



**SOLID WASTE MANAGEMENT PLAN
PUBLIC/TECHNICAL ADVISORY COMMITTEE**

Regular Meeting

November 16, 2023

3:00 pm – 5:30 pm

Online meeting

Zoom teleconference

A G E N D A

ITEMS
1. WELCOME
2. AGENDA
3. MEETING NOTES – September 7, 2023
4. ACTION/STANDING ITEMS 4.1 Action tracker 4.2 Incoming/outgoing communication
5. METRO VANCOUVER UPDATES
5.1 Solid Waste Management Plan Update – Vision and Guiding Principles Engagement and Next Steps Speaker: Stephanie Liu, Program Manager, Metro Vancouver
5.2 Sustainable Foodservice Purchasing Guide Speakers: Karen Storry, Senior Engineer, Metro Vancouver Lyndsay Poaps, Executive Director, Recycling Council of British Columbia Single-Use Item Regulations Metro Vancouver
6. OTHER BUSINESS
6.1 Zero Waste Committee Updates Speaker: Paul Henderson, Metro Vancouver Zero Waste Committee Agenda Package, November 9, 2023 (metrovancover.org)
6.2 Member Discussion on PTAC Meeting Involvement for 2024 Speaker: Director Kirby-Yung, Chair
6.3 2024 Meeting Planning



Speaker: Director Kirby-Yung, Chair
6.4 Zero Waste Conference 2023 Debrief Speaker: Director Kirby-Yung, Chair
7. INFORMATION ITEMS
7.1 Regional Waste Flows October 7.2 Public/Technical Advisory Committee 2023 Draft Annual Work Plan 7.3 Metro Vancouver Regional District Board Report – External Agency Status Report for the Solid Waste Management Plan Public/Technical Advisory Committee 7.4 Metro Vancouver Regional District Board Report – External Agency Status Report for the Solid Waste and Recycling Industry Advisory Committee 7.5 Metro Vancouver Regional District Board Report – External Agency Status Report for the National Zero Waste Council 7.6 Performance Metrics Review Scope of Work

Attachment 1: Meeting notes – September 7 – Solid Waste Management Plan Public/Technical Advisory Committee

Attachment 2: Action Tracker

Attachment 3: Regional Waste Flows October

Attachment 4: PTAC 2023 Draft Annual Work Plan

Attachment 5: Metro Vancouver Regional District Board Report dated October 6, 2023, titled “External Agency Status Report for Solid Waste Management Plan Public/Technical Advisory Committee”

Attachment 6: Metro Vancouver Regional District Board Report dated October 6, 2023, titled “External Agency Status Report for Solid Waste and Recycling Industry Advisory Committee”

Attachment 7: Metro Vancouver Regional District Board Report dated September 15, 2023, titled “External Agency Status for the National Zero Waste Committee”

Attachment 8: Performance Metrics Review Scope of Work

SOLID WASTE MANAGEMENT PLAN PUBLIC/TECHNICAL ADVISORY COMMITTEE

Thursday, September 7, 2023
In-Person Meeting
3:00 pm – 5:30 pm

UBC Robson Square – Room C440
800 Robson Street, Vancouver, BC

Meeting Notes

Attendees: Director Sarah Kirby-Yung, Chair; Director Craig Hodge, Vice-Chair; Alice Henry, Bill Chan, Brenda Martens, Brianna De Man, Christian Dietrich, Cody Irwin, Daniel Rotman, Doug Schell, Grant Hankins, Jamie Kaminski, Louise Schwarz, Love-Ese Chile, Lyndsay Poaps, Michael Zarbl, Raman Johal, Sue Maxwell.

Absent: Ben Liegey, Hunter Bergen, Jake Turek, Jaye-Jay Berggren, Jessica Savoy, John Doherty, Kevin Huang, Matthew Morin, Sara Larter, Tara Immell, Ulwiana Mehta-Malhotra, William Selten, Yasmin Abraham.

Metro Vancouver Staff: Allen Jensen, Brooke Atkinson, Chris Allan, Chris Underwood, Karen Storry, Paul Henderson, Samantha Joy, Stephanie Liu.

1.	INTRODUCTIONS <ul style="list-style-type: none"> Meeting started at 3:13 pm. 	Chair
	1.1 Welcome from the Chair 1.2 Territorial Acknowledgement	Chair
2.	AGENDA <ul style="list-style-type: none"> Reviewed the September 7, 2023 meeting agenda 	Chair
3.	MEETING NOTES – April 28, 2023 <ul style="list-style-type: none"> Reviewed the June 1, 2023 meeting notes A member suggested changes to the June meeting notes to clarify that they had recommended referring to the “zero waste hierarchy” rather than the “waste hierarchy” in Attachment 1: Workshop Summary – Solid Waste Management Plan Update Vision and Guiding Principles. 	Chair
4.	ACTION/STANDING ITEMS	Chair

	<p>4.1 Action items from June 1 meeting</p> <ul style="list-style-type: none"> No updates from staff. <p>4.2 Incoming/outgoing communication</p> <ul style="list-style-type: none"> No new communication. 	
5.	METRO VANCOUVER UPDATES AND INVITED PRESENTATIONS	
	<p>5.1 Performance Metrics Review – Discussion</p> <ul style="list-style-type: none"> Metro Vancouver has retained Morrison Hershfield to assist with the solid waste management plan update, including reviewing performance metrics. Key performance indicators including disposal and recycling rates are reported annually and in a biennial solid waste management plan progress report provided to the province. The scope of work for this review includes reviewing a wide range of solid waste performance metrics used elsewhere, including ones which assess performance related to circular economy, greenhouse gas emission reductions and equity. Qualitative and quantitative performance measures will be considered, along with factors such as access to date, reliability and measurement feasibility. PTAC members were asked what is important to their organization for reporting, what data they have access to that can inform this project, and if there are any specific jurisdictional examples that should be considered. PTAC members may submit additional comments or suggestions to zerowaste@metrovancover.org or if they would like to be interviewed on this topic. <p>Members discussed:</p> <ul style="list-style-type: none"> Metrics which track and measure the success of partnerships and collaborations, such as with cities and EPR stewards, and assess overall system capacity (e.g. number of refilleries available for given population) Including forward-looking metrics which help to measure things that are important for future success Metrics for tracking the number of reuse cycles, consumption, creation of green and inclusive jobs and other measures of economic circularity Applicability of industry best practices to Metro Vancouver region Applying the principles of Donut Economics to integrate metrics and illustrate them so they are more understandable How the make-up of waste stream is changing and the implications on current methods of calculations Protecting commercially sensitive data acquired from industry/haulers Terminology such as the difference between recycling and diversion Metrics which speak to market demand for specific recycled materials 	<p>Chris Underwood, Metro Vancouver</p> <p>Veronika Bartlett, Morrison Hershfield</p>

