metrovancouver
SERVICES AND SOLUTIONS FOR A LIVABLE REGION

To: Liquid Waste Committee

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

Date: November 1, 2019 Meeting Date: November 14, 2019

Subject: **2019 Regional Unflushables Campaign Results**

RECOMMENDATION
That the Liquid Waste Committee receive for information the report dated November 1, 2019, titled "2019 Regional Unflushables Campaign Results".

PURPOSE
To update the Committee on the results of the 2019 regional Unflushables Campaign to reduce the disposal of wipes and other materials into the sewer system, which took place in the spring and summer of 2019.

BACKGROUND
The flushing of disposable wipes and other items causes ongoing problems for the sewer system and can result in clogs, sewer overflows into the environment and damaged equipment. Medications are also difficult for treatment plants to fully remove and may end up in the aquatic environment. Now in its third year, the regional Unflushables Campaign educates residents about how to properly dispose of seven priority items that are a problem for the wastewater system.

This report provides a synopsis of the 2019 regional Unflushables Campaign results, as identified in the 2019 Liquid Waste Committee Work Plan.

2019 REGIONAL UNFLUSHABLES CAMPAIGN
The main portion of the 2019 Unflushables Campaign ran from April 1 to May 26 with engagement at various public events that continued through the summer. The campaign continued to target both men and women, educating residents about the correct disposal of seven priority items: wipes, paper towels, hair, floss, tampons and applicators, condoms and medications.

Campaign Elements and Approach
The campaign delivered its message in a humorous and lighthearted way and continued to use the creative concept and other elements proven to work in previous years. While the campaign covered seven items, it gave extra emphasis to wipes, which remains the most problematic item for the wastewater system. New elements were added to keep the campaign fresh, including:

- an April 1st "Don't be Fooled" launch event at Vancouver's Waterfront Skytrain Station;
- two new campaign mascots ("Pee" and "Poo");
- two new animated videos profiling disposable wipes and hair;
- front page ads on the Star Metro newspaper on April 1st
- homepage of the Vancouver Sun and Postmedia Network (i.e. Vancouver Province and National Post);

- news hour advertising and a morning interview on CityTV's Breakfast Television segment; and
- a new interactive wastewater display used at public events.

The media buy for the campaign also featured advertising on social media (Facebook, YouTube, Twitter, Instagram), washroom posters, Google banner ads, Google Search, an interactive game played through movie-goers' smart phones before movies, and a campaign website (see Attachment 1 for examples). Outreach teams attended events around the region to have face-to-face conversations and engage residents around unflushable issues. Participants answered a skill-testing question in order to earn a branded toilet paper roll with campaign messaging.

Collaboration with Members

Campaign details and creative materials were shared with members' communication staff and liquid waste staff before the campaign's launch through email communication and regional meetings. All materials are made available for download on the Metro Vancouver website, and custom, co-branded materials can be created upon request. As with all Metro Vancouver behavior change 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, print or online content, or digital ads. Members can amplify Metro Vancouver's campaigns in their own communities by using the materials provided by Metro Vancouver in their own assets (such as transit shelters, facility screens or social media channels).

Members also had opportunities to take part in the campaign by sharing the creative and messages on their social media channels, placing posters in washrooms in municipal facilities and hosting outreach teams at community events.

Evaluation

Metro Vancouver used various indicators to evaluate the campaign, including a regional post-campaign survey, tracking website and digital metrics, and more qualitative information from outreach team reports.

Post campaign survey results

A regional post-campaign survey of 1158 residents was conducted from May 27 to June 10. Survey results showed that:

- 31% of residents remembered seeing the campaign, almost double that of the 2018 campaign, which reached 16% of residents;
- awareness was highest among younger residents aged 18 to 34, with 41% recall of the campaign;
- roughly half (55%) of those who saw the campaign did so through news media or articles, followed by social media (41%);
- one third of those who saw the campaign discussed it with someone else; and
- the majority of respondents who saw the campaign advertising said they were less likely to flush the items featured in the campaign.

Digital and social media results

The post-campaign report on media promotion and the monitoring of non-paid channels showed that the digital and social media elements of the campaign performed well, reaching over 651,000 people. Much of the online engagement was related to the campaign mascots where there was a notably high level of engagement. Results included:

- a very high level of engagement on social media platforms, with 3,321 reactions (including 304 comments, 1,133 shares) on Facebook and Instagram and 11,801 tweet engagements;
- over 1,000 comments on external websites;
- 16,029 website visits;
- 1.8 million video views, with an above average rate of viewing videos to completion; and
- 35,884 plays (19% play rate) of the cinema game, with over 185,000 viewers exposed to the game's content.

Media coverage

Coverage of the new Pee and Poo campaign mascots went viral on social media and news outlets in late May, generating a total of 283 news hits from May 30 to June 7. These included 161 broadcast stories (53 TV, 107 radio), 118 online stories and four print stories in Canada, USA and Europe. In addition to increasing campaign awareness, media coverage during this period directly contributed to a significant jump in campaign website traffic, social media followers, video views and interest from cities outside of Metro Vancouver wanting to use campaign materials and develop their own mascots. Several cities, wastewater professionals and organizations shared the story on social media, citing the campaign as an example of an effective approach to wastewater issues. Mascot coverage was generally positive and had an estimated advertising value of almost $800,000 (see Attachment 2 for details). Additionally, posts on Metro Vancouver's own social media channels regarding the mascots appearing at upcoming events received higher average number of reactions, compared to other Metro Vancouver posts.

Outreach

The outreach team attended events in six municipalities (Richmond, Port Coquitlam, Surrey, Langley, Coquitlam, Port Moody), interacting with residents to discuss unflushables issues and distribute over 4500 rolls of campaign-branded toilet paper. The mascots were a popular presence at events for handshakes, hugs and selfies, and were specifically requested by cities hosting events. The mascots also visited the Systems, Applications and Products Inc. (SAP) office in Vancouver to engage its 1500 employees on unflushables issues and create a video documenting the office's recent costly clogging incident.

Lessons learned

The 31% recall rate is a strong result for this campaign and is on par with some of the highest results seen for other Metro Vancouver campaigns. The significant increase in recall is mainly due to the earned media and social media engagement generated by the campaign mascots. The mascots piqued public and media interest, generating high levels of engagement and sharing of the campaign that helped to broaden the campaign's audience beyond the core 18-44 demographic.

Survey results show that most Metro Vancouver residents are aware of what items should not be flushed and that this has a positive impact on their behaviour. Nevertheless, a substantial portion still

occasionally flush personal items down the toilet, largely because of convenience. Knowledge that flushing personal items down the toilet will harm their plumbing and the environment may help reduce this behaviour and could be emphasized more strongly in future campaigns. While the campaign was most successful at reaching younger residents (18 to 34), younger residents and men are still the most likely to flush personal items down the toilet. Additional research and strategies specific to these groups may be required to better understand what would motivate them to adopt desired behaviours.

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

FINANCIAL IMPLICATIONS
The budget for the regional Unflushables outreach program is $190,000. These costs are included in the 2019 Liquid Waste Communications Program Budget managed by the External Relations Department. An additional $5,000 from the Liquid Waste budget was used to accommodate the unexpected demand for the unflushables campaign mascots at events, however, there were still requests that could not be accommodated. In anticipation of similar and more frequent requests for outreach and education related to liquid waste initiatives, an additional $50,000 has been approved for the 2020 budget.

SUMMARY / CONCLUSION
The flushing of disposable wipes and other unflushable materials is an ongoing issue for the region's wastewater system and can lead to clogs, sewer overflows and damaged equipment. Some materials, like medications, are difficult to fully remove through treatment and may end up in the environment. Metro Vancouver's 2019 regional Unflushables Campaign, now in its third year, targeted both men and women to educate them about seven priority items that should not be flushed (wipes, paper towels, hair, floss, tampons and applicators, condoms and medications). The campaign ran from April 1 to May 26 and included an April 1st launch event, new campaign mascots (Pee and Poo), new videos, a morning TV interview, front page newsprint ads, an interactive cinema game, promotion on social media (Facebook, Twitter, Instagram and YouTube) and outreach at public events.

A post-campaign survey showed 31% of residents recalled the campaign, nearly double that of the 2018 campaign, and most people who saw the campaign said they were less likely to flush personal items. The campaign generated a very high level of engagement on social media platforms, as well as over 16,000 website visits and 1.8 million video views. Coverage of the new mascots went viral on social media and news outlets in late May, generating a total of 283 news hits from May 30 to June 7, and was one the main reasons for the increased campaign recall. Several cities, wastewater professionals and organizations shared the story on social media, citing the campaign as an example of an effective approach to wastewater issues. Mascot coverage was generally positive and had an estimated advertising value of almost $800,000. Over the course of six community events, the outreach team engaged over 4,500 residents with skill-testing questions to hand out branded rolls of toilet paper with campaign messaging. While most residents surveyed are aware of what should not be flushed, many still occasionally flush personal items, particularly younger residents and men. More research may be needed to better understand how to motivate these groups to adopt desired behaviours.

Attachments:

1. Sample of Unflushables Campaign materials
2. Unflushables Campaign Coverage Summary

Reference:

1. Unflushables Campaign Web Page

31473940

Samples of Unflushables Campaign Materials

April 1st launch event at Waterfront station in Vancouver

Interactive cinema game

Unflushables handout

Digital banners

Mascots at community event

Interactive game

Instagram post

Social media image

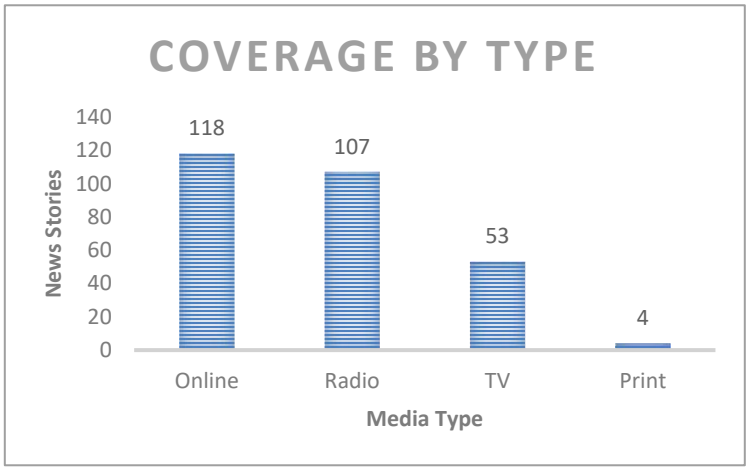
Event team with campaign toilet paper

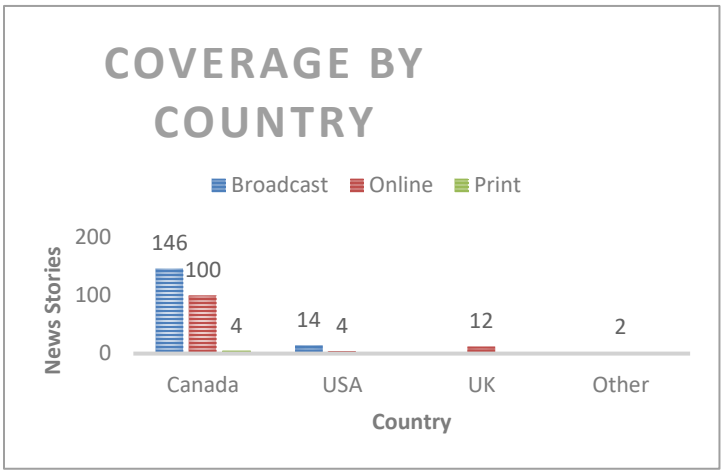
New video - Wipes in the Workplace

ATTACHMENT 2

Unflushables Campaign Coverage Summary - April 30 – May 7, 2019

Total News Stories: **283**
Cumulative Reach: **73,029,506**
Est. Ad Rate: **$798,968**





TOP MEDIA OUTLETS

TV

- Fox News Channel
- Fox 5 Washington
- CTV News Channel
- Global News BC
- CTV Calgary
- Global News Calgary
- Global News Toronto

RADIO

- The Fan Minneapolis
- Rip City Radio Portland
- Newstalk 1010 Toronto
- CKNW (Simi Sara)
- CJAD Montreal
- CFRA Ottawa

ONLINE

- Irish Examiner
- Belfast Telegraph
- Le Journal de Québec
- Vancouver Sun
- Vancouver Is Awesome
- Dailyhive

EXAMPLES OF TV COVERAGE

Earned Media

Of the **283 total news hits**, there were 161 broadcast stories (53 TV, 107 radio), 118 online stories and 4 print stories. The campaign earned some international interest as well with 13 stories from Europe (mostly UK and Ireland) and 18 from the US, including 3 mentions on FOX News (The Final 5, The Ingraham Angle, and online news), and inclusion as a link in an article on Sport Illustrated's website. There were also two French language stories from Quebec.

