	0.0%
	Non-Compostable Takeout Containers	0.3%	0.3%	0.4%	0.2%	0.0%
	Retail Carryout Bags	0.2%	0.3%	0.3%	0.1%	0.0%
	Other Recyclable Paper	1.0%	0.7%	0.7%	1.6%	0.2%
	Other Compostable Paper	4.4%	7.1%	7.0%	3.3%	0.2%
	Non-Compostable, non-recyclable paper	1.8%	0.7%	0.9%	3.3%	0.0%
Total Plastic		16.4%	21.6%	21.7%	14.6%	6.4%
Film	Re-Used Retail & Grocery Bags	0.6%	1.2%	1.2%	0.2%	0.0%
	Empty Retail & Grocery Bags	0.2%	0.2%	0.2%	0.1%	0.0%

Material Category		Regional	SF	MF	C/I	DO
	Consumable Packaging Bags and Film	2.5%	4.7%	3.8%	1.7%	0.1%
	Garbage Bags Sandwich /Freezer Bags	1.2%	1.1%	1.6%	1.3%	0.2%
	Freezer Bags	0.1%	0.3%	0.3%	0.1%	0.0%
	Deposit Beverage Pouches	0.0%	0.1%	0.0%	0.0%	0.0%
	Other Plastic Film	2.2%	1.0%	1.6%	3.6%	0.4%
Textiles (Synthetic)	Clothing and Accessories	1.6%	2.2%	2.2%	1.3%	1.1%
	Household	1.6%	3.0%	2.6%	0.8%	0.4%
	Other	1.0%	0.8%	1.0%	1.2%	0.6%
Rigid Beverage Containers	Dairy or Dairy Substitute	0.0%	0.0%	0.0%	0.0%	0.0%
	Deposit Containers - Water	0.2%	0.2%	0.4%	0.1%	0.0%
	Deposit Containers - Other	0.0%	0.0%	0.0%	0.0%	0.0%
	Single Serving Cups	0.1%	0.1%	0.1%	0.2%	0.0%
	Other	0.0%	0.0%	0.0%	0.0%	0.0%
Rigid Non-Beverage Containers	#1 PETE - Bottles and Jars	0.1%	0.2%	0.2%	0.1%	0.0%
	#1 PETE - Other Packaging	0.2%	0.4%	0.4%	0.1%	0.0%
	#2 HDPE - Bottles and Jars	0.3%	0.2%	0.5%	0.3%	0.0%
	#2 HDPE - Tubs and Lids	0.1%	0.1%	0.2%	0.1%	0.2%
	#3 PVC	0.0%	0.0%	0.0%	0.0%	0.0%
	#4 LDPE	0.0%	0.2%	0.0%	0.0%	0.0%
	#5 PP	0.2%	0.3%	0.3%	0.2%	0.2%
	#6 PS - Non-Foam	0.1%	0.2%	0.1%	0.0%	0.0%
	#6 PS - Packing Foam	0.1%	0.1%	0.2%	0.1%	0.0%
	#6 PS - Foam Cups	0.0%	0.0%	0.0%	0.0%	0.0%
	#6 PS - Foam Takeout Containers	0.1%	0.1%	0.1%	0.1%	0.0%
	#6 PS - Foam Foodware	0.3%	0.6%	0.4%	0.1%	0.0%
	#6 PS - Other PS Foam	0.0%	0.0%	0.0%	0.0%	0.1%
	Other Foam	0.0%	0.0%	0.0%	0.0%	0.0%

Material Category		Regional	SF	MF	C/I	DO
	#7 Mixed Resin Plastic	0.1%	0.2%	0.2%	0.0%	0.0%
	Uncoded Packaging/Containers	0.2%	0.3%	0.2%	0.1%	0.0%
	Single-Use Takeout Containers	0.3%	0.6%	0.6%	0.1%	0.0%
Other	Durable Plastic Products	2.7%	2.7%	2.5%	2.6%	2.9%
	Straws	0.0%	0.0%	0.0%	0.0%	0.0%
	Utensils	0.1%	0.1%	0.1%	0.1%	0.0%
	Coffee Pods	0.1%	0.3%	0.3%	0.0%	0.0%
	Other/Mixed Plastics	0.2%	0.2%	0.6%	0.1%	0.0%
Total Compostable Products and Packaging		0.0%	0.0%	0.0%	0.0%	0.0%
Foodware	Cups	0.0%	0.0%	0.0%	0.0%	0.0%
	Takeout Containers	0.0%	0.0%	0.0%	0.0%	0.0%
	Other	0.0%	0.0%	0.0%	0.0%	0.0%
Film	Retail Carryout Bags	0.0%	0.0%	0.0%	0.0%	0.0%
	Bags and Liners	0.0%	0.0%	0.0%	0.0%	0.0%
Other Compostable Products and Packaging	Packaging, Bottles	0.0%	0.0%	0.0%	0.0%	0.0%
Total Compostable Organics		26.0%	23.1%	25.8%	32.0%	11.9%
Yard and Garden	Small Yard Waste	4.1%	2.3%	6.5%	3.2%	4.8%
	Large Yard Waste	0.5%	0.0%	0.5%	0.8%	0.0%
Food waste	Unavoidable Food Waste	6.6%	9.5%	7.7%	7.1%	0.1%
	Plate Scrapings, Unfinished Meals	2.7%	2.5%	3.0%	3.5%	0.1%
	Whole Fruits and Vegetables	1.5%	1.9%	3.5%	0.7%	0.1%
	Whole Meats, Fish	0.8%	0.4%	1.1%	1.0%	0.0%
	Full/Unused Ready-Made	0.8%	1.5%	0.8%	0.9%	0.0%
	Baked goods	0.9%	1.2%	1.1%	1.1%	0.0%
	Dairy or Dairy Substitute	0.1%	0.2%	0.3%	0.0%	0.0%
	Liquids (drink, oil in package)	0.1%	0.1%	0.3%	0.1%	0.0%
	Candy and snacks	0.2%	0.3%	0.3%	0.0%	0.0%