	<ul style="list-style-type: none"> • Measures of consumption – items purchased that will eventually become waste • Measures of services available that benefit goals and targets • How to measure attitudes and behaviours for the purpose of identifying barriers and opportunities • The need to look deeper into the story behind the metrics (e.g. most users of recycling depots require a Class 5 driver’s license; what portion of population doesn’t have a Class 5 license and therefore has restricted access to depots) • Opportunity to access and use reuse/repair data from stewardship programs • Track metrics for how much goods are being stored (e.g. in self-storage) 	
	<p>5.2 Bidders’ Project</p> <ul style="list-style-type: none"> • A bidder is a person who collects redeemable beverage containers to sustain their livelihood. This diverts waste from disposal • Bidders’ Project provides a program to empower bidders and to recognize them as being part of the circular economy • Aiming to build the community from the bottom up by reducing stigma associated with binning, improve economic opportunities for Bidders, and support waste diversion in Vancouver • Example Bidders’ Project programs and initiatives: <ul style="list-style-type: none"> ○ Coffee Cup Revolution event ○ Community pickups ○ Bidders hook ○ Universal binning cart ○ Back-of-house waste sorting ○ Sorting services at community events <p>Members discussed:</p> <ul style="list-style-type: none"> • Possibility of replicating and expanding the program in other cities within the region • Necessary to build community capacity by getting more industry partners involved and government support 	<p>Brianne De Man, Bidders’ Project</p>
	<p>5.3 Reuse and Repair Initiative</p> <ul style="list-style-type: none"> • Metro Vancouver has multiple reuse and repair initiatives underway such as: <ul style="list-style-type: none"> ○ Reuse at Recycling and Waste Centres (Reuse Days) – diverting reusable items from the landfill at the North Shore Recycling and Waste Centre ○ Reusable cups and containers for offices and events – promoting reusable cup use in offices and community events (pilot at Metrotower III) ○ Food recovery network – Love Food, Hate Waste campaign and collaborating with FoodMesh ○ Construction and demolition – creating a waste reduction and recycling toolkit for construction and demolition waste 	<p>Karen Storry, Metro Vancouver</p>

	<ul style="list-style-type: none"> ○ Repair café funding – supporting municipalities to hold repair cafes for residents to work with repair experts to fix items <p>Members discussed:</p> <ul style="list-style-type: none"> ● The benefits of having a repository of lessons learned from all of these initiatives to be able to improve the current programs and expand them to other regions <p>Action Items:</p> <ul style="list-style-type: none"> ● Metro Vancouver to draft a lessons learned repository of all of the initiatives to date and share with PTAC. 	
	<p>5.4 Assessment of Regional Solid Waste Systems</p> <ul style="list-style-type: none"> ● A drive time model was developed to map and understand how the regional solid waste facilities meet Metro Vancouver’s goal to provide small vehicle loads access within 30 minutes from a regional solid waste facility. The difference in drive times and their implications related to drive distance and GHG emissions were shown for the following scenarios: <ul style="list-style-type: none"> ○ Smalls loads baseline waste (current system) ○ Vancouver South Transfer Station closure ○ Vancouver Landfill closure ○ Baseline without Central Surrey Recycling and Waste Centre ○ False Creek Flats Recycling and Waste Centre ○ Barnet/Lansdowne Recycling and Waste Centre ○ Langley Recycling and Waste Centre options ○ Commercial hauler loads baseline ● The current regional solid waste facilities meet the goal of drive times under 30-minutes for 98% of the population projected in 2050. <p>Members discussed:</p> <ul style="list-style-type: none"> ● There was a question about a scenario where the Waste-to-Energy Facility was not operating. It was noted that most of the scenarios presented were for drive times for small vehicles, and small vehicles do not have access to the Waste-to-Energy Facility. A scenario of replacing the Waste-to-Energy Facility with a full service recycling and waste centre would result in reduced drive times for small vehicles in the vicinity of the facility, although their drive times would already be less than 30 minutes due to the proximity of the Vancouver South Transfer Station and United Boulevard Recycling and Waste Centre. 	<p>Allen Jensen, Metro Vancouver</p>
<p>6.</p>	<p>OTHER BUSINESS</p>	

	<p>6.1 Zero Waste Committee Updates</p> <ul style="list-style-type: none"> • Paul Henderson provided an update on the agenda items from the July 13, 2023 Zero Waste Committee meeting, including: <ul style="list-style-type: none"> ○ Draft Tipping Fee Bylaw Updates ○ Smart Waste Program • Metro Vancouver is committed to engaging with waste haulers on both the tipping fee bylaw updates and the smart waste program. <p>Members discussed:</p> <ul style="list-style-type: none"> • Smart waste program, as a method to track where garbage goes, is less invasive than following trucks around the region 	<p>Paul Henderson, Metro Vancouver</p>
	<p>6.2 Invited Presenters and Topics Discussion</p> <ul style="list-style-type: none"> • Chair Kirby-Yung provided an opportunity for PTAC members to describe in more detail and add to the list of potential invited presenters for future PTAC meetings. • The list was created based on discussion at the June PTAC meeting and was shared with members for further discussion: <ul style="list-style-type: none"> ○ Community based social marketing (potential speaker Professor Doug Mackenzie Mohr). ○ Natural disaster impacts on management of waste (potential speaker Cameron Baughen). ○ Lighthouse investigation of waste composition leaving construction sites from the generation side. ○ Opportunities for recycling, particularly organics (markets, pick-up options, processing, separation from waste, end-use) ○ ReFED presentation on data and insights (potential speaker Dana Gunders). ○ Waste-to-Energy (potential speaker Mike Ewall). ○ Zero Waste BC agenda, the provincial circular economy strategy and costs for various disposal options. <p>Members discussed:</p> <ul style="list-style-type: none"> • Adding these topics to the list: <ul style="list-style-type: none"> ○ Environmental/social/governmental (ESG) accounting practices ○ Broader goal for net zero in 2050 ○ Insights from and perspectives of waste hauling industry ○ Single-use item regulations from province and federal government ○ Construction and demolition and how policies change the market ○ Presenters from other parts of the world that have had success in getting better results, best practices, changing course ○ Reuse and how to scale reuse (presenter Cody Irwin) ○ Information on recycling commodity markets ○ Procurement of organics and how we are cycling the nutrients 	<p>Chair</p>