In terms of sentiment, news outlets had fun with the story, even if some of the coverage was mocking in tone. The vast majority of stories would turn in tone to an appreciation of the issue and included Metro Vancouver's key messages (don't flush wipes, unflushables). Quotes featured were from Liquid Waste Committee Chair Richard Stewart and/or Corporate Communications Division Manager Larina Lopez.

Metro Vancouver's Social Media, Video and Website

During the same period, there was a significant increase in activity on Metro Vancouver's social media platforms and website. Traffic to the Unflushables web page increased by 82%, and the average weekly follower growth on Twitter and Facebook doubled compared to the previous week. The increased web traffic also resulted in a 30% increase in views on the other Unflushables campaign videos. The campaign launch video received nearly 15,000 organic video views on Facebook and 4,500 video views on Vimeo.

Some of the Notable Stories:

Vancouver Is Awesome, DailyHive, Newstalk 1010 Toronto with Evan Solomon, The Final 5 (Washington), Global News BC, Belfast Telegraph, Le Journal de Québec

Examples of Supportive Social Media Comments:

Industry Interest and Support:

Additionally, the Unflushables campaign gained attention from other local governments and wastewater professionals, both in and outside the region. Several cities and organizations shared the story on social media, citing the campaign as an example of an effective approach to wastewater issues. The Regional District of Nanaimo reached out for advice on building their own mascots, and Metro Vancouver received multiple requests for the mascots to visit schools, community events and other cities.

To: Liquid Waste Committee

From: Tom Sadleir, Program Manager, Community Engagement, Liquid Waste Services

Date: October 28, 2019 Meeting Date: November 14, 2019

Subject: **Integrated Liquid Waste and Resource Management Plan Biennial Report 2017-2018 - Engagement Results**

RECOMMENDATION

That the Liquid Waste Committee receive for information the report dated October 28, 2019, titled "Integrated Liquid Waste and Resource Management Plan Biennial Report 2017-2018 - Engagement Results".

PURPOSE

To communicate the results of the engagement on the Integrated Liquid Waste and Resource Management Plan Biennial Report 2017-2018. The email submissions received and the Metro Vancouver response table will be forwarded to the Ministry of Environment and Climate Change Strategy.

BACKGROUND

On June 28, 2019, a report titled "Integrated Liquid Waste and Resource Management Plan Biennial Report 2017-2018" was presented to the GVS&DD Board, and it was resolved:

> *That the GVS&DD Board approve the "Biennial Report 2017-2018", dated May 28, 2019 and direct staff to:*
>
> *a) submit the "Biennial Report: 2017-2018", dated May 28, 2019, to the Ministry of Environment and Climate Change Strategy in accordance with the requirements of the "Integrated Liquid Waste and Resource Management Plan"; and*
>
> *b) post the "Biennial Report: 2017-2018" on the Metro Vancouver website and arrange for the Liquid Waste Committee to receive comments and submissions on the "Integrated Liquid Waste and Resource Management Plan" progress, as described in the Biennial Report, at the September 19, 2019 meeting.*

This report provides the engagement activities and results.

ENGAGEMENT PROCESS

The Biennial Report 2017-2018 was posted to Metro Vancouver's website in July 2019. The following notification of opportunities to provide input on the report was provided:

- July 30, 2019 – letters to 34 First Nations and Tribal Councils
- August 2, 2019 – emails to 401 contacts on the Integrated Liquid Waste and Resource Management Plan database
- August 22, 2019 – newspaper advertisements: Vancouver Sun and Province

- September 19, 2019 – letter to 34 First Nations and Tribal Councils, reminding of deadline for receipt of input

All notification included a link to the Biennial Report (2017-2018), invitation to appear as a delegation to the September 19, 2019 Liquid Waste Committee meeting, and invitation to provide written input with a deadline of October 18, 2019.

Feedback
No delegations were received at the September 19, 2019 meeting of the Liquid Waste Committee.

The following email submissions were received:

- August 9, 2019 – Cindy Collins, Referrals Officer, Matsqui First Nation
- September 12, 2019 – Glen Parker, P.Eng., on behalf of the North Shore Streamkeepers and the North Shore Save Our Shores Society
- October 4, 2019 – Cindy Collins, Referrals Officer, Matsqui First Nation

Key themes emerging from the email submissions include concerns regarding regional population growth and marine contamination, and a desire for tertiary treatment at all regional wastewater treatment plants. These topics are addressed in the Metro Vancouver Board Strategic Plan, which provides direction to ensure that wastewater system capacity is aligned with regional growth, to understand the impacts of contaminants on the ecosystem, and to consider options for advanced levels of treatment. These issues will also be addressed in the review and update of the GVS&DD Integrated Liquid Waste and Resource Management Plan, which will be initiated in 2021.

The issues raised in the emails and Metro Vancouver's responses to those issues appear in Attachment 1: Issue-Response Table. The emails received appear in Attachment 2: Correspondence.

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

FINANCIAL IMPLICATIONS
There are no financial implications.

SUMMARY / CONCLUSION
The report summarizes the results of the engagement on the Integrated Liquid Waste and Resource Management Plan Biennial Report 2017-2018.

No delegations were received at the September 19, 2019 Liquid Waste Committee meeting and three emails were received. Key themes emerging from the submissions include concerns regarding regional population growth and marine contamination, and a desire for tertiary treatment at all regional wastewater treatment plants.

The Metro Vancouver response table and the email submissions received will be forwarded to the Minister of Environment and Climate Change Strategy.

Attachments

1. Issue-Response Table
2. Correspondence

32937605

October 24, 2019

ILWRMP 2017/2018 Biennial Report Feedback Summary
Issue-Response Table

#	Issue/Comment/Question	Metro Vancouver Response
Email submissions August 9, 2019 and October 4, 2019 from Matsqui First Nation		
1	Concerned for the declining population of fish species and ecosystems in and around the Fraser River and its tributaries.	Metro Vancouver's environmental programs include fish health monitoring in the Fraser River, but the results do not indicate overall deteriorating environmental health patterns from upstream to downstream. Information collected includes data on number and species of fish caught, but there is not enough information to make an assessment on population trends. Metro Vancouver has not done any ecosystem inventories for the Fraser River.
2	Concerned about the growing population and the resulting outflows into waterbodies.	The population growth is expected to increase nutrient and contaminant load to the wastewater treatment plants (WWTPs). Upgrades to the collection system and WWTPs take into consideration regional growth, and a need to ensure compliance with the applicable environmental objectives and guidelines on an ongoing basis. Metro Vancouver's monitoring programs are designed to assess whether the provincial and federal regulatory requirements are being met, and if overall regional liquid waste discharges are effectively managed in a manner that is protective of human and aquatic life.
3	Recommends research into alternative sewage treatment systems that use cleaner environmental processes and materials to manage the outflow of effluents into Fraser River and other waterbodies. (Shared example of recommended closed-loop technology recycling plants designed to move the outflow and discharge into an on land facility/plant that will transfer back to the liquid waste plant with cleaner environmental material used.)	As part of the current upgrades to four of the region's five wastewater treatment plants (Northwest Langley, Iona Island, Annacis Island, and North Shore), Metro Vancouver explores and evaluates combinations of existing and new technologies to improve wastewater treatment to meet or exceed national and provincial wastewater treatment requirements. Since 2011, Metro Vancouver's Annacis Research Centre serves as a laboratory and test facility for universities and industry in evaluating innovations aimed at improving the operation and effectiveness of wastewater treatment. Presently, the use of recycled/reclaimed wastewater is limited due to user demand.
4	Question about if there are environmental studies and reports on liquid waste that may impact soils and waterways, especially near the Fraser River.	All environmental studies are summarized on an annual basis in the GVS&DD Environmental Management & Quality Control Annual Report, available on the Metro Vancouver's website here.

Email submission September 12, 2019 from North Shore Streamkeepers and the North Shore Save Our Shores Society:		
5	Concerned about the negative impact of the cumulative effects of partially treated liquid wastes discharged into our waterways.	Metro Vancouver conducts comprehensive monitoring of the environmental health of water, sediments and biota in the vicinity of its liquid waste system outfalls. In addition, Metro Vancouver's ambient monitoring programs for the Fraser River and Strait of Georgia, among others, have been designed to assess the overall environmental health of the water bodies in the region. These programs provide information about background environmental conditions to help put into context findings of the receiving environment monitoring. The information collected through all of these monitoring programs and studies is used to understand the relative contribution of Metro Vancouver discharges into the waters of the lower Fraser River and the Strait of Georgia.
6	Believe that the 20% greater costs associated with treating liquid waste to a tertiary level is a reasonable price to pay for protecting the environment associated with liquid waste management.	The Metro Vancouver Board Strategic Plan (2019-2022) provides direction to "assess the value of moving to advanced levels of treatment, including tertiary treatment, at each of the wastewater treatment plants."
7	Request that Metro Vancouver adopt a policy of tertiary treatment for all liquid waste and seek ways to use the "clean" discharges to enhance our waterways and people.	The Metro Vancouver Board Strategic Plan (2019-2022) direction to "assess the value of moving to advanced levels of treatment, including tertiary treatment, at each of the wastewater treatment plants" and to "understand the impacts of contaminants on the ecosystem, and consider options for advanced levels of treatment."

Subject: Input Opportunity - Integrated Liquid Waste and Resource Management Plan Progress Report
Attachments: Lion's Gate Wastewater Treatment letter Wilkinson Beech 05 06 19.pdf; McKenna SIGNED REPLY - Dhaliwal - MIN - 251337.pdf; LGWWTP Letter Provincial Liberals.pdf

From: [redacted]
Sent: Thursday, September 12, 2019 12:07 PM
To: LWMP <LWMP@metrovancouver.org>
Cc: [redacted]; 'Lisa Muri' <MuriL@dnv.org>; 'Jonathan. Wilkinson' <Jonathan.Wilkinson@parl.gc.ca>; 'Terry. Beech' <Terry.Beech@parl.gc.ca>; Catherine.McKenna@parl.gc.ca; 'Glen Parker' [redacted]; 'Wiebe, Michael' <Michael.Wiebe@vancouver.ca>; [redacted]; 'Lisa Muri' <MuriL@dnv.org>; 'Dominato, Lisa' <Lisa.Dominato@vancouver.ca>; [redacted]; mayor@dnv.org; mtrentadue@newwestcity.ca; rsvendsen@mapleridge.ca; mayorandcouncillors@richmond.ca; sferguson@tol.ca; dwalker@whiterockcity.ca; mayor@langleycity.ca; rvagramov@portmoody.ca; rstewart@coquitlam.ca; muril@dnv.org; doug.elford@surrey.ca; lisa.dominato@vancouver.ca; pietro.calendino@burnaby.ca; 'Tony Valente (Councillor)' <tvalente@cnv.org>; [redacted]; 'Seyd, Jane (LMP)' <JSeyd@nsnews.com>; [redacted]; 'George Orr' <george.orr@greenparty.ca>; ralph.sultan.MLA@leg.bc.ca; jane.thornthwaite.mla@leg.bc.ca; jordan.sturdy.MLA@leg.bc.ca; bowinMa.MLA@leg.bc.ca; 'Milobar.MLA, Peter' <Peter.Milobar.MLA@leg.bc.ca>; Chair Dhaliwal <chair@metrovancouver.org>; Linda Buchanan <lbuchanan@cnv.org>; 'Mary-Ann Booth' <mbooth@westvancouver.ca>; 'Mike Little' <littlem@dnv.org>
Subject: Input Opportunity - Integrated Liquid Waste and Resource Management Plan Progress Report

Hello: I have been away and realize I have missed the September 9th date for requesting to speak to the committee but I would like to have the following shared with the Liquid Waste Committee:

To Members of the Liquid Waste Committee:

I believe it is safe to say the views expressed below are supported by most "fish groups" and specifically I can speak for the North Shore Streamkeepers and the North Shore Save Our Shores Society.

The message to the committee is that cumulative effects matter and the partially treated liquid wastes discharged into our waterways have a negative impact. Treating liquid waste to a tertiary level costs about 20% more than the minimum legal limit of secondary treatment. We believe 20% is a reasonable price to pay for protecting the environment over the longer terms associated with liquid waste management infrastructure! We request Metro Vancouver adopt a policy of tertiary treatment for all liquid wastes and seek ways to use the "clean" discharges to enhance our waterways for fish and people. Metro attempts to be a leader in so many environmental areas: why are we a laggard with respect to liquid waste management?