Material Category		Regional	SF	MF	C/I	DO
	Condiments and sauces	0.2%	0.4%	0.3%	0.2%	0.0%
	Pet Food	0.0%	0.0%	0.0%	0.0%	0.0%
Clean Wood	Wood Pallets	2.3%	0.0%	0.0%	5.3%	0.0%
	Unfinished Wood Furniture	0.2%	0.0%	0.0%	0.5%	0.0%
	Food Service	0.1%	0.0%	0.1%	0.1%	0.0%
	Other Wood	4.9%	2.7%	0.3%	7.7%	6.8%
Other Compostable Organics	Manure, Slaughterhouse, Animal	0.0%	0.0%	0.0%	0.0%	0.0%
Total Non-Compostable Organics		16.4%	6.6%	5.6%	15.3%	49.7%
Treated or Painted Wood	Pressure Treated Wood	4.5%	1.1%	0.2%	2.7%	21.1%
	Finished Wood	8.4%	2.6%	3.3%	9.7%	20.6%
	Finished wood Furniture	1.4%	0.5%	0.0%	0.9%	6.4%
Textiles	Natural Fiber Clothing	0.2%	0.0%	0.4%	0.2%	0.2%
	Household	0.2%	0.0%	0.2%	0.0%	0.9%
	Other	0.1%	0.3%	0.0%	0.0%	0.0%
Rubber	Tires	0.0%	0.0%	0.0%	0.0%	0.0%
	Other Rubber	1.1%	1.2%	0.4%	1.7%	0.5%
Leather/ Multiple/ Composite Organic Materials Other	Leather	0.0%	0.1%	0.1%	0.0%	0.0%
	Composite Organics Materials (shoes)	0.3%	0.7%	0.7%	0.1%	0.0%
	Other	0.1%	0.1%	0.3%	0.0%	0.0%
Total Metals		3.8%	3.1%	4.8%	3.6%	3.8%
Ferrous	Food Containers	0.4%	0.5%	0.5%	0.3%	0.0%
	Spiral-Wound Containers	0.0%	0.0%	0.0%	0.0%	0.0%
	Other Ferrous	0.0%	0.0%	0.1%	0.0%	0.1%
Bimetallic	Food Containers	0.0%	0.0%	0.0%	0.0%	0.0%
Non-Ferrous (copper, aluminum, brass)	Alcoholic	0.0%	0.0%	0.0%	0.0%	0.0%
	Non-alcoholic	0.1%	0.1%	0.1%	0.0%	0.0%
	Food Containers	0.1%	0.3%	0.1%	0.1%	0.0%

Material Category		Regional	SF	MF	C/I	DO
	Foil Trays, wrap	0.3%	0.8%	0.5%	0.1%	0.0%
	Other Non-Ferrous	0.1%	0.1%	0.0%	0.3%	0.0%
Non-consumable Mixed Metals	Household	2.1%	1.2%	2.4%	2.0%	3.1%
	Machine parts	0.1%	0.1%	0.0%	0.2%	0.0%
	Construction/Industrial	0.6%	0.0%	1.1%	0.5%	0.6%
Total Glass		2.4%	1.9%	1.7%	1.9%	5.4%
Beverage Containers	Beer	0.1%	0.1%	0.1%	0.0%	0.0%
	Other Alcohol	0.1%	0.0%	0.4%	0.1%	0.0%
	Non-Alcoholic & Non-Dairy	0.0%	0.0%	0.0%	0.0%	0.0%
	Dairy or Dairy Substitute	0.0%	0.0%	0.0%	0.0%	0.0%
Food Containers		0.1%	0.2%	0.3%	0.0%	0.0%
Other Glass and Ceramics		2.1%	1.6%	0.8%	1.8%	5.4%
Total Building Material		5.6%	3.1%	1.9%	5.2%	16.2%
Gypsum/Drywall		0.5%	0.5%	0.3%	0.7%	0.5%
Masonry		0.6%	0.2%	0.0%	0.0%	4.1%
Rock, Sand, Dirt		0.4%	1.1%	0.2%	0.4%	0.0%
Rigid Asphalt		0.7%	0.0%	0.0%	1.7%	0.0%
Carpet Waste		1.9%	0.8%	0.8%	1.5%	6.2%
Other Inorganics		1.4%	0.6%	0.7%	0.9%	5.4%
Total Electronic Waste		1.0%	1.0%	2.0%	0.7%	0.3%
Computer and Peripherals	Desktop Computers	0.0%	0.0%	0.0%	0.0%	0.0%
	Notebook computers	0.0%	0.0%	0.0%	0.0%	0.0%
	Computer Peripherals	0.1%	0.2%	0.0%	0.1%	0.0%
	Computer Monitors	0.0%	0.0%	0.0%	0.1%	0.0%
	Printers, Scanners	0.0%	0.0%	0.0%	0.0%	0.0%
Televisions & Av Equipment	Televisions	0.0%	0.0%	0.0%	0.0%	0.0%
	Other Audio/video	0.3%	0.0%	0.8%	0.1%	0.0%