	<ul style="list-style-type: none"> ○ Repair and reuse working alongside procurement <p>Action Items:</p> <ul style="list-style-type: none"> • Members are welcome to provide additional ideas for invited presentations at future meetings, by emailing zerowaste@metrovancover.org 	
	<p>6.3 Collaborative Engagement</p> <ul style="list-style-type: none"> • PTAC members representing not-for-profit organizations are invited to participate in the collaborative engagement initiative, or to share information with potentially interested not-for-profit organizations. • This initiative offers funding (up to \$5,000 per organization) and support to non-profit organizations to engage their networks on a vision and guiding principles for an updated solid waste management plan. • The goal is to hear from community members who otherwise may not be aware of opportunities to provide input to Metro Vancouver (i.e under-represented or equity denied groups, urban Indigenous people, youth, senior associations, environmental groups). <p>Action Items:</p> <ul style="list-style-type: none"> • Metro Vancouver will send details on the organizations we are currently working with and the type of organizations that we are looking to engage with. PTAC members are welcome to email zerowaste@metrovancover.org with suggestions on who to reach out to, or if their organization would like to participate. 	<p>Brooke Atkinson, Metro Vancouver</p>
	<p>6.4 Metro Vancouver Solid Waste Services Department Name</p> <ul style="list-style-type: none"> • Paul Henderson explained how Metro Vancouver Solid Waste Services Department is looking to change its name to something that better describes the work that the department does. • PTAC members participated in a polling exercise using Mentimeter. 	<p>Paul Henderson, Metro Vancouver</p>
	<p>6.5 2023 Zero Waste Conference PTAC Member Attendance</p> <ul style="list-style-type: none"> • Chair Kirby-Yung provided a reminder to PTAC members that Metro Vancouver will cover the registration cost for PTAC members for the upcoming Zero Waste Conference (November 1-2) • PTAC members should email their information to zerowaste@metrovancover.org before September 25 if interested in attending 	
7.	<p>ADJOURNMENT</p> <ul style="list-style-type: none"> • Meeting was adjourned at 5:25 pm. 	<p>Chair</p>
8.	<p>NEXT MEETING</p> <ul style="list-style-type: none"> • November 16, 2023 (online). 	

Sustainable Foodservice Purchasing Guide

PRODUCT AND PURCHASING GUIDELINES FOR METRO VANCOUVER

Single-use items have a lasting impact on our environment long after being used for a short period of time. The best way for residents and businesses to reduce the impact of single-use items is to choose reusable alternatives. Using materials you are certain can be recycled is also a good option. Visit metrovancover.org and search "single-use" for more information about single-use regulations.

	COLD BEVERAGES	HOT BEVERAGES	CONTAINERS FOR DRY FOODS	CONTAINERS FOR WET OR HOT FOODS	UTENSILS
 BEST	 <ul style="list-style-type: none"> • Reusable cups for on-site dining • Reusable cups brought by customers • Participate in a cup share program 	 <ul style="list-style-type: none"> • Reusable containers for on-site dining • Participate in a container share program 	 <ul style="list-style-type: none"> • Reusable containers for on-site dining • Participate in a container share program 	 <ul style="list-style-type: none"> • Reusable utensils for on-site dining 	 <ul style="list-style-type: none"> • Reusable utensils for on-site dining
 ACCEPTABLE	 <ul style="list-style-type: none"> • Cups made from an easily recyclable plastic (#1 PET, #5 PP) 	 <ul style="list-style-type: none"> • Paper cups lined with plastic • Easily recyclable plastic or fibre lids (#1 PET, #5 PP) 	 <ul style="list-style-type: none"> • Unlined paper/fibre containers • Containers made from easily recyclable plastic (#1 PET, #5 PP) 	 <ul style="list-style-type: none"> • Aluminum containers • Heat safe plastic (#5 PP) 	 <ul style="list-style-type: none"> • Uncoated wood utensils • <i>Distribute by request only</i>
 BANNED	 <ul style="list-style-type: none"> • Plastic cups and lids labelled "compostable" or "biodegradable" 	 <ul style="list-style-type: none"> • Foam cups 	 <ul style="list-style-type: none"> • Plastic containers and lids labelled "compostable" or "biodegradable" 	 <ul style="list-style-type: none"> • Foam containers 	 <ul style="list-style-type: none"> • Plastic utensils • Plastic utensils labelled "compostable" or "biodegradable"

Sustainable Foodservice Purchasing Guide

PRODUCT AND PURCHASING GUIDELINES FOR METRO VANCOUVER

QUICK FACTS

- Reusable items are the best option
- Choose products that contain recycled content
- Choose uncoated wood products over bamboo
- Choose easily recyclable plastics (#1 PET, #5 PP)
- Most paper products are compostable
- Paper products coated with plastic cannot be composted
- Compostable plastics are not accepted in municipal composting and recycling programs – many compostable plastics do not break down at regional composting facilities

BAGS



- Distribute by-request only
- Source high quality reusable bags that are durable enough to withstand long term, repeated use and cleaning
- If using paper bags, choose bags that contain at least 40% recycled paper content
- Avoid plastic bags

STRAWS



- Use sippy cup lids that don't require straws
- Distribute paper straws by-request only
- Avoid plastic straws – including plastic straws labelled “compostable or biodegradable”

SINGLE-USE ITEM REDUCTION REGULATIONS

Summary of Federal and Provincial Regulatory Updates

December 2023

June 2024

July 2030



Shopping bags

Plastic*: banned

Paper: fee (must charge \$0.25 or more); 40% recycled content

Reusable: fee (must charge \$2.00 or more); must be machine washable



SCAN FOR DETAILS



Disposable accessories

By request only

Examples: condiment sachets, garnish (drink umbrellas, plastic sushi grass), napkins, wet wipes, cup lids, cup sleeves, food or beverage trays



SCAN FOR DETAILS



Take out containers

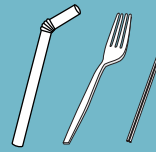
Certain types of plastics are banned, including:

- Polystyrene foam, #3 plastics, oxo-degradable plastics, and carbon black plastics
- Plastics labelled "compostable" or "biodegradable"

PLA-lined paper products are exempt from the regulations



SCAN FOR DETAILS



Staws, cutlery, stir sticks

Plastic*: banned

All other materials: by request only

Ban

Prohibition on the sale or distribution of an item.

Fees

Requiring fees (retained by retailers) on disposable items to encourage the use of reusable items.

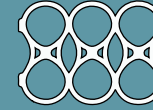


Juice box straws

Flexible plastic straws packaged with beverage containers: Banned*

By request

Only providing items when a customer asks for, or agrees to receive, them. This includes self-service stations and requests made or accepted electronically (e.g., online by checking a box for the item).



Plastic ring carrier

Banned*



Foam meat trays

Banned*



*including plastic labelled "compostable" or "biodegradable"



Health Authority Single-Use Item Regulatory Update

The BC Centre for Disease Control has found no evidence of COVID-19 transmission risk from reusable food service accessories or bags. The use of reusables to reduce waste and improve environmental health is encouraged.

In February 2022, the Government of BC released a new policy for reusable containers on food premises. Customer-supplied containers are permitted under the BC Food Safety Act.

- Businesses must identify which food and beverage items are appropriate for customer-supplied containers
- The customer-supplied containers must be clean and suitable for food transport

Scan for more information:



Contact Us

Information Centre: 604-432-6200
(Monday to Friday from 8 am to 4:30 pm)

Email: icentre@metrovancover.org

Website: metrovancover.org Search "single-use regulations"



Compostable Plastics

Compostable plastics are often marketed as a more sustainable option than conventional plastics. However, there are many challenges associated with compostable plastics in practice and they often end up in the landfill.