Attached are letters to Metro supporting liquid waste treatment at levels beyond the "minimum legal standard" from the DFO Minister Jonathan Wilkinson/MP Terry Beech, from Environment Minister Catherine McKenna and the BC Liberals.

Glen Parker P.Eng.
[redacted]
Home: [redacted], *Mobile:* [redacted]

From: "Cynthia Collins" [redacted]
Date: August 9, 2019 at 9:07:42 AM PDT
To: <tom.sadleir@metrovancouver.org>
Cc: "'Alice'" [redacted]
Subject: Liquid waste

August 9, 2019
Tom
Matsqui First Nation is concerned about the growing population and the outflows into waterbodies and would like to recommend that all sewage systems research other means of outflow of effluents into the Fraser River and other waterbodies that may be utilized.
For example some type of recycling plant to go around and around in the one system- to move the outflow and discharge into a on land facility/plant that will go back to the liquid waste plant and at the same time have cleaner environment material to be utilized in products mentioned.
With the declining population of fish species and ecosystems in and along the Fraser River and mouth of the Fraser River the sewage plants along the Fraser River may be contributing to the fact of the declining population.

Cindy Collins
Matsqui First Nation
Referral Officer

From: Cynthia Collins [redacted]
Sent: Friday, October 4, 2019 11:08 AM
To: Tom Sadleir <Tom.Sadleir@metrovancouver.org>
Cc: alice.mckay [redacted]
Subject: File:PE-13-01-LW-005

Tom
Matsqui First Nation's concerns is with the environmental impacts that may impact soils and waterways especially if it is near the Fraser River.
Is there environmental studies and reports on this liquid waste? With the decreasing population and returns of wild fish species it is important to look at the big picture and ensure that fish are protected
Thanks

Cindy Collins
Matsqui First Nation
Referral Officer

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SERVICES AND SOLUTIONS FOR A LIVABLE REGION

To: Liquid Waste Committee

From: Brent Burton, Division Manager, Policy, Planning and Analysis, Liquid Waste Services

Date: October 31, 2019 Meeting Date: November 14, 2019

Subject: **Feasibility of a Regional Recreational Vehicle Sanitary Dump Facility**

RECOMMENDATION

That the Liquid Waste Committee receive for information the report dated October 31, 2019, titled "Feasibility of a Regional Recreational Vehicle Sanitary Dump Facility".

PURPOSE

This report responds to a request from the Liquid Waste Committee to provide information on the feasibility of a regionally-operated sanitary dump (sani-dump) facility within Metro Vancouver.

BACKGROUND

The report is being brought forward to respond to the following motion passed at the Liquid Waste Committee meeting of June 13, 2019:

> *That the Liquid Waste Committee direct staff to report back with information on the feasibility of a regional sani-dump location*.

A sani-dump facility is designed to receive holding tank wastewater from Recreational Vehicles (RVs). This wastewater is generated from kitchens, showers and toilets within the RV. This sani-dump wastewater is usually discharged into the public wastewater collection system at designated sani-dump facilities.

EXISTING FACILITIES

There are numerous existing sani-dump facilities located in Metro Vancouver and neighbouring regions. Within Metro Vancouver, the Sanidump website (www.sanidumps.com) is a commonly-used resource for RV owners that identifies eleven existing locations, including sites within Vancouver, North Vancouver, Burnaby, Delta, and Maple Ridge. Most are located in RV parks and/or dealerships, provincial parks, and service stations. The website identifies three additional locations at RV parks in the region that are for use by registered guests only. The City of Vancouver recently opened a City-owned sani-dump facility adjacent to their National Works Yard at 701 National Avenue.

A number of private sani-dump facilities have closed in recent years. Closures have been attributed to factors including low returns on investment and operational challenges. Monitoring or supervision of a sani-dump facility is often required to prevent misuse of the system. Metro Vancouver enforcement staff have reported abuse and mistreatment of the sani-dump system, largely from commercial vehicles dumping chemicals or other non-compliant liquids into the wastewater system via sani-dumps. Metro Vancouver staff are currently reviewing regulatory options for sani-dumps to ensure that only RV and similar wastewater is accepted.

CITY OF RICHMOND'S CONSIDERATION OF A MUNICIPAL FACILITY

In 2012, the City of Richmond (City) released an Expression of Interest (EOI) for locating a sanitary dump facility with the City and offered up to $10,000 to assist with the installation of utility services. City staff contacted several potential vendors; however, there was little interest in the opportunity and no vendors responded to the request. The lack of response to the EOI suggested that there was little interest for this type of operation from the commercial sector.

In a 2015 report to the Richmond Parks, Recreation & Cultural Services Committee, City staff also determined that siting a municipal sani-dump facility at the Lulu Island Wastewater Treatment Plant and/or operating a sanitary dump facility at the former Minoru sewage treatment plant were not feasible options for them at that time. *"Due to an absence of functional space, proven low return on investment and the labour-intensive nature of this type of operation",* Richmond staff recommended that the City not pursue a City-owned sani-dump facility. An alternative option, noted in the staff report, was to advise owners of recreational vehicles to empty their holding tanks before returning to Richmond.

REGIONAL FEASIBILITY

Metro Vancouver currently operates five wastewater treatment plants (WWTPs). The location of the Iona Island WWTP is relatively isolated from major transportation corridors. The new North Shore WWTP is being built on a constrained site with no feasibility for a sani-dump. MV Operations staff advise that the Annacis WWTP currently does not have the physical space or protocols in place to accommodate a regional sani-dump facility. The Lulu Island WWTP was previously considered as a site for a municipal sani-dump facility, but was not considered feasible by the City at that time. The design process for upgrading the Northwest Langley WWTP is underway and, to date, no consideration for a regional sani-dump has been undertaken.

Through the Regional Engineers Advisory Committee Liquid Waste Sub-Committee, municipal staff recently advised that there has not been significant public interest in providing sani-dumps within their own municipalities. The challenges previously identified by City of Richmond staff in 2016, including the absence of functional space, proven low return on investment, and the labour-intensive nature of this type of operation will likely continue to exist at the regional level; additional information on these factors is outlined below.

Functional space. In 2016, responding to a new request from the City of Richmond, Metro Vancouver investigated the feasibility of accommodating a potential sani-dump facility at the Lulu Island WWTP. At that time, the site, located at the northwest corner of the plant property off Gilbert Road, could be made available until such time that the GVS&DD required the site for future plant works. Metro Vancouver staff concluded that this location would require a dedicated entrance, separate from the main WWTP entrance, in order to accommodate the necessary traffic management and security. As outlined in a letter of May 5, 2016 to the City of Richmond Mayor and Council (see Attachment), the cost of facility construction was estimated to be $200,000, with an additional estimated $10,000 in annual operating costs for a six-month duration (seasonal).

Equity and low return on investment. Given the capital and operating costs associated with a regional sani-dump facility, there are regional considerations of equity with funding such an investment given that it would service only the relatively small portion of the population that own RVs.

Existing private sector sani-dumps typically charge between $5 and $10 per vehicle. To fully recover the estimated annual operational costs of at least $10,000, a regional facility would need to attract 1000 - 2000 vehicle trips in its 6 months of operation. In order to recover capital costs, this user fee would need to increase significantly.

Labour-intensive nature of this type of operation. Due to the high potential for misuse of a regional sani-dump facility, staffing, potentially combined with a monitoring system, would be required. In the absence of a staffed facility, security and monitoring systems, coupled with additional sampling and analysis, may be appropriate.

A regional sani-dump facility and the associated operating costs are not in the current GVS&DD program budget.

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

FINANCIAL IMPLICATIONS
This is an information report; there are no financial implications.

SUMMARY / CONCLUSION
The Liquid Waste Committee requested that Metro Vancouver staff investigate the feasibility of providing a regionally-operated sani-dump facility. Available information indicates that an estimated eleven sani-dump stations are already operating within Metro Vancouver, and that market interest is low in providing new facilities.

In 2016, at the request of the City of Richmond, Metro Vancouver investigated the option of accommodating a municipally-operated sani-dump facility at the Lulu Island WWTP. Conceptual construction costs were estimated at $200,000, with an additional $10,000 in annual operating costs. At that time, Richmond staff determined that operating a facility at Lulu Island WWTP, or on municipally-owned lands at the former Minoru treatment plant, was not feasible. The challenges cited by Richmond staff also likely exist at the regional level and are currently foreseen to continue; there are also potential considerations of equity in funding such an investment given that it would only service the relatively small portion of the population that own RVs.

Attachment
1. Excerpt from letter to City of Richmond without original attachments, titled “Recreational Vehicle Sanitary Dump Station”, dated May 5, 2016.

32565608

ATTACHMENT

metrovancouver
SERVICES AND SOLUTIONS FOR A LIVABLE REGION

Office of the Commissioner/ Chief Administrative Officer
Tel. 604 432-6210 Fax 604 454-6614

File: CR-07-01-RIC

MAY 0 5 2016

Mayor Malcolm Brodie and Council
City of Richmond
6911 No. 3 Road
Richmond, BC V6Y 2C1
VIA EMAIL: mayorea@richmond.ca

Dear Mayor Brodie and Council:

Re: Recreational Vehicle Sanitary Dump Station

Thank you for your letter asking Metro Vancouver to further consider establishing a sanitary dump station for recreational vehicles at the Iona Island or Lulu Island Wastewater Treatment Plants. We have been in contact with Richmond staff to discuss the feasibility and options for such a facility.

Unfortunately, a sanitary dump station located at the Iona Island plant is not feasible at this time due to the upcoming secondary treatment upgrade project which will have a significant impact on this location. Additionally, there are land tenure issues at this location as the Greater Vancouver Sewerage and Drainage District (GVS&DD) does not have full ownership of all lands at this site.

A potential alternative site may be available at the Lulu Island Wastewater Treatment Plant for a sanitary facility at this location once the construction works associated with the twinning of the Gilbert Trunk Sewer are complete. The area located at the northwest corner of the plant property off Gilbert Road would be available until such time that the GVS&DD requires the site for future plant works. An initial conceptual cost of approximately $200,000 has been estimated to construct a facility at this location (see Attachments 1 and 2) and an annual cost of approximately $10,000 is anticipated to operate the station for a six-month duration.

Given the cost of constructing a purpose-built sanitary dump facility, as an alternative we have attached a map (see Attachment 3) that identifies several existing RV sani-dump stations located within the region. Most are located in RV parks, dealerships, provincial parks, and service stations. We understand that some of the existing facilities have minimal usage and are operated seasonally, creating uncertainty with respect to year-round staffing, sufficient funding, security and maintenance issues.

As the expected use of a new facility in Richmond is uncertain, we propose that your municipality consider conducting a survey to determine the actual demand for a sanitary dump station located

within the City prior to proceeding further with this concept. Metro Vancouver staff are available to work with your staff to assist in considering these options.

Yours truly,

Carol Mason
Commissioner/ Chief Administrative Officer

CM/SS/FN/mw

cc: Robert Gonzalez, General Manager, Engineering & Public Works, City of Richmond
Tom Stewart, Director, Public Works Operations, City of Richmond

Attachments: (*17571126*)

1. Potential Location at the Lulu Island WWTP
2. Conceptual Layout and Costs
3. RV Dump Stations Map

ECOWASTE

October 31, 2019

Metro Vancouver Zero Waste Committee
Board & Information Services
4730 Kingsway
Burnaby, BC V5H 0C6

To Whom this May Concern:

RE: Application to speak to Metro Vancouver Zero Waste Committee Meeting on November 15, 2019

Please accept this letter and information herewith as our application to present to the Metro Vancouver Zero Waste Committee on Friday, November 15th, 2019.

1. **Contact Information:** Carmen Garbett, Executive Assistant
   Ecowaste Industries Ltd.
   Direct: 236-454-2642 / Cell: 604-916-7074
   cgarbett@montroseproperty.com

2. **Presenter:** Tom Land, President & CEO
   Ecowaste Industries Ltd.

3. **Committee:** Zero Waste Committee

4. **Committee Meeting Date**: November 15, 2019

5. **Subject of Presentation**: The regional impact of Ecowaste Industries' plans to build a fully automated facility to divert Construction & Demolition waste and extend the life of its landfill by up to 20 years.

6. **Action for Committee**: Enforce regulations consistently across all participants in the region. Don't get into competition with the private sector. Include Ecowaste Industries as a knowledgeable resource in the upcoming update to the Integrated Solid Waste and Resource Management Plan.