Material Category		Regional	SF	MF	C/I	DO
Telephones & Telecommunications Equipment	Mobile Phones & Accessories	0.0%	0.1%	0.0%	0.0%	0.0%
	Other	0.1%	0.0%	0.0%	0.1%	0.0%
Small Appliances & Floor Care Appliances		0.3%	0.6%	0.4%	0.2%	0.1%
Electronic Toys		0.0%	0.0%	0.0%	0.0%	0.0%
Smoke Detectors		0.0%	0.0%	0.0%	0.0%	0.0%
Other Electronics		0.3%	0.1%	0.7%	0.1%	0.1%
Total Household Hazardous		0.9%	0.8%	1.2%	1.0%	0.2%
Batteries	Lead Acid	0.1%	0.0%	0.1%	0.1%	0.0%
	All Other Batteries	0.0%	0.1%	0.0%	0.0%	0.0%
Medical/Biological	Sharps	0.0%	0.0%	0.0%	0.0%	0.0%
	Animal Carcass	0.0%	0.0%	0.0%	0.0%	0.0%
	Other	0.2%	0.0%	0.4%	0.2%	0.0%
HHW	Stains/Preservatives	0.0%	0.0%	0.0%	0.0%	0.2%
	Latex Paint	0.0%	0.0%	0.0%	0.0%	0.0%
	Oil-Based Paint	0.0%	0.0%	0.0%	0.0%	0.0%
	Paint Aerosols	0.0%	0.0%	0.0%	0.0%	0.0%
	Solvents	0.0%	0.0%	0.1%	0.0%	0.0%
	Cleaners, Soaps etc.	0.0%	0.0%	0.0%	0.0%	0.0%
	Pesticides/Herbicides/Preservatives	0.0%	0.0%	0.0%	0.1%	0.0%
	Motor Oil	0.0%	0.0%	0.0%	0.0%	0.0%
	Oil Filters	0.0%	0.0%	0.0%	0.0%	0.0%
	Antifreeze	0.0%	0.0%	0.0%	0.0%	0.0%
	Pharmaceuticals	0.0%	0.1%	0.0%	0.0%	0.0%
	Other Petroleum Based Products	0.0%	0.3%	0.0%	0.0%	0.0%
	Other	0.2%	0.2%	0.1%	0.3%	0.0%
Mercury Containing Items	Thermostats and Switches	0.0%	0.0%	0.0%	0.0%	0.0%
	CFLS	0.0%	0.0%	0.1%	0.0%	0.0%

Material Category		Regional	SF	MF	C/I	DO
Other HHW	Other HHW or Containers	0.3%	0.1%	0.5%	0.4%	0.0%
Total Household Hygiene		7.4%	18.2%	11.9%	3.0%	0.0%
Biological	Diapers	3.7%	9.9%	5.6%	1.3%	0.0%
	Pet Waste	2.1%	5.3%	3.5%	0.7%	0.0%
	Other (sanitary products, condoms)	1.6%	2.7%	2.6%	1.0%	0.0%
Liquid Product	Personal Care	0.1%	0.3%	0.2%	0.0%	0.0%
Total Bulky Items		0.5%	0.0%	0.0%	0.1%	3.2%
White Goods	Large Appliances	0.0%	0.0%	0.0%	0.0%	0.0%
Furniture	Mattresses, Box springs	0.1%	0.0%	0.0%	0.0%	0.7%
	Other Upholstered Furniture	0.4%	0.0%	0.0%	0.0%	2.5%
	Other Furniture	0.0%	0.0%	0.0%	0.1%	0.0%
Total Fines		1.5%	3.2%	2.1%	0.9%	0.0%
Fines		1.5%	3.2%	2.1%	0.9%	0.0%

To: Zero Waste Committee

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

Date: June 5, 2019 Meeting Date: June 14, 2019

Subject: **2019 Regional “Think Thrice About Your Clothes” Campaign Results**

RECOMMENDATION

That the Zero Waste Committee receive for information the report dated, June 5, 2019, titled “2019 Think Thrice About Your Clothes Campaign Results.”