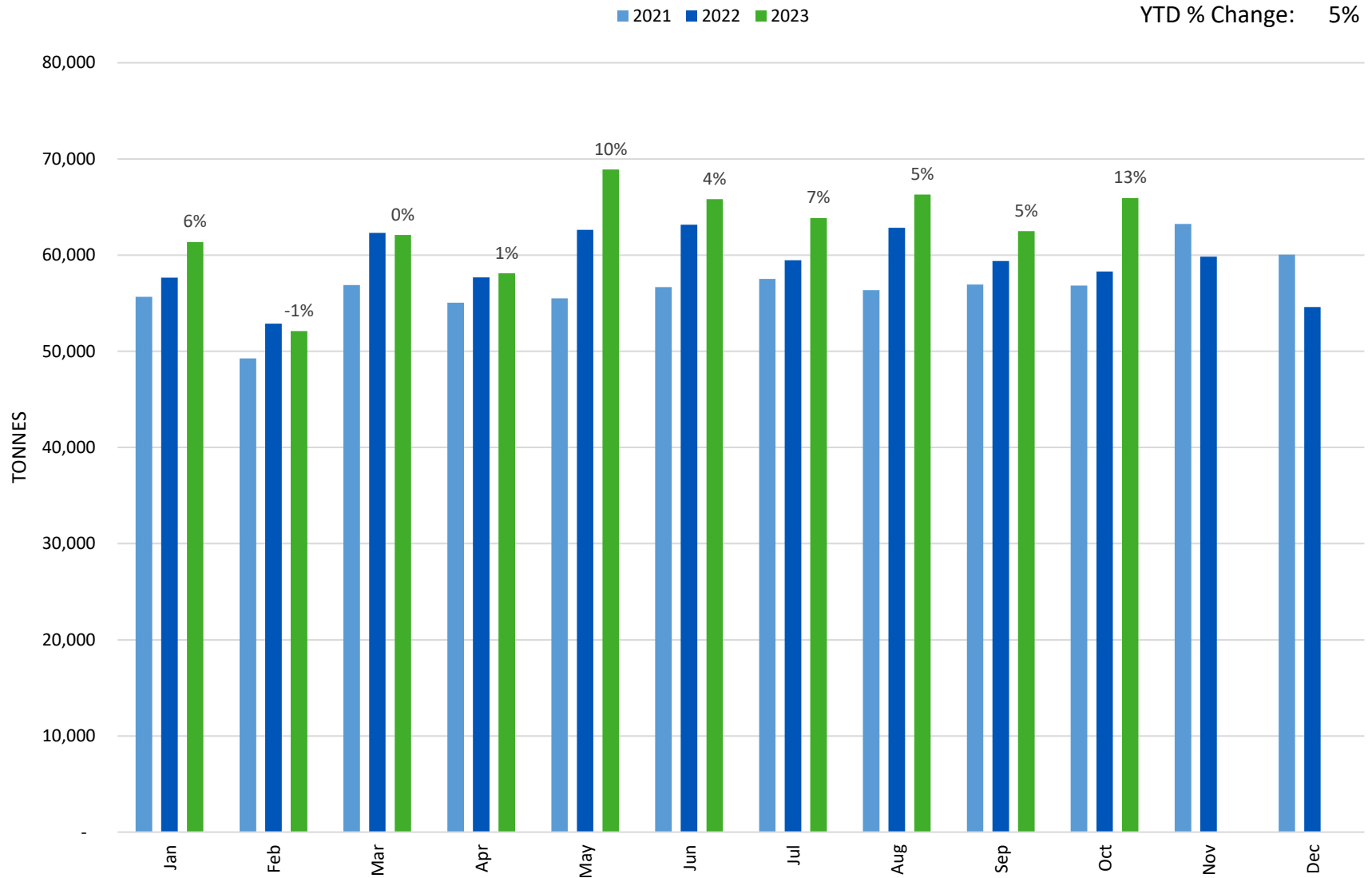
The challenges with compostable plastics are that they:

- May not break down properly during processing
- Are difficult to tell apart from conventional plastic products and are regularly screened out at composting facilities
- May potentially introduce microplastics and chemical additives into soil as they break down
- Are still a single-use item and consume resources and energy to produce

metrovancover

Together we make our region strong

Metro Vancouver Waste Quantities* 2021 - 2023**



**Data reconciled to Sept 2023

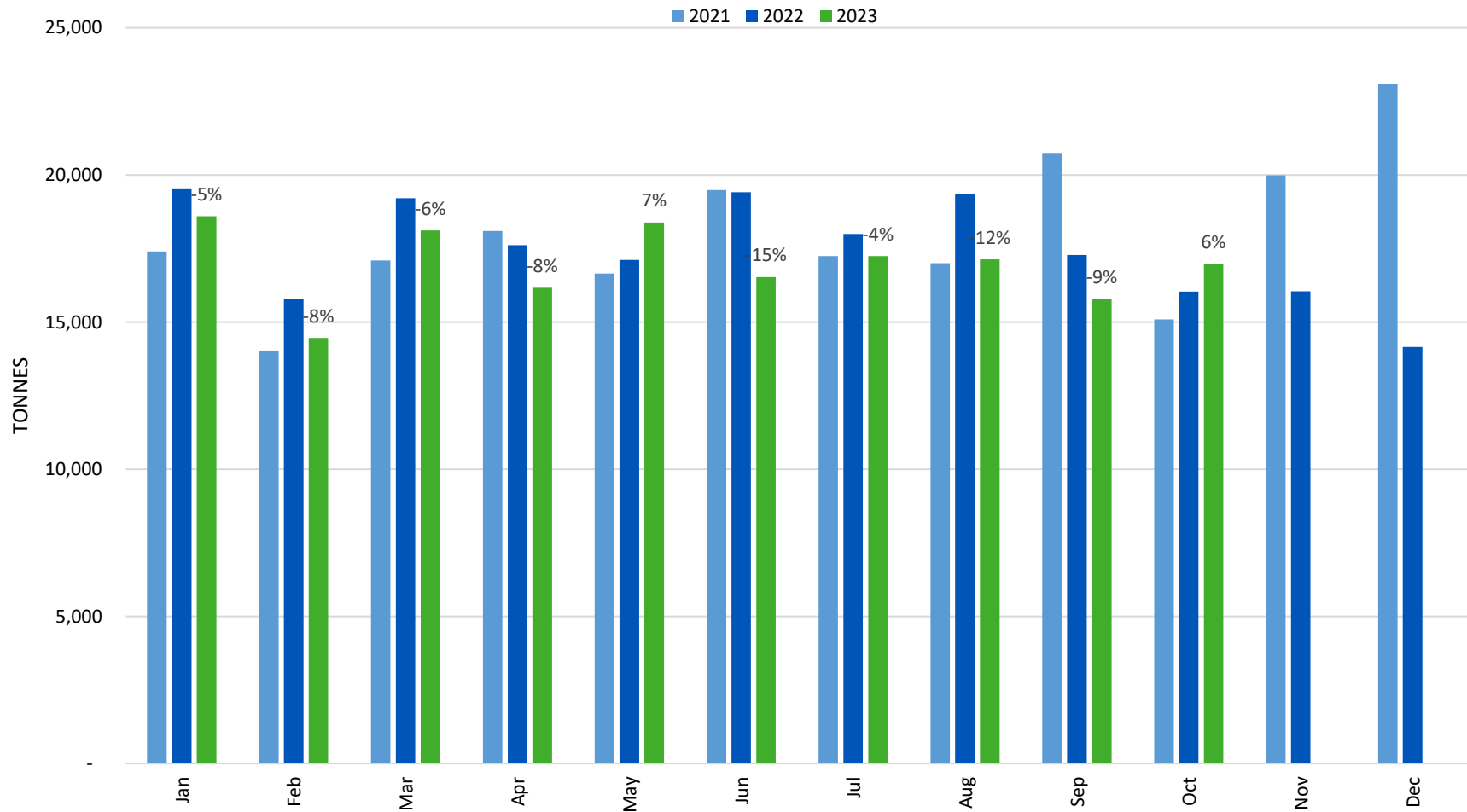
*Metro Vancouver's Six Recycling and Waste Centres & the Waste-to-Energy Facility