7. Presentation Summary

a. Brief history and background of Ecowaste Industries Ltd. and parent company Montrose Property Holdings Ltd.
b. Overview of Ecowaste's investment in diversion recycling and disposal activities.
c. Local disposal options, statistics and remaining landfill life.
d. Ecowaste's diversion plans.
e. Impact our investment will have on the regional diversion rate.

If you have any questions, please do not hesitate to contact the undersigned. Thank you for considering our application and we look forward to your response.

Yours truly,

Carmen Garbett
Executive Assistant
Ecowaste Industries Ltd.

Zero Waste Committee Presentation summary:
Re: 100% natural alternative to single use plastic bags in Canada

As the Canadian distributor of this new natural alternative to single use plastic bags, we want to present a brief overview of the science of this natural plastic alternative product. We will briefly discuss the key points of what makes the product so different, precedents requiring companies to become innovative in reducing wasteful activities and our initiative to minimize both costs and waste deposal of plastic bags stocks to help municipalities change to alternatives now.

The initiative offers municipalities purchase credit towards compostable bags worth as much as they paid for their current plastic bag inventory, potentially allowing for huge discounts on a product that is soil-saving and pollution-preventing.

We will create a PowerPouint presentation and keep the talk informative and brief.

Best regards,
Wil Tarnasky, owner and presenter,
Svi Distributing/Beyond Green-bioDOGradable

info@sportsfleets.com
778-371-9541

To: Metro Vancouver Zero Waste Committee
From: Michael R. Stephen, P.Ag.

Date: November 13, 2019 Meeting Date: November 15, 2019

Subject: **Plastic Debris in Compost related to Item 5.1 on agenda for November 15, 2019**

RECOMMENDATION

That the Zero Waste Committee:

a) Consider the possibility that a significant proportion of the yard and food waste that is reported as recycled in Item 5.1 of today's agenda was contaminated with plastic and other debris (collectively known as "foreign debris"), and that this material did not comply with the applicable standards.
b) Direct staff to create and implement a policy whereby Metro Vancouver's members use only compost products that are virtually free of foreign debris.
c) Ask the federal and provincial governments to help compost producers to quickly comply with the applicable government standards regarding foreign debris.
d) Direct staff to create and implement a region-wide plan that applies to all compost production and use, ensuring it is virtually free of foreign debris.
e) Direct staff to map and rate according to risk level the location of soils that have been contaminated with foreign debris from compost products, starting with sensitive sites such as community gardens and farms. Staff should then remediate or develop containment plans for these contaminated soils.

PURPOSE

To inform the Zero Waste Committee about plastic and other debris contamination in compost products, and to recommend initial solutions.

BACKGROUND

The issue of plastic and glass fragments contaminating compost is relevant to the "Recycling" section on the top of page 3 of agenda item 5.1: *Recycling and Solid Waste Management 2018 Report*.

Agenda item 5.1 indicates that 430,000 tonnes of yard and food waste were recycled in 2018. However, my research indicates that at least 100,000 tonnes of this compost was produced at Harvest Power in Richmond and was contaminated with significant quantities of foreign debris which did not comply with the applicable standards. Some of these standards include the following:

- B.C. Organic Matter Recycling Regulation (OMRR)
- B.C. Environmental Management Act; Public Health Act; Code of Practice for Soil Amendments
- Canadian Fertilizers Act and Regulations.

THE ISSUE

I frequently observe that the City of Vancouver and private companies use soil products derived from compost that is heavily contaminated with plastic and other debris This is a region-wide issue, as I find this debris within almost every sample of compost-derived soil that I stop to inspect anywhere I go within Metro Vancouver.

Foreign debris is mainly comprised of sheet plastic, but also includes sharp fragments of glass and hard plastic. For example, this month I noticed that contaminated soil had been recently spread over the boulevard in front of a private home (see **Photo 1**). This photo shows the debris that I picked from this soil in only about one minute. The home owner's response was dismay: "I pay $50,000 per year in property taxes and the city dumps garbage on my front lawn?"

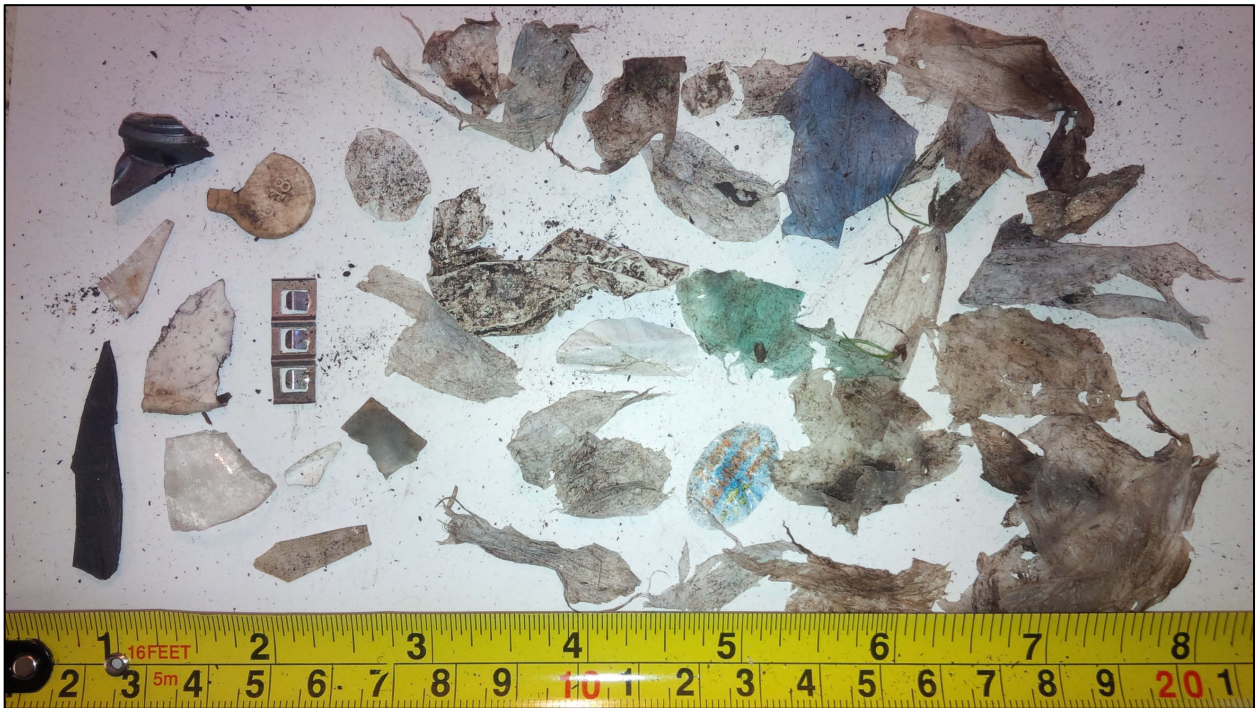

Photo 1: Foreign debris collected in one minute from city boulevard soil.

In addition to aesthetic consequences, sharp debris is a safety hazard, and plastic waste causes well-recognized environmental harm. Furthermore, recently published scientific research shows that plastic can be physically and chemically incorporated into plant tissue in food crops. Of special concern, therefore, is the use of contaminated compost for growing food: the soil of every community garden in Metro Vancouver that I have visited contains obvious quantities of plastic debris.

Compost production can be an important way to divert organic waste from landfills while creating a valuable soil amendment. However, great care is needed to keep unwanted garbage out of the compost ingredients. Local governments can use their legislative authority, buying power, and public education abilities to greatly improve compost quality within their regions.

To: Zero Waste Committee

From: Allen Jensen, Project Engineer, Solid Waste Services

Date: November 8, 2019 Meeting Date: November 15, 2019

Subject: **2018 Regional Solid Waste System Summary**

RECOMMENDATION

That the Zero Waste Committee receive for information the report dated November 8, 2019 titled "2018 Regional Solid Waste System Summary".

PURPOSE

To provide the Zero Waste Committee with an overview of the waste management services provided by the regional solid waste system in 2018.

BACKGROUND

Metro Vancouver's network of solid waste facilities serves residents and businesses throughout the region. Zero Waste Committee members have identified that a summary of the regional solid waste system would assist the Committee and the public in understanding the solid waste services provided by Metro Vancouver. This report provides an overview of the key statistics for the regional solid waste system in 2018 as well as fact sheets with details on each Metro Vancouver transfer station and the Waste-to-Energy Facility. The fact sheets will be available on Metro Vancouver's website.

REGIONAL SOLID WASTE SYSTEM

The regional solid waste management system, includes:

- Metro Vancouver facilities:
  - North Shore Transfer Station;
  - Coquitlam Transfer Station;
  - Surrey Transfer Station;
  - Maple Ridge Transfer Station;
  - Langley Transfer Station; and
  - Waste-to-Energy Facility.
- City of Vancouver facilities:
  - Vancouver South Transfer Station; and
  - Vancouver Landfill.

Transfer stations all provide a range of services including receipt of municipal solid waste and paid recycling, such as clean wood, organics, gypsum and mattresses. Metro Vancouver provides free recycling (drop-off of recyclables) at recycling depots at the North Shore Transfer Station and the Coquitlam Transfer Station.

The non-profit Ridge Meadows Recycling Society operates a recycling depot adjacent to the Maple Ridge Transfer Station. The new Surrey Recycling and Waste Drop-Off facility and the replacement

Coquitlam Transfer Station will both have recycling depots. Recycling facilities are also available at City of Vancouver facilities. As part of the upcoming regional solid waste system assessment study opportunities to improve recycling services at the Surrey and Langley Transfer Stations will be investigated.

Customer Use of Metro Vancouver Solid Waste Facilities

Table 1 provides a summary of the number of customers and material quantities received at Metro Vancouver's solid waste facilities.

Table 1: 2018 Metro Vancouver Solid Waste System Summary Data

MATERIAL(S)	CUSTOMERS	TONNES
Garbage	**565,862**	**782,067**
Clean Wood, Organics & Other Paid Recycling	**160,865**	**57,883**
Gypsum	**12,477**	**1,036**
Mattresses	**56,846 units**	**2,019**
Free Recycling	**377,295**	**10,457**

Metro Vancouver facilities received 968,700 customer visits in 2018. This number was calculated by combining the garbage, clean wood, organics, gypsum and mattress customers and portion of the free recycling customers at the North Shore and Coquitlam Transfer Stations. Some recycling depot customers at the North Shore and Coquitlam Transfer Stations dropped off both garbage and recycling on the same trip and therefore are only counted once in the total. Of the garbage loads delivered to Metro Vancouver transfer stations, 85% or approximately 450,000 are loads less than 1 tonne with an average load weight of 200 kg.

Paid Recycling includes yard trimmings, clean wood and gypsum along with other limited recyclables received at the Surrey and Langley Transfer Stations. All recycling at the Surrey and Langley Transfer Stations is located behind the scales. Users typically combine recyclables with waste and pay the garbage rate on the full load.

Compared to 2017, system-wide customers and material quantities stayed approximately the same for 2018.

Waste Flows and Disposal Destination

Table 2 provides a summary of residential and commercial/institutional waste quantities and tonnages that were handled by the regional solid waste management system including Vancouver facilities and their disposal destination.

Table 2: 2018 Regional Garbage Disposal Destination

DESTINATION	MUNICIPAL SOLID WASTE (tonnes)
Vancouver Landfill	**619,514**
Waste-to-Energy Facility	**239,421**
Contingency Disposal	**58,679**
Total	**917,614**

As noted in Table 2, the overall residential and commercial/institutional waste delivered to Metro Vancouver and City of Vancouver facilities in 2018 equaled 917,614 tonnes. This compares to 903,750 tonnes of residential and commercial/institutional waste delivered to the system in 2017. In addition to residential and commercial/institutional waste, the Vancouver Landfill received an additional 98,394 tonnes of construction and demolition material and utility residuals for a total Operational Certificate disposal quantity of 717,908 tonnes. The Waste-to-Energy Facility received 13,705 tonnes of utility residuals and international waste for a total Operational Certificate disposal quantity of 253,126 tonnes.

In 2018, 42,539 tonnes of bottom ash were generated at the Waste-to-Energy Facility and were beneficially used as part of the construction of the new Coquitlam Transfer Station at the former Coquitlam Landfill. Metro Vancouver is initiating a procurement process for beneficial uses of bottom ash. The 10,479 tonnes of fly ash from the Waste-to-Energy Facility in 2018 was sent to a landfill in Oregon under contract to Metro Vancouver.

Contingency disposal tonnage in 2018 equaled 58,679 tonnes compared to 85,779 tonnes in 2017. Contingency disposal waste was sent to two landfills in Washington and Oregon under contract to Metro Vancouver.