PURPOSE

To update the Zero Waste Committee on the results of the 2019 regional clothing waste reduction campaign, “Think Thrice About Your Clothes.”

BACKGROUND

In 2019, Metro Vancouver launched a regional clothing waste reduction campaign “Think Thrice About Your Clothes” (“Think Thrice”). The campaign supports the waste reduction objectives in the *Integrated Solid Waste and Resource Management Plan*. 2019 was the first year of the campaign.

This report provides an update on the results of the 2019 “Think Thrice” campaign as identified in the 2019 Zero Waste Committee Work Plan. The report also provides information about use of the campaign materials by member jurisdictions as recently requested by the Zero Waste Committee.

2019 REGIONAL “THINK THRICE ABOUT YOUR CLOTHES” CAMPAIGN

Clothing is one of the fastest growing waste streams due to rapidly changing fashion trend cycles and low prices, leading to increased clothing consumption and disposal. Approximately 20,000 tonnes of clothing waste is disposed annually in Metro Vancouver, despite local options to swap, sell or donate unwanted clothing. Metro Vancouver residents throw out an average of eight kilograms of clothing per person per year, equivalent to the weight of 44 t-shirts.

Campaign Approach

The campaign was in market from February 18, 2019 to April 28, 2019. The objectives were to:

- Educate residents about clothing waste in the region;
- Provide tips and information to help residents make more informed and sustainable decisions when purchasing, caring for, and disposing of their clothing; and
- Over the long term, reduce the amount of textiles waste produced in the region and divert that waste from the landfill.

The campaign targeted men and women ages 18-64, with some campaign communications skewing towards “fashionistas,” families with kids, and “do-it-yourselfers.”

Research Findings

Public attitudes survey results (summer 2018) indicated a general lack of awareness among residents of clothing waste as an issue, and in particular, a lack of understanding about issues related to clothing donations. As such, campaign messaging focused largely on these two topics. Furthermore, over 50% of those surveyed indicated that they were likely to repair or mend damaged clothing, with some showing interest in selling, swapping or repurposing clothing, which informed secondary messages.

Stakeholder engagement with second-hand clothing retailers, thrift stores, donation bin operators, and used clothing brokers (summer 2018) informed the messaging around clothing donations, namely that most items can be donated, and that residents should ensure that items being donated are clean, dry, and packed properly in bags or boxes.

Focus group testing (October 2018) found that participants were receptive to messages around how much more clothing we purchase now versus previous decades, as well as how much clothing is being thrown away each year. This feedback informed the creative direction.

Key Messages

The campaign platform encouraged residents to “Think Thrice About Your Clothes,” with the tagline to “Reduce, Repair and Re-use to Minimize Waste.” These messages were reinforced with tangible clothing waste reduction tips and information within each of the three “R” bucket areas:

- Reduce – tips for identifying quality items when purchasing new or second-hand clothing.
- Repair – tips for better care of clothing, such as washing, drying and stain removal, as well as DIY clothing repair and alteration ideas.
- Re-use – what to do with unwanted clothing, including information on reselling, repurposing and donating.

The call to action, “For tips and insights, visit www.clothesarentgarbage.ca,” encouraged residents to visit the website for more information to reduce clothing waste. (See Attachment 1 for examples of campaign creative.)

Media Strategy

The media strategy combined broad reach with targeted media placements to reach people throughout Metro Vancouver. The broad reach tactics were used to spread awareness messages, while targeted placements shared content about specific tips and ideas. Media placements included:

- Digital: social media (Instagram, Facebook), online display ads (banners and video), Google Search, YouTube pre-roll videos, and native content articles in *The Georgia Straight*.
- Out of Home: transit shelter ads, bus exterior ads, SkyTrain station posters, video on screens in Tim Horton’s stores, and a Cineplex Timeplay game.

Outreach Events

To further engage with residents at outreach events, Metro Vancouver collaborated with Frameworq (www.frameworq.ca), a local non-profit organization that facilitates clothing swaps and “fix-it” events. At each event, Metro Vancouver ambassadors, alongside representatives from Frameworq, engaged residents to promote campaign messaging and answer questions. The booth featured the following unique elements:

- Examples of damaged or distressed clothing that could still be repaired or donated;

- Website demonstrations via iPads;
- Hands on demonstrations of clothing repair techniques; and
- Nine “how to” clothing repair videos on loop via TV monitor display.

The outreach events included:

- Mt. Pleasant Public Library “Clothing Fix-It,” Vancouver
- Cloverdale Birth Fair, Surrey
- Maple Ridge Repair Café, Maple Ridge
- Vancouver Public Library, Vancouver
- Port Moody Farmer’s Market, Port Moody
- Party for the Planet, Surrey

In total, the outreach team engaged 1,783 residents and provided website demonstrations to 1,107 event attendees.