City of Vancouver Waste Quantities*

2021 - 2023

(Demo garbage not included)

YTD % Change: -6%



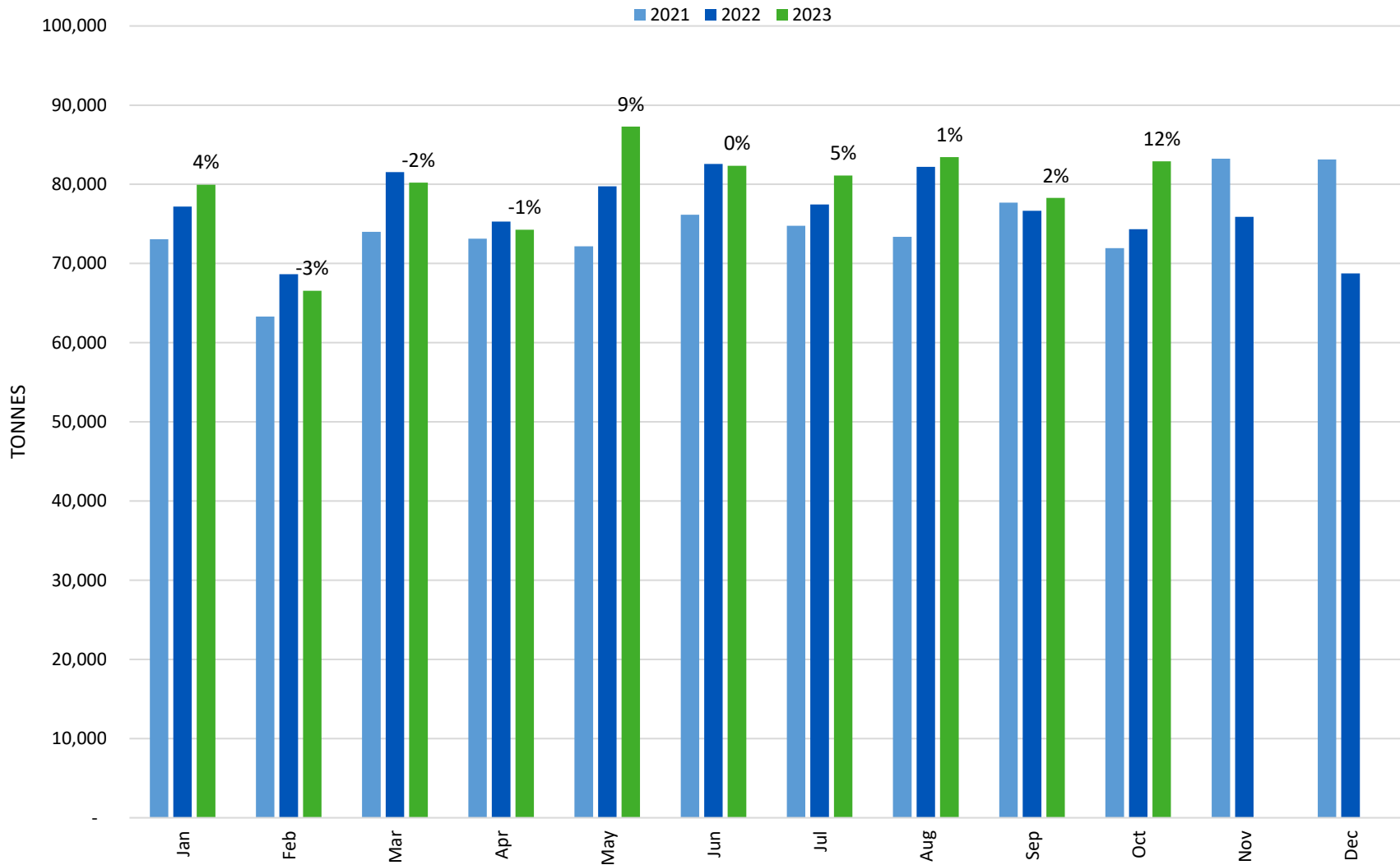
*Vancouver Landfill & Vancouver South Transfer Station

Metro Vancouver and City of Vancouver Waste Quantities

2021 - 2023*

(Demo garbage not included)

YTD % Change: 3%



*Metro Vancouver data reconciled to Sept 2023

Solid Waste Management Plan Public/Technical Advisory Committee

2023 Annual Work Plan

Meeting Date: November 16, 2023

An annual work plan for the committee will be developed by Metro Vancouver staff based on deliverables in the solid waste management plan development. The work plan will be reviewed annually by the committee, and will guide development of meeting agendas.

Priorities	
Item	Status
Workshop - Solid Waste Management Plan Update: Vision and Guiding Principles	Complete
Solid Waste Management Annual Summary	Complete
Circular Economy/ 3Rs Study	Complete
2022 Waste Composition Program Results	Complete
Performance Metrics Review	Complete
Reuse and Repair Initiatives	Complete
Regional Solid Waste System Assessment Study	Complete
Solid Waste Management Plan Update – Vision and Guiding Principles Report Back	Pending
Solid Waste Management Plan Update – Planning for Ideas Generation phase of engagement	Pending
Solid Waste Management Plan Update – Vision and Guiding Principles Engagement and Next Steps	In Progress
Sustainable Foodservice Purchasing Guide	In Progress

2023 Meetings:

April 28, 2023 – In-person workshop

June 1, 2023 – Online

September 7, 2023 – In-person

November 16, 2023 – Online

To: MVRD Board of Directors

From: Sarah Kirby-Yung, Director, Metro Vancouver Board, and Chair, Solid Waste Management Plan Public/Technical Advisory Committee
Craig Hodge, Director, Metro Vancouver Board, and Vice Chair, Solid Waste Management Plan Public/Technical Advisory Committee

Date: October 6, 2023 Meeting Date: October 27, 2023

Subject: **External Agency Status Report for the Solid Waste Management Plan Public/Technical Advisory Committee**

RECOMMENDATION

That the MVRD Board receive for information the report dated October 6, 2023, titled “External Agency Status Report for the Solid Waste Management Plan Public/Technical Advisory Committee”.