Individual Metro Vancouver Solid Waste Facilities Statistics
Fact sheets with details of each of Metro Vancouver's solid waste facilities are included in Attachment 1, and will be posted on the Metro Vancouver website.

Tables 3 & 4 show the same information as Table 1, broken down by facility.

Table 3: Summary of Annual Customers at Facilities

MATERIAL (customers)	NORTH SHORE	COQUITLAM	SURREY	MAPLE RIDGE	LANGLEY	WASTE-to-ENERGY FACILITY	TOTAL
Garbage	**122,996**	**141,368**	**138,900**	**86,066**	**51,174**	**25,358**	**565,862**
Clean Wood, Organics & Other Paid Recycling	**48,830**	**27,144**	**32,747**	**28,026**	**24,118**	**n/a**	**160,865**
Gypsum	**3,524**	**2,310**	**1,852**	**2,224**	**2,567**	**n/a**	**12,477**
Mattresses (units)	**14,403**	**17,780**	**12,747**	**4,669**	**7,247**	**n/a**	**56,846**
Free Recycling	**210,729**	**166,566**	**n/a**	**n/a**	**n/a**	**n/a**	**377,295**

Table 4: Summary of Annual Waste & Recyclables Quantities at Facilities

MATERIAL (tonnes)	NORTH SHORE	COQUITLAM	SURREY	MAPLE RIDGE	LANGLEY	WASTE-to-ENERGY FACILITY	TOTAL
Garbage	124,322	182,969	217,287	10,156	7,814	239,520	782,067
Clean Wood, Organics & Other Paid Recycling	37,489	7,214	5,506	3,682	3,992	n/a	57,883
Gypsum	385	232	148	146	126	n/a	1,036
Mattresses	807	537	325	223	126	n/a	2,019
Free Recycling	5,295	5,162	n/a	n/a	n/a	n/a	10,457

The North Shore Transfer Station has the highest number of overall customer visits because of the number of recycling depot users. Paid Recycling at the North Shore Transfer Station includes single family residential organics collected by the North Shore municipalities. Surrey Transfer Station received the most garbage.

2018 Project Highlights

The 2018 project highlights for the five Metro Vancouver transfer stations include:

- Scale replacements at 3 solid waste facilities (Langley Transfer Station, Maple Ridge Transfer Station and the Waste-to-Energy Facility).
- Signature pads to replace printed duplicate tickets.
- Matsqui Transfer Station deconstruction.
- Transfer station lighting upgrades to reduce energy use at North Shore and Surrey Transfer Stations.

ALTERNATIVES

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

FINANCIAL IMPLICATIONS

This report provides information on customer trips and waste quantities in the regional solid waste system. Financial reporting for the regional solid waste system is included in annual budget reports.

SUMMARY / CONCLUSION

Metro Vancouver operates five transfer stations and the Waste-to-Energy Facility. The City of Vancouver operates the Vancouver Transfer Station and the Vancouver Landfill. These facilities make up the regional solid waste system. This report provides summary information with respect to facility operations in 2018. Detailed fact sheets are included as attachments to the report and will be provided on the Metro Vancouver website. Overall the Metro Vancouver Solid Waste system served 968,700 customers in 2018, approximately the same number of customers as in 2017. Overall regional residential and commercial/institutional waste quantities equaled 917,614 tonnes up slightly from 2017.

Attachment

Metro Vancouver Solid Waste System Fact Sheets

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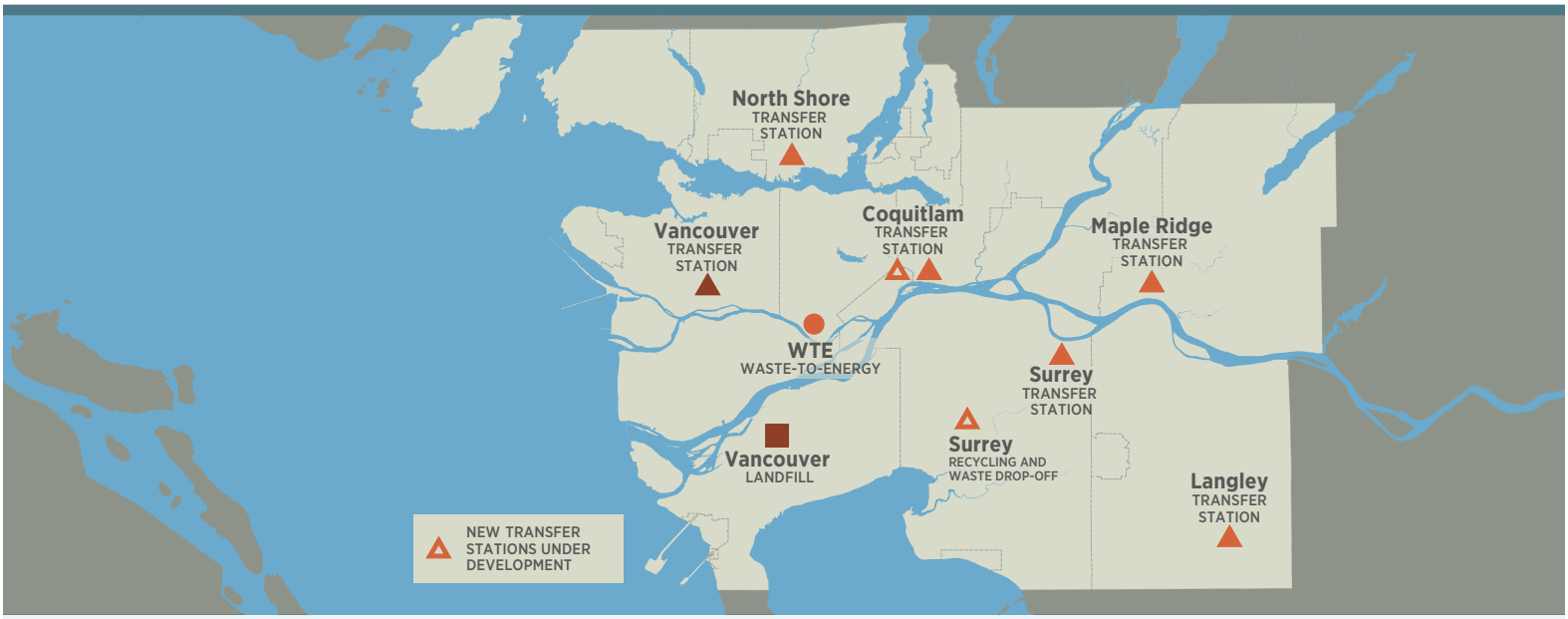


Metro Vancouver

Solid Waste System

System Description

Metro Vancouver is responsible for waste reduction, recycling planning, and the operation of a series of solid waste facilities in the region. Planning for less waste, improving reuse and recycling systems and managing the remaining waste reflects the public's expectations of high environmental stewardship, as well as the desire to keep waste management affordable.

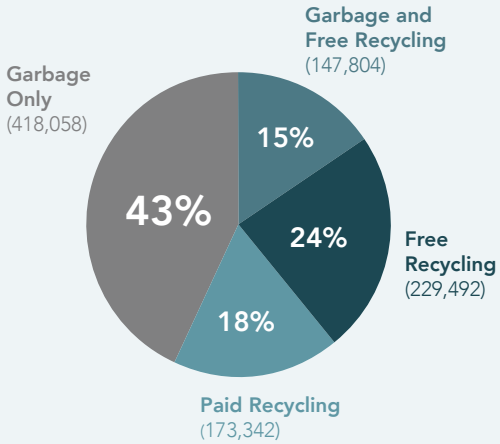
Metro Vancouver operates five transfer stations where residents and businesses drop off garbage, yard trimmings and a variety of other recyclable materials. Garbage remaining after recycling is managed at the Metro Vancouver Waste-to-Energy Facility and the Vancouver Landfill. The Vancouver Landfill and Vancouver Transfer Station are owned and operated by the City of Vancouver. Garbage in excess of what can be managed at local facilities is shipped to remote landfills for disposal.

Metro Vancouver also created the National Zero Waste Council and runs a number of behavior change campaigns such as Love Food Hate Waste, Food Scraps Recycling, Create Memories not Garbage, and Think Thrice About Your Clothes.

Annual number of customers: 968,696
Garbage: 917,614 tonnes*
Paid Recycling: 60,938 tonnes
Free Recycling: 10,457 tonnes

MATERIAL(S)	CUSTOMERS	TONNES
Garbage	565,862	782,067
Clean Wood, Organics & Other Paid Recycling	160,865	57,883
Gypsum	12,477	1,036
Mattresses	56,846 units	2,019
Free Recycling	377,295	10,457

2018 Customer Use of Solid Waste Facilities



*In addition to residential and commercial/institutional waste the Waste-to-Energy Facility received 13,705 tonnes of utility residuals waste and international waste. The Vancouver Landfill received 86,663 tonnes of construction & demolition and 19,447 tonnes utility residuals. In 2018, 42,539 tonnes of bottom ash from the Waste-to-Energy Facility was beneficially used as fill at the former Coquitlam Landfill, the site of the new Coquitlam Transfer Station. The 917,614 tonnes of garbage is the regional total, while the number of customers is only based on Metro Vancouver facilities.

30 Riverside Drive, North Vancouver

North Shore
Transfer Station

Facility Description

The North Shore Transfer Station accepts garbage and a wide range of recyclables from both small and large vehicles. It has both attended and automated scales, the latter for use mainly by account customers with mechanically unloaded vehicles. Garbage is unloaded onto a tipping floor in the main building and a front end loader pushes the waste into an underground compactor for shipment to disposal. Green waste, clean wood, gypsum and mattresses are accepted for recycling for a fee. A recycling depot where customers can drop off materials for free is located ahead of the scales. Accepted materials include batteries, electronics, cardboard, metal, expanded polystyrene, containers and plastic bags, light bulbs, cooking oil, books and textiles.

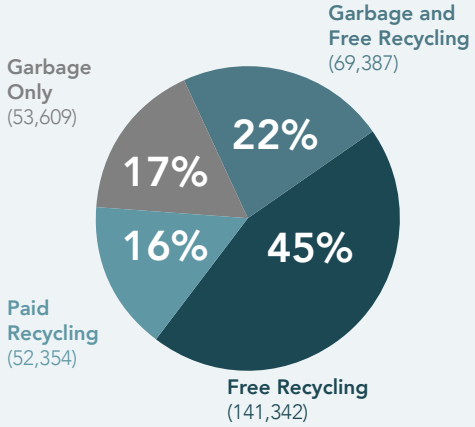
Site Area: 1.78 hectares (4.4 acres) including green waste yard

Building Area: 51 m x 61 m = 3,100 m^2

Annual number of customers: 316,692

MATERIAL(S)	CUSTOMERS	TONNES
Garbage	122,996	124,322
Clean Wood, Organics & Other Paid Recycling	48,830	37,489
Gypsum	3,524	385
Mattresses	14,403 units	807
Free Recycling	210,729	5,295

Customer Use of North Shore Transfer Station



1200 United Boulevard, Coquitlam

Coquitlam

Transfer Station

Facility Description

The Coquitlam Transfer Station accepts garbage and a wide range of recyclables from both small and large vehicles. It has both attended and automated scales, the latter for use mainly by account customers with mechanically unloaded vehicles. Garbage is unloaded onto a tipping floor in the main building and a front end loader pushes the waste into an underground compactor for shipment to disposal. Green waste, clean wood, gypsum and mattresses are accepted for recycling for a fee. A recycling depot where customers can drop off materials for free is located ahead of the scales. Accepted materials include batteries, electronics, cardboard, metal, expanded polystyrene, glass packaging, light bulbs, cooking oil, books and thermostats.

Site Area: 2.681 hectares (6.625 acres)

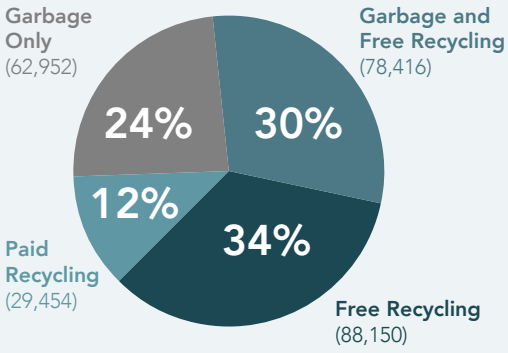
Building Area: 50 m x 78 m = 3,900 m^2

Annual number of customers: 258,972

MATERIAL(S)	CUSTOMERS	TONNES
Garbage	141,368	182,969
Clean Wood, Organics & Other Paid Recycling	27,144	7,214
Gypsum	2,310	232
Mattresses	17,780 units	537
Free Recycling	166,566	5,162

Metro Vancouver is constructing a new transfer station on the former Coquitlam Landfill site one kilometre west of the current location. Construction is ongoing and the new transfer station will open at the end of 2020.