Regional Sharing of Campaign Materials

As with all Metro Vancouver campaigns, all member jurisdictions were included in the media buy. This means that campaign ads appeared in every member jurisdiction, whether they were physical ads (e.g. billboards), broadcast (e.g. radio), or geo-targeted digital ads.

Members can amplify Metro Vancouver’s campaigns in their own communities by using materials provided by Metro Vancouver in their own assets (such as transit shelter posters, facility screens, or social media channels). For all campaigns, Metro Vancouver sends information to all members before launching the campaign, makes materials available for download on the Metro Vancouver-website, and creates custom, co-branded materials for members when requested.

At least 10 member jurisdictions used materials from the “Think Thrice” campaign, including social media content, outreach materials, a digital billboard, and facility screens.

Evaluation

- **Behaviour Change**

Among those who saw or heard the advertising:

- One-half say they are more likely to donate their unwanted clothing;
- 43% say they will buy clothing that lasts longer;
- 35% will buy less clothing; and
- 27% will repair clothing.

Nearly three-in-ten (28%) of residents who saw or heard Metro Vancouver’s advertising say they discussed its message with others.

- **Media Performance**

The digital media successfully reached the audience through geo-targeting and keyword / interest targeting. Two tactics that performed particularly well are the Google search ads (11.4% click through rate) and *Georgia Straight* native content (17,000 total reads).

The success of the out of home tactics is indicated by the high proportion of organic and direct website traffic (40.5%).

- **Earned Media**

The campaign gained additional publicity in the form of earned media via newspaper articles, radio and TV mentions. The value of earned media is estimated at \$186,080, with 91 online / print stories, 30 radio spots, and 31 TV spots.

- **Website Performance**

Over the campaign period, the “Think Thrice” website saw 14,958 sessions; an average of 214 sessions/day. Engagement was strong, with visitors spending over a minute on the site and visiting two pages per session. The most popular pages were “Where Can I Donate?”, “What Can I Donate?”, and “Repairs and Alterations.”

In addition, the Campaign was the recipient of the Recycling Council of British Columbia (RCBC) 2019 Award for Environmental Achievement in the Public Sector category.

Plans for 2020

The 2020 regional clothing waste reduction campaign will continue to use the “Think Thrice” platform. The creative, website and media strategy will be refined based on learnings from 2019. Outreach and collaboration with Metro Vancouver members will be expanded.

ALTERNATIVES

This is an information report. No alternatives are presented.

FINANCIAL IMPLICATIONS

The budget for the 2019 “Think Thrice About Your Clothes” campaign was \$150,000, supported under the Zero Waste Communications Program of the 2019 General Government budget and managed by the External Relations Department.

SUMMARY / CONCLUSIONS

The “Think Thrice About your Clothes” (“Think Thrice”) campaign supports the waste reduction objectives in the *Integrated Solid Waste and Resource Management Plan*. 2019 was the first year of the “Think Thrice” campaign, which was in market from February 18, 2019 to April 28, 2019. The campaign objectives were to: raise awareness about clothing waste in the region; provide tips and information to help residents make more informed decisions when purchasing, caring for, and disposing of clothing. Research findings informed the key messages selected for the campaign. The media strategy combined broad reach and targeted media tactics to reach residents throughout Metro Vancouver.

Among those aware of the ads, up to half intend to change their behaviour. Over the campaign period, the “Think Thrice” website saw 14,958 sessions. The campaign also received an estimated \$186,060 worth of earned media. Campaign materials were used by at least 10 member jurisdictions. The 2020 clothing waste reduction campaign will continue to use the “Think Thrice” platform, which will be refined base on learnings in 2019.

The Campaign was the recipient of the Recycling Council of British Columbia (RCBC) 2019 Award for Environmental Achievement in the Public Sector category.

Attachment

“Think Thrice About Your Clothes” Campaign – Sample Creative

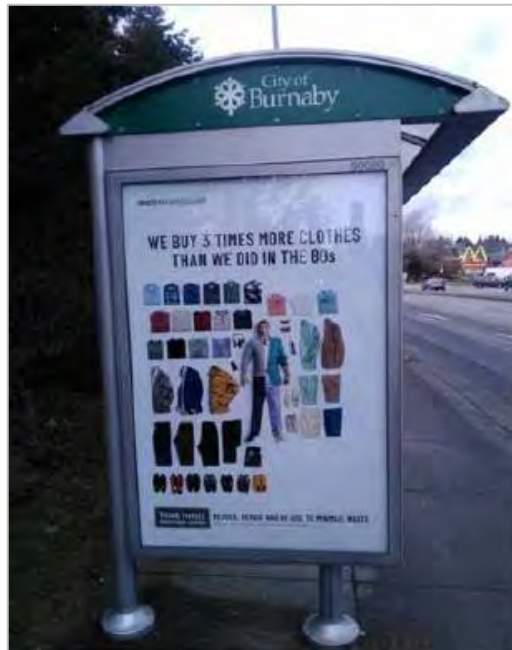
Reference

[“Think Thrice About Your Clothes” Website](#)