EXECUTIVE SUMMARY

The Solid Waste Management Plan Public/Technical Advisory Committee serves as a forum for contribution from individuals representing a diversity of sectors and interests to inform the review and update of the solid waste management plan. Following an open application process, 30 members were selected by the GV&SDD Board and the committee was formed in June 2022. The Chair (Sarah Kirby-Yung) and Vice-Chair (Craig Hodge) of the Zero Waste Committee were selected by the Board to be the Chair and Vice-Chair of the committee. The committee has held five meetings to date and the 2023 work plan has focused on the regional recycling and waste system, zero waste and the circular economy, and feedback on technical studies related to the solid waste management plan update. One key highlight in 2023 was the opportunity to provide input on the vision and guiding principles for an updated solid waste management plan.

The committee will be in place for the duration of the solid waste management plan update.

PURPOSE

To provide the MVRD Board of Directors with an update on the activities of the Solid Waste Management Plan Public/Technical Advisory Committee in 2023.

BACKGROUND

In November of 2019, the Board authorized initiating an update of the regional solid waste management plan. In July 2021, a report to the Zero Waste Committee outlined plans to engage on the structure and composition of the provincially required solid waste management plan public and technical advisory committee(s). The terms of reference for the Public/Technical Advisory Committee were approved by the Board in November 2021 (Attachment 1).

Director Sarah Kirby-Yung is the Metro Vancouver Board-appointed Chair of the Solid Waste Management Plan Public/Technical Advisory Committee (Public/Technical Advisory Committee), and Director Craig Hodge is the Metro Vancouver Board-appointed Vice Chair.

A call for applications was sent out in December 2021, with efforts made to reach out to a diverse range of sectors. Approximately 90 applications were received to participate in the committee. Applicants were advised that financial support could be provided to any potential member that faced barriers to participating in the committee.

Staff reviewed applications based on criteria approved by the Board in November 2021. Staff recommendations were reviewed by the Solid Waste Management Plan Independent Consultation and Engagement Panel: a panel formed to act as an independent third party providing guidance to staff and the Board on consultation and engagement. From the applications received, 30 members were chosen by the Board in a closed meeting.

Public/Technical Advisory Committee members represent a range of backgrounds with diverse life experiences and will provide advice and input on the development of an updated solid waste management plan. Biographies for the committee members can be found on the [website](#) (Attachment 3).

In June 2022, the committee held its first meeting and meets four to six times per year. The Public/Technical Advisory Committee will be in place for the duration of the development of an updated solid waste management plan.

Any member of the public is welcome to observe Public/Technical Advisory Committee meetings. Starting November 2023, online meetings will be live-streamed and recorded. Any observers must attend in-person at in-person meetings.

SOLID WASTE MANAGEMENT PLAN PUBLIC/TECHNICAL ADVISORY COMMITTEE

Key Topics of Discussion

Since June 2022, the Public/Technical Advisory Committee has met to discuss relevant topics and to provide their input on the solid waste management plan update. Most of the meetings are online with two in-person meetings held each year. A highlight of the 2023 meetings was the April 28, 2023 meeting where committee members toured the United Boulevard Recycling and Waste Centre and participated in a workshop to provide input on the development of a vision and guiding principles for an updated solid waste management plan. A few themes emerging from the workshop included ensuring accessibility and affordability of services; accountability in reporting on and measuring progress towards waste reduction targets; considering equity when planning waste reduction solutions; improving climate resilience; and developing regulatory frameworks that encourage innovation and waste prevention. Key themes from the workshop will be considered in the development of the vision and guiding principles for the updated plan and are summarized in Attachment 2.

Topics discussed at Public/Technical Advisory Committee meetings to date include:

- Committee engagement preferences and Terms of Reference
- Regional recycling and waste system overview
- Solid waste and recycling data
- Zero waste and circular economy

- Solid waste management annual summary
- Regional solid waste assessment study
- Performance metrics study and review
- Circular economy and 3Rs study
- 2022 waste composition program results
- Reuse and repair initiatives by Metro Vancouver
- Collaborative engagement on the solid waste management plan update

Solid Waste Management Plan Public/ Technical Advisory Committee Actions

In April 2023, Public/Technical Advisory Committee members were presented a draft 2023 work plan for consideration. The 2023 draft work plan continues to guide the content of the Public/Technical Advisory Committee meetings. The draft 2024 work plan will be presented at the November 2023 meeting for members' feedback.

Member Financial Support

To encourage diversity, equity, and inclusion on the Public/Technical Advisory Committee, financial supports are available to help members belonging to typically underrepresented and equity-denied communities participate to the best of their ability. Supports may include:

- Financial support per meeting
- Transportation allowance
- Child care stipend
- Access to technology stipend for a supporting organization
- Pre- and post-meeting support

All members are given the opportunity to indicate if they require this type of support for each meeting they participate in. To date, four members have requested support.

ALTERNATIVES

This is an information report. No alternatives are presented.

FINANCIAL IMPLICATIONS

Coordination of the Public/Technical Advisory Committee is included in the current Solid Waste Services work plan and budget.

CONCLUSION

The Solid Waste Management Plan Public/Technical Advisory Committee provides a forum for contribution from individuals representing a diversity of sectors and interests to inform the review and update of the solid waste management plan. In 2022/23 the committee met to provide input on the solid waste management plan vision and guiding principles, toured the United Boulevard Recycling and Waste Centre, and received information on and provided input on various Metro Vancouver initiatives and technical studies related to the solid waste management plan update. The committee will continue to meet in 2024 to continue to provide input during the solid waste management plan update process.

Attachments

1. Solid Waste Management Plan Public/Technical Advisory Committee Terms of Reference
2. Workshop Summary – Solid Waste Management Plan Update Vision and Guiding Principles, April 28, 2023
3. Solid Waste Management Plan Public/Technical Advisory Committee Member Biographies

Reference

[Solid Waste Management Plan Public/Technical Advisory Committee Web Page](#)

62866153

Solid Waste Management Plan

Public/Technical Advisory Committee

Terms of Reference

November 17, 2021

1. PURPOSE

Over the next two to three years, Metro Vancouver will engage with governments (including Indigenous Nations), government agencies, waste and recycling industry representatives, waste producers, businesses, communities of interest, and Metro Vancouver residents to review and update the current [Integrated Solid Waste and Resource Management Plan](#) (2011). The updated solid waste management plan will build on the strengths of the current plan and identify opportunities for accelerated waste reduction and diversion, while reducing greenhouse gases and promoting a circular economy.

The purpose of the solid waste management plan public/technical advisory committee (committee) is to provide a forum for contribution from individuals from a range of backgrounds to inform the review and update of the solid waste management plan. The purpose of these terms of reference is to describe role of the committee.

2. TIMEFRAME

The committee will exist for the duration of the solid waste management plan update process.