Customer Use of Coquitlam Transfer Station



9770 192nd Street, Surrey

Surrey Transfer Station

Facility Description

The Surrey Transfer Station accepts garbage and a limited number of recyclables from both small and large vehicles. It has both attended and automated scales, the latter for use mainly by account customers with mechanically unloaded vehicles. Garbage is unloaded into a pit for mechanical unloading vehicles and onto the tipping floor for small vehicles. A front end loader pushes the waste into an underground compactor for shipment to disposal. Green waste, clean wood, gypsum and mattresses and a number of other materials are accepted for recycling for a fee. General recyclables such as metals are managed within the transfer station building, and customers typically pay for the recyclables based on weight along with garbage.

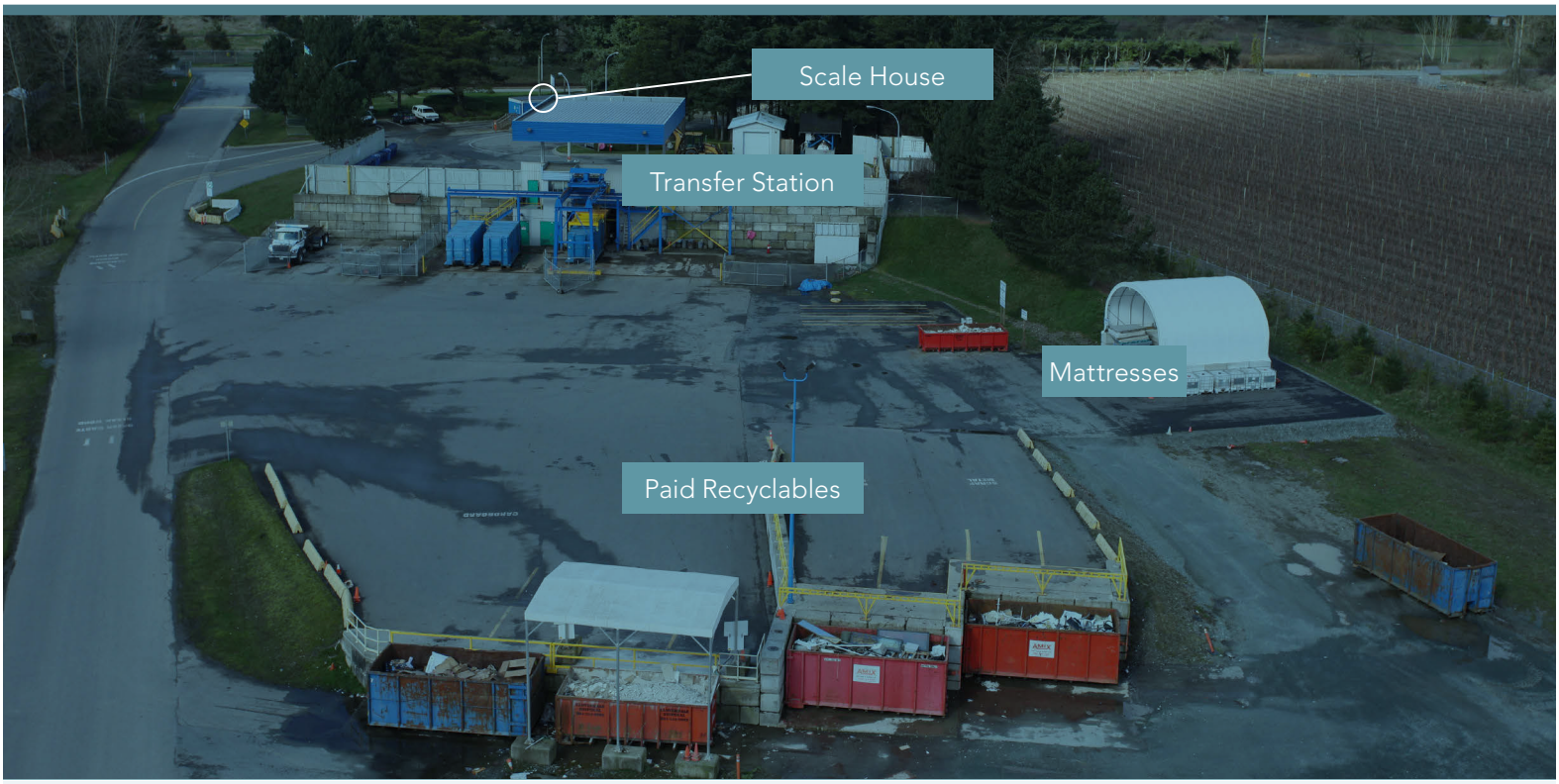
MATERIAL(S)	CUSTOMERS	TONNES
Garbage	138,900	217,287
Clean Wood, Organics & Other Paid Recycling	32,747	5,506
Gypsum	1,852	148
Mattresses	12,747 units	325

Metro Vancouver is developing a new recycling and solid waste drop-off facility at 6711 – 154 Street in Surrey to increase the convenience of recycling and waste management for residents, reduce traffic and help to reduce illegal dumping. The new drop-off facility is expected to open in 2021.

Site Area: 2 hectares (5 acres)

Building Area: 60 m x 88 m = 5,400 m^2

Annual number of customers: 173,499



1070 – 272nd Street, Aldergrove

Langley Transfer Station

Facility Description

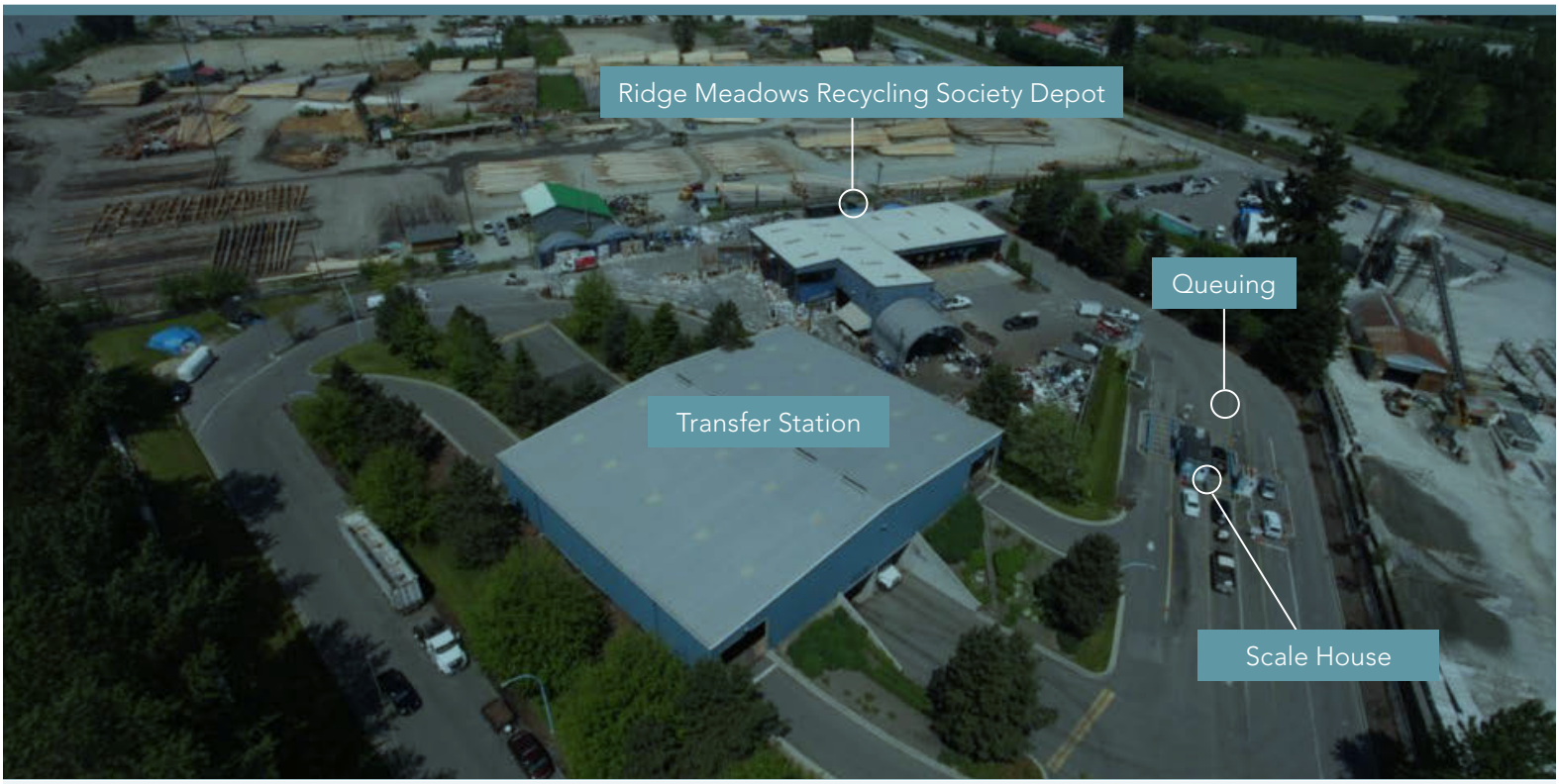
The Langley Transfer Station accepts garbage and limited recyclables from customers in small vehicles. It has attended scales only, and is not used by mechanically unloading trucks. Garbage is hand-unloaded by customers onto a walking floor that is then loaded into a compactor container. Recyclables accepted for a fee include green waste, clean wood, gypsum and mattresses. Other recyclables such as batteries, cardboard, metals, plastic bags and containers, refillable propane tanks and oil filters, are accepted within the transfer station area, and customers typically pay for the recyclables based on weight along with garbage.

MATERIAL(S)	CUSTOMERS	TONNES
Garbage	51,174	7,814
Clean Wood, Organics & Other Paid Recycling	24,118	3,992
Gypsum	2,567	126
Mattresses	7,247 units	126

Site Area: 3.86 hectares (9.5 acres)

Building Area: 1,672 m^2

Annual number of customers: 77,859



10092 – 236th Street, Maple Ridge

Maple Ridge Transfer Station

Facility Description

The Maple Ridge Transfer Station accepts garbage and a number of recyclables from small vehicles that are hand-unloaded. It has attended scales only, and is not used by mechanically unloading trucks. Garbage is unloaded directly into trailers located below the tipping floor. Green waste, clean wood, new and used gypsum and mattresses are accepted for recycling for a fee. A recycling depot, operated by Ridge Meadows Recycling Society, accepts recyclable materials for free and is adjacent to the transfer station.

MATERIAL(S)	CUSTOMERS	TONNES
Garbage	86,066	10,156
Clean Wood, Organics & Other Paid Recycling	28,026	3,682
Gypsum	2,224	146
Mattresses	4,669 units	223

Site Area: 2.43 hectares (6 acres), part of site leased to Ridge Meadows Recycling Society

Building Area: 45 m x 35 m = 1,575 m^2

Annual number of customers: 116,316

5150 Riverbend Drive, Burnaby

Waste-to-Energy Facility

Facility Description

Metro Vancouver's Waste-to-Energy Facility has operated in Burnaby since 1988 and handles about 250,000 tonnes of garbage per year – roughly a quarter of the region's garbage. It is a mass-burn facility that turns waste into electricity (enough to power 16,000 homes) and recovers approximately 6,500 tonnes of ferrous and 500 tonnes of non-ferrous metal annually.

The waste-to-energy process is monitored 24 hours a day, seven days a week, 365 days a year from a control room located on site. Facility emissions data and compliance reports are available on Metro Vancouver's website in real time. The range of emissions monitored, includes common air contaminants such as nitrogen oxides (NOx) and particulate matter (PM), as well as acid gases, trace metals, trace organics, and dioxins / furans.