29838801

“Think Thrice About Your Clothes” Campaign – Sample Creative

Transit Shelter Ads



Digital Billboard

**You can donate
any clothes**



**As long as they're
clean and dry**

THINK THRICE
ABOUT YOUR CLOTHES

clothesarentgarbage.ca

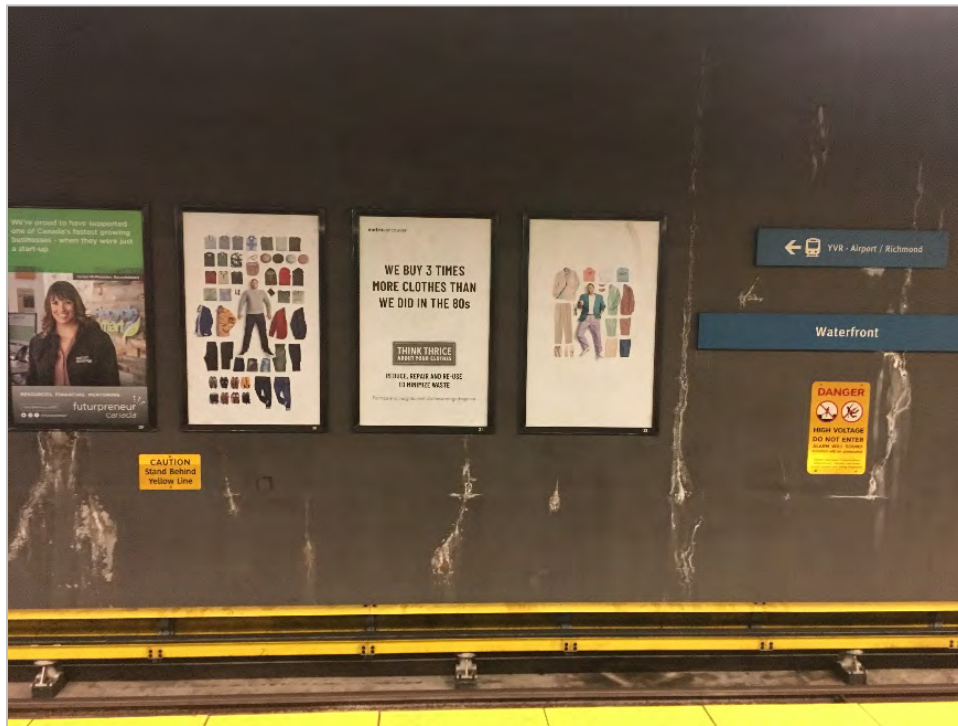

NEW WESTMINSTER

metrovancouver

Bus Exteriors



SkyTrain Station Posters



Banner Ads

Frame 1



Tear in your T?



Frame 2



Fix it, don't trash it.



Frame 3



Learn how at clothesarentgarbage.ca

metrovancover

Frame 1

Blemish on your blouse?



Frame 2

Fix it, don't trash it.

Frame 3



Frame 4

learn how

Frame 5

metrovancover

Frame 1

Going shopping?

Frame 2

Choose clothes that will last years,

Frame 3

Choose clothes that will last years, **not weeks.**

Frame 4



Frame 5

learn more

Frame 6

metrovancover

Social Media

Metro Vancouver
Sponsored (demo) · 🌐

We buy 3 times more clothes than we did in the 1980s.
Visit our website for tips and ideas to minimize waste.
#TextilesWaste #ThinkThriceAboutYourClothes #Reduce #Repair #Reuse
#MetroVancouver

**WE BUY 3 TIMES MORE CLOTHES
THAN WE DID IN THE 80s**



WWW.CLOTHESARENTGARBAGE.CA
Think Thrice About Your Clothes
Tips to reduce, repair and re-use your clothes. [Learn More](#)

Metro Vancouver
Sponsored (demo) · 🌐

Sewing a patch is one part technique, one part magic. Watch to learn how.
(You'll be amazed by what happens at 1:15.)
#TextilesWaste #ThinkThriceAboutYourClothes #Reduce #Repair #Reuse
#MetroVancouver




PATCH

WWW.CLOTHESARENTGARBAGE.CA
Think Thrice About Your Clothes
How to do minor clothing repairs. [Learn More](#)

metrovancoverbc · Follow

**WE EACH TRASH THE EQUIVALENT
OF 44 T-SHIRTS PER YEAR**



throws away 17 shirts a year
actually just statistical error.
Average person throws away 0
shirts a year. T shirt Georg, who
lives in a cave and throws away
over 10,000 t shirts a day, is an
outlier adn should not have been
counted.

4w Reply
[View replies \(2\)](#)

8,783 views
FEBRUARY 14

Add a comment... [Post](#)

Metro Vancouver
Sponsored (demo)

Are you donating as much as you can? You can donate anything clean and dry, from a ripped shirt to a single shoe. Learn more about what can be donated on our website.