3. SCOPE OF WORK

The committee will receive and review information, and advise on topics related to the development of the solid waste management plan. Committee members will be invited to pose questions, engage in discussion, and provide comments for consideration as the plan is developed. Potential topics for engagement with the committee include the circular economy, waste reduction and recycling, greenhouse gas emissions reduction, residuals management, asset and risk management, innovation, resilience, affordability, and collaboration and engagement.

Representatives of the 10 local Indigenous Nations will be invited to observe committee meetings at their preference. A separate Indigenous engagement strategy will help ensure a collaborative government-to-government engagement approach with Indigenous Nations whose territories include all or part of the Metro Vancouver region as well as a community engagement approach with urban Indigenous organizations, off-reserve and non-status First Nations, Métis and Inuit.

4. MEMBERSHIP

The committee will be composed of members representing a diversity of sectors and interests, who bring a variety of personal qualities, perspectives, and experiences to solid waste and recycling issues.

The following is a list of sectors/interests that could be represented by committee members:

- Adjacent regional district elected official
- Agriculture
- Circular economy

- Construction and demolition
- Extended producer responsibility programs
- Food service
- Government agencies and health authorities
- Large waste generators (e.g. academic institutions, school boards, transportation hubs, entertainment sector)
- Multi-family residences (e.g. residents, landlords, property management associations)
- Non-governmental/non-profit organizations and environmental stewardship groups
- Organics processing
- Public members-at-large (e.g. youth, seniors, and multicultural, accessibility, and resident/community associations)
- Recycling industry
- Reduction/repair/refill industry
- Retail/grocery
- Small- and medium-sized businesses, and business improvement associations, chambers of commerce, boards of trade
- Tourism and hospitality
- Waste industry
- Workers/unions

The following is a list of possible desired personal qualities, perspectives and experience of committee members:

- Demonstrates community/committee involvement and the ability to work collaboratively with others (e.g. openness to different/opposing views)
- Demonstrates personal commitment to zero waste, circular economy goals, sustainability, and climate action
- Demonstrates the ability to advance innovation
- Experienced with waste, waste reduction and recycling (i.e. lived experience, technical expertise, or both)
- Belongs to a community that is typically underrepresented (e.g. women, LGBTQ2S+, Indigenous persons, immigrants, visible minority, persons with disabilities, youth, etc.)
- Represents the interests/perspectives of a group of people/sector

5. SELECTION PROCESS

Membership will last the duration of the solid waste management plan update process. Committee members should be prepared to participate through the full term.

Committee members with the exception of the chair and vice-chair will be filled through a call for applications. Potential committee members who belong to typically underrepresented or equity-denied communities will be identified through targeted recruitment, with support mechanisms put in place to lower barriers to participation.

The call for applications will be promoted publically, and shared with our member jurisdictions and partners. Potential committee members will be asked to specify their sector/interest during the call for applications and an individual could identify more than one sector/interest. Not all sectors/interests will necessarily be represented on the committee, and more than one individual could be selected to represent a sector/interest. Following receipt of applications, the applicants will be evaluated based on

the personal characteristics outlined in the above section on membership. Recommendations for members will be reviewed by the Independent Consultation and Engagement Panel in advance of the recommendations being considered by the Zero Waste Committee and Board in closed meetings, before being released to the public.

6. CHAIRS

The committee chair and vice-chair will be members of the Zero Waste Committee, recommended by the Board Chair and selected by the Board in a closed meeting.

7. ADVISORY ROLE OF COMMITTEE

The role of the committee is advisory to Metro Vancouver. No votes will be held to determine the group's position on issues or recommendations to Metro Vancouver. Where consensus exists, it will be noted; minority opinions will be considered to have merit and will be noted.

8. MEETINGS

- a. Meetings will be held approximately 4–6 times per year for the duration of the solid waste management plan update process.
- b. The meeting dates and times will be determined by the chair and vice-chair in consultation with committee members, and will be scheduled at intervals relevant for the solid waste management plan development.
- c. The chair and vice-chair will work with Metro Vancouver staff to draft meeting agendas and coordinate meeting materials, which will be circulated to the committee in advance of meetings.
- d. The meetings will be structured to encourage dialogue and collaboration on relevant issues within the constraints of the planned agendas.
- e. Meeting minutes and action trackers will be kept for each meeting. Minutes shall not reflect the names of individual speakers or their stance on issues; rather, they shall reflect the issues discussed, significant points of view on the issues and the resolutions or actions to be taken.
- f. Meetings will be held virtually or at Metro Vancouver offices located at 4515 Central Boulevard in Burnaby, British Columbia. If unable to attend a meeting in person, a member may participate via teleconference or videoconference.
- g. A meeting quorum will be 50%+1 of active members.
- h. Meetings will be open to any individual who wishes to observe the discussions either in person or through teleconference or videoconference, although only committee members will be provided standing to participate in the discussion. Non-members may request an opportunity to present to the committee through two weeks' advance written submission for consideration by the chair and vice-chair.
- i. Metro Vancouver staff are not members of the committee, but will attend meetings to provide information on various topics, respond to questions etc.
- j. The committee may invite groups and subject matter experts to present and provide advice and feedback on specific agenda items, at the discretion of the chair and vice-chair.
- k. All committee agendas will be published and publicly available in advance of meetings, and presentations and meetings minutes posted thereafter on Metro Vancouver's website.
- l. Metro Vancouver will coordinate the venue and meeting logistics, invitations, notetaker, refreshments, and all requests received for the committee.
- m. Committee members may be reimbursed by Metro Vancouver for reasonable, out-of-pocket expenses associated with participating in meetings.

9. WORK PLAN

An annual work plan for the committee will be developed by Metro Vancouver staff based on deliverables in the solid waste management plan development. The work plan will be reviewed annually by the committee, and will guide development of meeting agendas.

10. CODE OF CONDUCT

This code is intended to serve as a framework to guide the spirit and intent of how members are expected to deliver on the committee's purpose and objectives in an ethical and respectful manner.

- a. *Respect and Collaboration*: Discussions and debates shall take place in an atmosphere of mutual respect and solutions-oriented collaboration, recognizing the value of different perspectives and seeking to understand the interests and needs of all affected parties.
- b. *Transparency*: It is expected that all members speak honestly and transparently, engaging in good-faith dialogue and sharing information openly to encourage fact-based dialogue.
- c. *Treatment of other Members*: Members have a duty to treat other members with respect during committee meetings. Specifically, members have a duty to avoid:
 - disrupting meetings by making continual interruptions or whispered asides
 - making offensive or abusive remarks directed at other members
 - impugning the motives of other members or supporting staff
 - ignoring the legitimate direction of the chair or vice-chair

Members who object to the behaviour of another member as identified in this code of conduct are asked to identify their concerns immediately to the committee chair and vice-chair. A member whose behavior repeatedly does not meet the code of conduct requirements may be asked to resign or be removed from the committee by the chair or vice-chair.

11. MEMBERSHIP RESIGNATION

Members wishing to resign from committee membership should provide written notice of their intent to resign, including the effective date of their resignation, addressed to the committee chair and vice-chair.

12. BUDGET AND RESOURCES

Funding for general meetings is provided by Metro Vancouver. Any additional funding for special projects or studies is subject to Metro Vancouver approval.