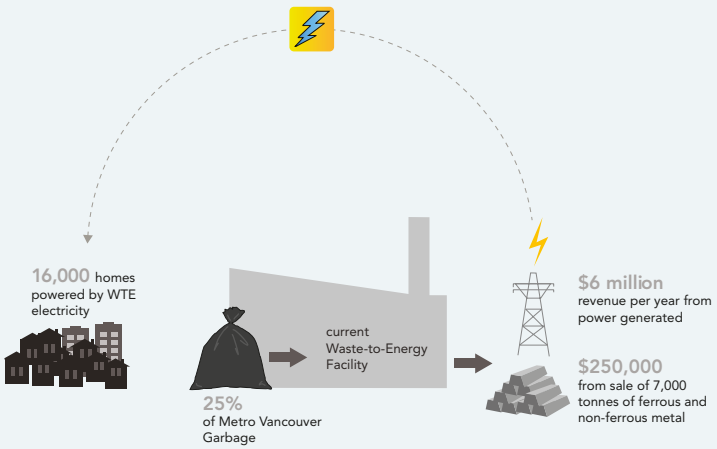
The facility receives waste from an average of 80 mechanically unloading trucks per day that empty their loads into a large garbage bunker.

Site Area: 1.8 hectares (4.4 acres)

Building Area: 70 m x 70 m = 4,900 m^2

Annual number of customers: 25,358

2018 tonnage: 253,126 tonnes



To: Zero Waste Committee

From: Terry Fulton, Project Engineer, Solid Waste Services

Date: November 7, 2019 Meeting Date: November 15, 2019

Subject: **Alternative Fuel and Recyclables Recovery Project Procurement Update**

RECOMMENDATION

That the Zero Waste Committee receive for information the report dated November 7, 2019 titled "Alternative Fuel and Recyclables Recovery Project Procurement Update".

PURPOSE

The purpose of this report is to update the Zero Waste Committee on the procurement status and project scope for the alternative fuel and recyclables recovery project business case.

BACKGROUND

On July 12, 2019, the Zero Waste Committee was updated on business case development for an alternative fuel and recyclables recovery centre. The project would involve segregating small vehicle loads delivered to regional transfer stations and processing that material to recover recyclables and alternative fuel at the Coquitlam Landfill. Since July, staff have sought input on the scope of the business case, and shortlisted consulting firms to undertake the business casing work. This report updates the Zero Waste Committee on the project progress, and provides information on the feedback received on the draft project scope.

ALTERNATIVE FUEL AND RECYCLABLES RECOVERY PROJECT

On July 19, 2019, Metro Vancouver publicly posted a Request for Qualifications for the alternative fuel and recyclables recovery project business case. Five consulting firms responded and two were shortlisted to continue to the Request for Proposals process.

Prior to proceeding with a formal Request for Proposals, Metro Vancouver provided a summary of the alternative fuel and recyclables recovery project to solid waste and recycling associations, potential end users, private waste haulers, member jurisdictions, and the Ministry of Environment and Climate Change Strategy.

Metro Vancouver received feedback from the Fraser Valley Regional District and Sue Maxwell on behalf of Zero Waste B.C. The project scope was updated to address air quality concerns and ensure the highest and best end use of available material. The updated scope is included in Attachment 1. Copies of the correspondence from the Fraser Valley Regional District and Zero Waste B.C. are provided as Attachments 2 and 3. The Request for Proposals, was sent to shortlisted proponents in early November. The business case is expected to be initiated in early 2020.

ALTERNATIVES

This is an information report. No alternatives are presented.

FINANCIAL IMPLICATIONS

Funding for conducting the business case will be provided from the 2020 Solid Waste Services budget as previously reported to the Board. The expected cost of the business case is approximately $300,000. The business case will include expected costs and revenues related to the proposed alternative fuel and recyclables recovery project for the Board's consideration.

SUMMARY / CONCLUSION

Procurement is underway for the alternative fuel and recyclables recovery project business case. Metro Vancouver received feedback on the proposed scope of work from the Fraser Valley Regional District and Sue Maxwell on behalf of Zero Waste B.C. The Request for Proposals was issued in early November. The business case is expected to be initiated in early 2020.

Attachments *(Orbit #33417569)*

1. Scope of Services for Alternative Fuel and Recyclables Recovery Project Business Case
2. Letter from Lance Lilley, Manager of Environmental Services, Fraser Valley Regional District re: Feedback on Alternative Fuel and Recyclable dated September 24, 2019
3. E-mail from Zero Waste B.C., re: Feedback for MV's Alternative Fuel and Recyclable Material Recovery Project dated September 24, 2019

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DRAFT RFP SCOPE OF SERVICES – ALTERNATIVE FUEL AND RECYCLABLES RECOVERY PROJECT

Metro Vancouver is seeking Consulting services to complete the following tasks:

1. Task 1: Concept Design

1.1. Review existing Metro Vancouver studies and evaluate material processing options.

1.2. Participate in 10 – 15 meetings at various locations within the region (approximately 1.5 hours per meeting) with interested parties to discuss project scope and business case constraints and opportunities. Metro Vancouver expects interest from cement plants and the Cement Association, other wood-based fuel users, recyclables processors, construction and demolition haulers and processors, construction and development companies, GVS&DD member jurisdictions, industry associations and others.

1.3. In consultation with Metro Vancouver, develop and analyze three concept design options. Key questions to be addressed include:

- What type of processing equipment will likely be utilized and how does that impact site design? What recovery rate can be expected from each option?
- What types of vehicles will be expected and how will that impact the design of the site? (e.g. transfer trailers, demolition trailers, roll-off trucks etc.)
- How will vehicles be scaled in and out of the facility?
- How much on-site storage of material should be accommodated based on end market demand and utilization timeframe?
- How will landfill gas and landfill cover systems meet landfill closure plan requirements?
- What is the optimum area for a processing building on the site given site constraints and the following criteria:
    - Ability to support large vehicle and material loads
    - Material management features (e.g. push walls)
    - All material storage to be fully enclosed
    - Appropriate HVAC for dust and emissions controls
    - Vector control features
    - Flexibility to accommodate a variety of conveyor, screening and shredding equipment layouts
    - Office area either integrated into the building or dedicated
    - Energy efficient and sustainable design based on the Envision Sustainability Infrastructure Scoring System with the approach being to track scoring, but not register.

1.4. Recommend measures to minimize the potential for hazardous materials and maximize recyclables recovery by analyzing:

- Small vehicle waste composition

- Transfer station recycling systems
- Metro Vancouver solid waste educational and monitoring systems
- Alternative Fuel and Recyclables Recovery system processing/equipment

2. Task 2: Business Case

2.1. Based on the preferred concept design, develop capital costs related to the development of the facility including:
- Permitting
- Design and engineering
- Geotechnical site improvements
- Building(s)
- Active and passive landfill gas collection network expansion
- Landfill cover system meeting the current approved landfill closure plan
- Scale system for weighing materials in and out compatible with Metro Vancouver systems
- Circulation areas
- Bulk material handling and storage areas
- Site access and parking
- Security and camera systems
- Landscaping and other ancillary design requirements

2.2. Identify and evaluate up to five potential business models for service delivery (e.g. design, build, operate; Metro Vancouver provides building and contractor provides and operates equipment; Metro Vancouver provides building and equipment and contractor operates, Metro Vancouver operates with own forces, etc.)

2.3. Evaluate expected cost per processed tonne, royalty and payback scenarios. The analysis should be based on Metro Vancouver delivering up to 50,000 to 60,000 tonnes per year of small vehicle waste with the potential for the facility operator to source additional feedstock including construction and demolition waste or source separated materials such as clean wood for a total processing capacity of up to approximately 100,000 to 125,000 tonnes per year.

2.4. Identify any barriers/risks to proceeding with the project, and mitigation strategies to manage the barriers/risks.

2.5. Develop a risk/responsibility/benefit distribution matrix for the project with recommendations on a range of issues including but not limited to:
- Procurement strategy/elements/timing including specifying various contracts required to undertake initiative
- Contract term
- Permitting responsibilities
- Risk allocation including risk related to material and product characteristics
- Contract requirements related to waste diversion and end use
- Contract oversight

- Financial security

2.6. For each category of recyclable material or alternative fuel to be recovered from the facility, identify potential types of users of the materials and describe the associated regulatory framework and/or regulatory approval processes for each type of user related to using the recovered materials.

3. Task 3: Impact Analysis

3.1. For each potential end user of the alternative fuel product:
- Assess the potential change in emissions through use of alternative fuel
- Recommend any enhancements to monitoring and reporting requirements due to use of the alternative fuel

3.2. Conduct impact assessments for traffic, dust, noise and odour for the proposed facility and recommend mitigation strategies if applicable.

3.3. Compare greenhouse gas emission reductions to business as usual scenarios considering:
- Displacement of conventional fossil fuels
- Recovery and use of materials
- Landfill disposal avoidance

3.4. In addition to the Envision Sustainability Infrastructure Scoring System criteria, determine other environmental, social and economic benefits of project including:
- Analyze greenhouse gas emission reduction allocation scenarios and provide recommendations with respect to contract provisions to maximize opportunities for Metro Vancouver to recognize greenhouse gas emission reduction benefits for the corporation as well as member jurisdictions
- Expected quantities and types of recoverable materials
- Economic and social impact with respect to value of recovered materials and job creation opportunities

Fraser Valley Regional District

www.fvrd.ca | info@fvrd.ca

September 24, 2019

Attn.: Terry Fulton
Project Engineer, Solid Waste Services
Metro Vancouver
Burnaby, BC. V5H 0C6
terry.fulton@metrovancouver.org

Re: Feedback on Alternative Fuel and Recyclable Material Recovery Project by Metro Vancouver

The Fraser Valley Regional District (FVRD) has reviewed Metro Vancouver's proposed development of a facility at the Coquitlam Landfill to utilize waste dropped off from small vehicles as well as construction and demolition waste as alternative fuels in facilities such as cement plants. Metro Vancouver is currently in the process of developing a business case for this project, and is seeking input from interested stakeholders.

The Lower Fraser Valley is a unique airshed and, as such, needs to be given special consideration in any decisions regarding air quality issues. The FVRD constantly advocates for improving air quality and strongly opposes any form of waste incineration in our sensitive airshed due to health and environmental concerns from air pollution. Air emissions from burning garbage, including painted or treated wood waste, includes toxic chemicals, fine particular matter, and heavy metals. The broad range of contaminated materials in garbage makes air emissions more unpredictable and difficult to control.

It is important that Metro Vancouver consider the costs for greater air emission control technology, increased monitoring and reporting, and the costs of air pollution within the airshed within the scope of their business case. The FVRD is a key stakeholder in this proposed project and we look forward to seeing how our air quality concerns are addressed within the request for proposal. We also expect to be kept informed of the status of this project and to be given future opportunities to review and comment.

If you have any questions or would like to discuss air quality concerns further, please contact Marina Richter, FVRD Environmental Policy Analyst, at mrichter@fvrd.ca.

Sincerely,

Lance Lilley
Manager of Environmental Services

metrovancouver
SERVICES AND SOLUTIONS FOR A LIVABLE REGION

ATTACHMENT 3

From: [redacted]
To: Terry Fulton
Cc: [redacted]
Subject: Feedback for MV"s Alternative Fuel and Recyclable Material Recovery project
Date: Tuesday, September 24, 2019 11:47:28 AM
Attachments: Feedback _ alternative fuel and recycable material.docx

Hi Terry,

Thank you for the opportunity to provide feedback on the Alternative Fuel and Recyclable Material Recovery. I am a member of Zero Waste BC and while recovering materials makes sense, we have concerns about the energy recovery portion. Please see the feedback in the attached document.

Sincerely,
Sue Maxwell

Feedback for MV's Alternative Fuel and Recyclable Material Recovery project

Metro Vancouver has done a lot of work on the solid waste file since the last Solid Waste Management Plan update and should be congratulated on its push for composting of organics, advocating for more and improved EPR programs and campaigns on waste reduction. Since that last plan, the following has changed:

- Metro Vancouver has proved that pursuing strategic actions higher on the Zero Waste hierarchy are less costly and more effective than pursuing waste to energy.
- We are now in a climate emergency where it makes more sense to save as much energy and refrain from burning materials wherever possible, even to the point of considering sequestering of certain materials instead of using them for energy.
- The Province has set guidelines where "waste management to only be undertaken at one level when all feasible opportunities for pollution prevention at a higher level have been taken[1]". While much has been done, it is clear from the latest waste composition study with remaining high amounts of compostable or recyclable materials that much remains to be done.
- Studies show that much more energy used in the production of a product (embodied energy) and its use[2] rather than the energy that could be gained by energy recovery (embedded energy)[3]. In fact the EU which had been promoting waste to energy has now changed its policies to focus on the first three Rs.[4]
- The federal and provincial governments are pursuing strategies to decrease plastic use. This will also decrease the energy component of waste.