#TextilesWaste #ThinkThriceAboutYourClothes #Reduce #Repair #Reuse #MetroVancouver



WWW.CLOTHESAREN'TGARBAGE.CA
Think Thrice About Your Clothes
What can be donated? Find out.

[Learn More](#)

Metro Vancouver
Sponsored (demo)

You can donate any clothes that are clean and dry. That includes ripped pants, a sock with a hole, and a single shoe. And a dress shirt missing a button. And a skirt with an unravelling hem ...

As long as it's not mouldy, paint-stained, or oil-covered, you can donate it!

#TextilesWaste #ThinkThriceAboutYourClothes #Reduce #Repair #Reuse #MetroVancouver



metrovancover

Outreach Events





To: Zero Waste Committee

From: Paul Henderson, General Manager, Solid Waste Services

Date: June 5, 2019

Meeting Date: June 14, 2019

Subject: **Manager's Report**

RECOMMENDATION

That the Zero Waste Committee receive for information the report dated June 5, 2019, titled "Manager's Report".

Clean Wood Disposal Ban - Surcharge Waiver Extension

On December 24, 2018, Metro Vancouver temporarily waived surcharges for loads containing clean wood for six months, due to a reduction in wood processing facilities in the region. Wood recycling remains limited; therefore, in accordance with Section 5.16 of the *Greater Vancouver Sewerage and Drainage District Tipping Fee and Solid Waste Disposal Regulation Bylaw No. 306, 2017*, the General Manager of Solid Waste Services intends to extend the surcharge waiver three more months until September 30, 2019. Loads delivered to Metro Vancouver disposal facilities are charged the applicable tipping fee and are managed as garbage.

Our expectation is that a further extension beyond September 30, 2019 will not be required as new processing options are expected to open over the summer, and existing processors are making adjustments to the new market conditions. Staff will communicate with customers and processors over the summer the expectation that the disposal ban surcharge waiver is unlikely to be extended beyond the end of September.

Carpet Recycling Pilot

Metro Vancouver is starting a carpet recycling pilot at the Coquitlam Transfer Station in July 2019 to evaluate the opportunity to divert carpet waste from disposal. Each year, approximately 17,000 tonnes of carpet (2% of the waste stream) ends up in the regional disposal system. This pilot will direct carpet to a local recycler that recycles the nylon carpets and sends the remaining carpets and underlays to a local cement kiln for fuel. Nylon carpet fibres can be recycled into products like car parts, electronic components and office chairs. Carpets will be accepted for recycling from businesses and residents at the regular garbage tipping fee, with the tipping fee revenues used to cover the cost of recycling the carpet. If the project is successful in Coquitlam, it will be expanded to other transfer stations.

Electronic Surcharge Project

Starting in February 2019, technology upgrades have improved the disposal ban surcharge process. Under the disposal ban program, customers are issued surcharges if garbage loads dropped off at Metro Vancouver solid waste facilities have excessive recyclables or other unacceptable materials. Previously, disposal ban inspectors issued hand-written notices and provided photos of offending loads on request. With the technology upgrades, emailed notices and photos are sent to account customers in real time, eliminating the hand-written notices, and speeding up communications with customers. The program

launched in February at the North Shore Transfer Station and will be rolled out to the other Metro Vancouver solid waste facilities by mid-July. To Metro Vancouver's knowledge, this is the first program of its type in North America, and provides a new tool to help encourage customers to minimize recyclables in loads of garbage. A more detailed report will be provided to the Zero Waste Committee once the program is fully implemented across the regional system.

2019 Zero Waste Conference – Reduced registration fees

In response to the Zero Waste Committee's request of staff to consider how best to provide the opportunity of a reduced Zero Waste Conference registration fee for individuals and post-secondary students for whom the full registration fee is outside their means but bring a unique value and contribution to the conference's zero waste goals, a limited number of reduced registration fees will be available on a first come basis to the 2019 Zero Waste Conference. The reduced registration fee will be set at \$150 (the full registration fee is \$475); this covers the projected catering cost per participant. Last year's Conference, held in the Vancouver Convention Centre West, attracted 503 participants with a total capacity of 600. However, in 2019, the Conference returns to the Vancouver Convention Centre East where the capacity of the room is 500 participants. So the number of participants who can be provided a reduced registration fee needs to be limited to 20 without adversely affecting the overall budget.

The registration page for the 2019, Zero Waste Conference will be revised to include the following:

"A limited number of reduced registration fees are available to post-secondary students and other individuals. For further information, please contact the conference organizers at ZWConference@metrovancover.org."

2019 Zero Waste Committee Work Plan

The attachment to this report sets out the Committee's work plan for 2019. The status of work program elements is indicated as pending, in progress or complete. The listing is updated as needed to include new issues that arise, items requested by the Committee and changes in the schedule.