Thus it is puzzling that Metro Vancouver is pushing waste to energy (or "energy recovery"). The updated Strategic Plan has a few areas that are of concern:

- 1.4 looks to identify future disposal alternatives with a life cycle and GHG analysis. It is important to make sure these also look at the ability of local government to scale back waste without penalty or need to generate enough waste to feed the future systems. It is also important that the GHG analysis looks at the impact of alternatives such as actual waste reduction, better recycling, sequestering carbon, destruction of materials (especially non-renewables), etc. To date waste to energy has been consistently shown to be costly and detrimental to waste reduction activities.
- 2.1 looks at possible district heating around the Burnaby Waste to Energy facility. This is problematic in that the Burnaby facility has already lasted beyond the usual lifespan of such a facility[5] so does it make sense to invest more money in a system that may not be there long-term, that requires a certain amount of waste continually to keep it running, is essentially based on fossil fuel and where people will be living right next to it with concerns around pollution.
- 2.1 also considers seeking out public and private partnerships to facilitate the recovery of materials and energy. This needs to be done very thoughtfully to ensure that there is a transparent and accountable system that cannot be corrupted and that it is working towards the goal of zero waste and circular economy, not continued or increased wasting. It needs to fosters design change instead of locking in systems to rely on poorly designed products.
- While Air Quality and Climate Change 3.3 notes "Pursue partnerships with other orders of government to fund innovative projects that will generate clean, renewable sources of energy from Metro Vancouver utilities", it is important to note that burning garbage (or thermal treatment) is neither clean, nor renewable as the single biggest contributor to the energy (over 40% and increasing) comes from plastics.
- Point 3 under Solid Waste looks to design out waste, expand EPR programs and change public behaviour. Pursuing waste to energy (aka energy recovery) using mixed waste undermines these actions.

With regards to the Alternative Fuel and Recyclable Material work, there seems to be a lot of focus on alternative energy and very little on recycling the materials. A drop off depot with materials coming from small vehicles, is a great opportunity to both educate citizens as well as require separation of materials. The work should focus on maximizing the use of the materials (as materials not energy) as well as looking at this as a living lab -what kinds of materials or

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[1] https://www2.gov.bc.ca/assets/gov/environment/waste-management/garbage/waste_for_energy_recovery.pdf)_.

[2] Stolaroff, J. https://www.researchgate.net/publication/327060546_Products_Packaging_and_US_Greenhouse_Gas_Emissions

[3] Morris, J. https://www.rcbc.ca/files/u7/ZW_JeffMorrisReport_0907.pdf

[4] ZW Europe. https://zerowasteeurope.eu/2019/02/european-parliament-steps-forward-to-stop-burning-eu-funds/

[5] GAIA. The. Age of Incinerators in the US is ending. https://www.no-burn.org/failingincineratorsreport/

products are coming in? Why? Does a system already exist to recycle them? Can the amounts be reduced? Do we need an EPR program or better regulations and who by? What role could Mechanical Recovery, Biological Treatment play? What is the GHG impact and what GHG could be saved by decreasing this waste?

The report noted that "Alternative fuels produced from construction and demolition waste are already being used in local cement plants, district heating systems, and at pulp and paper mills. " That may be the case but this does not mean that this is the right course of action. It is convenient for Metro Vancouver as this form of waste destruction slips under the radar in a way that building a new incinerator would not but most of the same concerns hold true for this also. It destroys materials, wastes embodied energy, reduces the drive towards better product and system design and it still pollutes. These systems were not designed for this type of fuel and there is even less transparency around these systems than for public facilities. In Europe, where this has happened, communities have come out strongly against it.[6]

The report also notes that "Greenhouse gas emissions reductions through use of the alternative fuel would equal approximately 1 tonne of carbon dioxide equivalent per tonne of alternative fuel, depending on the fuel replaced. In total, the project could therefore result in greenhouse gas emission reductions of between 70,000 to 85,000 tonnes per year of carbon dioxide equivalent." This fails to note that it also depends on what is in the alternative fuel (as noted plastics which are a fossil fuel are the main energy component in mixed waste) and that far more GHG could be saved through reduction of waste. So if GHGs are the focus, let the business case focus on reduction, reuse and recycling.

It is important the business case is not designed to support waste to energy (as it appears to be heading towards given the consultation with cement companies but not others) but instead looks comprehensively at the opportunity costs, real GHG impacts and other alternatives that may provide better yields at lower costs while moving towards sustainability which is still noted as a key Metro Vancouver value.

[6] Zero Waste Europe. https://zerowasteeurope.eu/2014/03/when-waste-ends-up-in-acement-kiln/

To: Zero Waste Committee

From: Larina Lopez, Division Manager, Corporate Communications

Date: November 4, 2019 Meeting Date: November 15, 2019

Subject: **2019 "Create Memories, Not Garbage" Campaign – Update**

RECOMMENDATION

That the Zero Waste Committee receive for information the report dated November 4, 2019 titled "2019 Create Memories, Not Garbage" Campaign – Update."

PURPOSE

To update the Committee on the 2019 "Create Memories, Not Garbage" campaign to reduce the amount of unnecessary waste entering the region's waste streams during the holiday season.

BACKGROUND

The holidays are a heavy consumption season, when customs and traditions can result in unnecessary waste through decorations, gift wrap, packaging, food, and gifts.

The "Create Memories, Not Garbage" (CMNG) campaign was originally established and continues to support the Metro Vancouver Board Strategic Plan which calls for increasing diversion rates of materials that can be reused, repurposed or recycled; and continuing the expansion of behavior change campaigns that support the objectives of zero waste.

The objectives of the campaign are to:

- Raise awareness of the needless waste produced over the holiday season
- Create behaviour change by having audiences choose to celebrate the holidays in a way that produces less waste
    - Encourage people to do just one thing differently
- Long term: reduce the amount of waste produced in Metro Vancouver over the holiday season

The foundation of the campaign is based on the idea that many gift recipients say that their best gift ever is one that was an experience with friends and family, or something that generated memories for years to come. The value of the CMNG campaign is to provide tips and ideas that make low-waste celebrating easier for residents, while fostering what makes the holiday season memorable.

This report provides an overview of the 2019 CMNG campaign plans, as identified in the 2019 Zero Waste Committee Work Plan.

2019 REGIONAL "CREATE MEMORIES, NOT GARBAGE" CAMPAIGN

Campaign Approach

This is the 12th year of Metro Vancouver's holiday waste reduction campaign, and the 9th year using the "Create Memories, Not Garbage" (CMNG) platform.

The 2019 CMNG campaign will continue to promote the two behaviours that residents are most receptive to in order to reduce their waste – buying low-waste gifts and using low-waste wrap.

As in the previous two years, the 2019 campaign will be divided into three phases: Early Shopper Campaign (Oct 7-Nov 12), Main Campaign (Nov 13-Dec 25), and Post-Christmas Campaign (Dec 26-Jan 12).

The campaign will target residents aged 25-54 with a skew towards women aged 25-34 as 2018 Omnibus results show that directionally, interest in producing less waste decreases slightly with age. Further to age, we are targeting those doing the shopping, wrapping, and decorating for the holidays. The audience is non-denominational as research has shown that Christmas tends to be the main gift-giving occasion for many, including non-Christians.

New to this year is the campaign's strategy to integrate its message into existing Christmas content – for example, Christmas programming on television, Christmas playlists in Spotify and targeting those looking for Christmas-related content online. The campaign will also have its own CMNG Christmas song (composed and performed by local musicians) playing on 103.5 QMFM – the region's Christmas station. The CMNG campaign will leverage the debut of the song for its launch on November 25th – one month before Christmas Day. Beyond Christmas content, this year's campaign will also be using the power of local, like-minded influencers to help disseminate the CMNG message to their thousands of followers.

Creative Materials and Campaign Elements

Similar to 2018, the CMNG headline will be prominently featured in all creative with the primary message "This season, do one thing differently to celebrate with less waste." Users will be encouraged to "find ideas" on the campaign website.

The art direction remains bright, festive and evocative of the holiday season and the tone remains light-hearted and positive. We're continuing to focus on the Merry Memory Maker app that's been live and expanding since 2017 with more than 170 ideas for gifts that last or experiences within desired price ranges.

Main campaign elements include:

- online display ads (animated and interactive), YouTube and social media (Facebook, Instagram, Pinterest)
- Georgia Straight – native content (x2 articles)
- Global TV and City TV – visuals and PSAs during morning show Christmas giveaways
- CBC - :10 sec spots in Christmas programming
- radio - :30 sec spot on QMFM – Vancouver's Christmas Station

- Spotify - :30 sec audio ad and banner ads
- engagement at holiday markets around the region where campaign representatives will encourage residents to interact with the Merry Memory Maker app, demonstrate low-waste wrapping ideas and giveaway customizable gift certificates and a colouring sheet that can be used for wrapping. Five markets have been confirmed to date.

Website features
The campaign website is the content hub for the CMNG campaign. Features include low-waste ideas and tips for low-waste giving, wrapping, decorating and cooking. A post-Christmas section is added just before Christmas day to help residents dispose of things like packaging, Christmas trees, and unwanted gifts.

Within the low-waste giving section is the Merry Memory Maker app. This web-based app was designed in 2017 to help residents make low-waste giving easier. Residents can choose their preferred price range and type of gift, and are then offered a list of ideas that they can browse through. Each gift idea comes with a brief explanation of what makes it low-waste, a map of where they can find the item nearby and the option to add any ideas that they like to a 'wish list' that they can save for future reference.

Campaign Performance
A post-campaign survey and online metrics will be used to help assess the impact of the campaign. Online metrics will include:

- Video views and banner interaction
- Website traffic and engagement
- Merry Memory Maker app analytics
- Social media engagement
- Influencer engagement

Collaboration with Members
Campaign details and creative materials are shared via email and regular meetings with members' communication staff and the Municipal Waste Reduction Coordinator's Committee. As with all Metro Vancouver behavior change campaigns, Members have opportunities to co-brand all campaign materials and share the creative and messages on any of their communication channels (social media, facility posters, community holiday events, etc.).

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

FINANCIAL IMPLICATIONS
The 2019 CMNG campaign budget is $190,000, supported under the Zero Waste Communications Program of the 2019 General Government budget and managed by the External Relations Department.

SUMMARY / CONCLUSION

This is the 12th year of Metro Vancouver's holiday waste reduction campaign, and the 9th year using the "Create Memories, Not Garbage" (CMNG) platform. The campaign continues to promote the two behaviours that residents are most receptive to in order to reduce their waste – buying low-waste gifts and using low-waste wrap.

Similar to 2018, the CMNG headline will be prominently featured in all creative with the primary message "This season, do one thing differently to celebrate with less waste." Users will be encouraged to "find ideas" on the campaign website where they'll find the Merry Memory Maker app with more than 170 low-waste gift ideas within various price ranges.

The 2019 campaign will be divided into three phases: Early Shopper Campaign (Oct 7-Nov 12), Main Campaign (Nov 13-Dec 25), and Post-Christmas Campaign (Dec 26-Jan 12). New to this year is the campaign's strategy to integrate its message into existing Christmas content as well as working with local like-minded influencers that will act as credible sources supporting the message.

Promotional tactics include online display ads, YouTube, social media (Facebook, Instagram, Pinterest), the Georgia Straight, television, Spotify and Vancouver's Christmas radio station, QMFM. The campaign will also be onsite at holiday markets around the region where campaign representatives will encourage residents to interact with the Merry Memory Maker app, demonstrate low-waste wrapping ideas and giveaway customizable gift certificates and a colouring sheet that can be used for wrapping.

Campaign details and creative materials are shared by email and through meetings with Members' solid waste and communications staff as developed. Members have opportunities to co-brand all campaign materials, and share the creative and messages on any of their communication channels.

Attachment

Sample of Campaign Artwork and Marketing Materials

References

1. Create Memories, Not Garbage Website
2. Create Memories, Not Garbage – Merry Memory Maker app

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Sample of Campaign Artwork and Marketing Materials

<table>
<tr>
<td>Poster sample
 
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<td>Outreach Display mock-up
 
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<tr>
<td>Videos – Pre-Christmas
Merry Memory Maker (:30) PSA
Wise Wrapping (:30) PSA
Holiday Packaging (:30) PSA

Videos – Post-Christmas
O Christmas Tree (:30)
Reuse/Recycle Wrapping Paper (:30)</td>
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 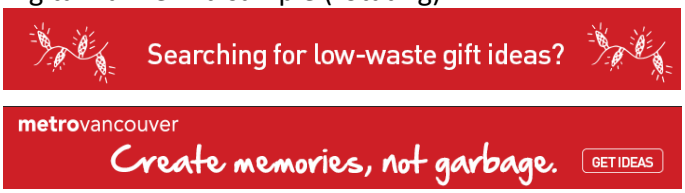

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<td>Pinterest sample – COMING SOON</td>
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