27988447

Zero Waste Committee 2019 Work Plan

Report Date: June 5, 2019

Priorities

1 st Quarter	Status
2017 Solid Waste and Recycling - Annual Report	Complete
Solid Waste Regulatory Framework - Update	Complete
Electronic Disposal Ban Tool	Complete
2018 Waste Composition Monitoring Program	In progress
Recycling Markets Update	Complete
National Zero Waste Council Update	Complete
2018 Zero Waste Conference Results	Complete
2018 Create Memories Not Garbage Campaign Results	Complete
2018 Food Scraps Campaign Results	Complete
2019 Textiles Campaign Launch	Complete
Residential Used Gypsum Disposal Program Update	Complete
Customer Operational Notification	In progress
Asset Management Policy	Complete
2 nd Quarter	
2018 Disposal Ban Inspection Program	Complete
Coquitlam Transfer Station Replacement – Update and Operations Contract	Pending
Single Use Item Reduction Strategy	Complete
Organics Regulatory Framework and Procurement Processes	Pending
Construction and Demolition Material Regulatory Framework	Pending
Transfer Station Paid Recyclables Funding Model	Pending
Love Food Hate Waste Canada – Campaign Updates	Complete
2018 Waste-to-Energy Facility Financial Summary	Complete
2018 Waste-to-Energy Facility Environmental Performance Summary	In progress
Waste-to-Energy Facility Non-Ferrous Metal Recovery System	Complete
Solid Waste Energy Policy	Complete
30-Year Financial Plan: Solid Waste Scenarios	Pending
3 rd Quarter	
2019 Zero Waste Conference	Pending
Extended Producer Responsibility	Complete
Expanded Polystyrene Disposal Ban Implementation Progress	Pending
Surrey Recycling and Waste Drop-Off Facility – Construction Contract	Pending
Unsecured Loads Surcharge Update	Pending
2019 Textiles Campaign Results	Pending
Waste-to-Energy Options	Pending
4 th Quarter	
2020 Tipping Fee Bylaw Revisions	Pending
2020-2024 Financial Plan – Solid Waste Services	Pending
Waste-to-Energy Facility – Biosolids Utilization Business Case and Conceptual Design	Pending
2018 Solid Waste and Recycling – Annual Report	Pending
2019 Abandoned Waste Campaign Results	Pending
Ellen MacArthur Foundation Membership	Pending



MAYOR KENNEDY STEWART

May 14, 2019

Sav Dhaliwal
 Chair, Greater Vancouver Sewerage and Drainage District
 Metro Vancouver
 Metrotower III, 4730 Kingsway
 Burnaby, BC
 V5H 0C6

Dear Mr. Dhaliwal:

Re: Support for a Provincial Single-Use Item Reduction Strategy Aligned with Federal Goals for Reduction of Plastic Waste

On behalf of Vancouver City Council, I am writing this letter to urge Metro Vancouver to confirm support for the development of a Provincial Single-Use Item Reduction Strategy aligned with Federal goals for reduction of plastic waste.

On April 29, 2019, Vancouver City Council confirmed their unwavering commitment to boldly reduce single-use items through a strategy that shifts societal norms, supports lasting behaviour change, and values all members of Vancouver's diverse communities regardless of physical ability.

Council adopted a by-law that bans serving prepared food in foam cups and foam take-out containers beginning January 1, 2020, with exemptions for hospitals and community care facilities, as well as a one-year temporary exemption for charitable food providers. Council also approved a ban on the unnecessary use of plastic straws, while requiring provisions such as bendable plastic straws to be available upon request for accessibility, beginning April 2020. Exemptions for health care needs will apply.

In its response to the UBCM Resolution 2018-B126 calling for a Provincial Single-Use Item Reduction Strategy, the Ministry of Environment and Climate Change indicated that the Province intends to address single-use items through the extended producer responsibility (EPR) program for packaging and printed paper. While EPR is one important tool for addressing single-use items, a more comprehensive provincial single-use item reduction strategy, is required. Recognizing that BC is a leader in EPR policy and programs, there are several limitations with the current policy for packaging and printed paper that need to be addressed before it can be relied upon to address single-use items. Currently the EPR program for packaging and paper does not

604-873-7621 kennedy.stewart@vancouver.ca

City of Vancouver, Office of the Mayor, 453 West 12th Avenue, Vancouver, British Columbia, Canada V5Y 1V4



yet focus on reduction or reuse, or cover single-use items that are compostable or disposed of at businesses or in the public realm. A more comprehensive approach is required, one that either addresses these limitations in EPR policy, or involves a parallel policy alongside EPR.

The widespread use of single-use items is decades in the making. Solving the challenges with this waste stream is beyond what any individual municipality can do alone. To this end, the City of Vancouver looks forward to working with Metro Vancouver staff to strengthen and align regional, provincial and federal single-use item policies and programs.

Sincerely

A handwritten signature in black ink, appearing to read "ESK", followed by a large, stylized loop.

Kennedy Stewart
Mayor, City of Vancouver

Cc: City Manager, Sadhu Johnston
Cc: City Clerk, Katrina Leckovic
Cc: GM - Engineering, Jerry Dobrovolny