13. MEDIA PROTOCOL

Media requests will be directed to Metro Vancouver's media relations team. Individual members will not speak on behalf of the committee, unless it has been discussed and approved by the committee chair and vice-chair in advance.

The committee chair and vice-chair will be the chief spokespeople on behalf of the committee. For high profile issues, the role of spokesperson rests with the Board chair, vice-chair or the chair of the Zero Waste Committee. On technical matters or in cases where an initiative is still at the staff proposal level, a senior staff member is the appropriate chief spokesperson.

14. DECLARING CONFLICT OF INTEREST

Committee and subcommittee members must declare any conflicts of interest, real or perceived, at the outset of the process or as soon as it becomes known to the member.

SOLID WASTE MANAGEMENT UPDATE VISION AND GUIDING PRINCIPLES
Solid Waste Management Plan Public/Technical Advisory Committees Workshop
April 28, 2023

On April 28, 2023, Metro Vancouver held a workshop with members of the Solid Waste Management Plan Public/Technical Advisory Committee (PTAC) to discuss vision and guiding principles for the updated regional solid waste management plan. There were 20 of 32 PTAC members present as well as one observer.



The vision and guiding principles phase of engagement sets the foundation and direction for the plan development process, by gathering feedback on values, priorities, interests, and key solid waste management considerations now and into the future.

At the April 28, 2023 PTAC workshop, four key questions were presented to members:

1. What waste reduction, recycling and garbage disposal topics are most important, now and into the future?
2. List words or phrases that describe what matters, when deciding what to do with products, packaging and materials that are no longer needed.
3. The updated solid waste management plan is intended to reflect the values of everyone in the region. What values, interests, and priorities can be considered?
4. Thinking of how we purchase, use, reuse, repurpose, recycle and throw things away in the Metro Vancouver region, what could be better in the future than it is today?

A summary of themes that emerged at the workshop is presented in the What We Heard section below. Note that the feedback presented here is meant to highlight key themes from the discussion. Detailed discussion notes are being retained as part of the full engagement record, and individual comments will be included in feedback logs as part of an engagement report at the end of this phase on vision and guiding principles.

Next steps include providing an update report to the Zero Waste Committee on what we have heard so far through engagement with First Nations, member jurisdiction staff, and advisory committees, followed by the launch of public engagement on vision and guiding principles. Following public engagement, Metro Vancouver will produce an engagement summary report for this phase of engagement and provide a draft vision statement and guiding principles to the Zero Waste Committee and Board for consideration.

Members are encouraged to submit any additional feedback to zerowaste@metrovancover.org before May 31, 2023.

WHAT WE HEARD

The table below summarizes themes that emerged through the discussion, which will be taken into consideration as Metro Vancouver continues to engage on the vision and guiding principles for the updated plan.

Priority	What We Heard
Accessibility and inclusivity	<ul style="list-style-type: none"> • Enable easy, cheaper and local access to services. Support people to meet them where they are so they can have access.
Accountability	<ul style="list-style-type: none"> • Improve metrics to report on reuse, repair and diversion, and waste generation (including food) to enable us to reach bold goals. • Regularly set targets and share data publicly. • Recognize the shared responsibility of individuals and industry.
Affordability	<ul style="list-style-type: none"> • Understand and provide solutions to how affordability influences a person’s ability to purchase durable goods that last, access reuse markets, and travel to recycling facilities. Suggest making poor quality materials more expensive to disincentive their use, for example by incorporating costs related to environmental/health risks and clean-up. • Incentivize prevention over diversion over disposal.
Circular economy	<ul style="list-style-type: none"> • Start at the top of the zero waste hierarchy; increase reuse, repair, and remanufacture. • Create longer lasting products that are valued. • Design closed loop systems and encourage highest and best use of a product. • Facilitate development of infrastructure to support circular economy industries. • Build the circular economy to create jobs.
Climate action	<ul style="list-style-type: none"> • Advance current greenhouse gas reduction targets that align with sustainable development goals, to achieve climate goals. • Consider carbon footprint from production, extraction, and distribution. • Include food as integral to climate action plans. • Reduce dependency on disposal, including incineration, by increasing focus on waste prevention, reduction and diversion. • Improve system resiliency to climate change impacts.
Collaboration	<ul style="list-style-type: none"> • Collaborate with all levels of government, private businesses, and industry. • Engage with and foster a sense of community.
Convenience, consistency, simplicity	<ul style="list-style-type: none"> • Increase convenience and harmonize services across the region, and across sectors. Reduce complexity to combat decision fatigue.

Cultural sensitivity and respect	<ul style="list-style-type: none"> • Recognize cultural pressures or norms about consumption that impact actions related to waste.
Education and behavior change	<ul style="list-style-type: none"> • Provide clear communications to help increase understanding of the waste being created, and build public trust about recycling systems including end markets. • Increase transparency and awareness about the waste system, especially among younger populations. • Shift cultural norms to make waste prevention and recycling relevant, including using enjoyment/fun as tools to motivate collective action.
Environmental stewardship	<ul style="list-style-type: none"> • Review global climate footprint, biodiversity, sustainable development, and impact on people. • Acknowledge the importance and value of keeping the land healthy and regenerative. • Minimize discharges to the environment. • Minimize health, environmental, and financial risks using the precautionary principle.
Equity	<ul style="list-style-type: none"> • Make waste solutions accessible for modest/low income groups. • Increase equity by simplifying language, providing recycling services in all languages, and recognizing that not everyone has background of being zero waste expert. • Empower those who are marginalized. • Consider those who are food insecure; acknowledge those who are not aware of recycling or have limited access to education. • Consider the doughnut economic model to live within our planetary means while ensuring no one falls short on life’s essentials
Innovation	<ul style="list-style-type: none"> • Advance the waste prevention, reuse, and repair economies, as well as technological innovations and habit innovations. • Provide options for reuse, repair and recycling that are easier than disposal. • Introduce alternative, more sustainable products and consider subsidizing these options to reduce the financial barrier.
Regulation	<ul style="list-style-type: none"> • Develop and strengthen a regulatory framework that encourages innovation and waste prevention, includes food waste reporting, removes barriers to recycling, and has the flexibility to respond to change.



Public/Technical Advisory Committee Workshop activity: “What waste reduction, recycling and garbage disposal topics are most important, now and into the future?”

WORKSHOP ATTENDEES:

Director Sarah Kirby-Yung, Chair
 Director Craig Hodge, Vice-Chair
 Ben Liegey
 Bill Chan
 Brenda Martens
 Brianne De Man
 Cody Irwin
 Daniel Rotman
 Doug Schell
 Grant Hankins

Jamie Kaminski
 Louise Schwarz
 Love-Ese Chile
 Lyndsay Poaps
 Raman Johal
 Sue Maxwell
 Tara Immell
 Ulwiana Mehta-Malhotra
 William Selten
 Yasmin Abraham

Solid Waste Management Plan

Public/Technical Advisory Committee Bios



Director Sarah Kirby-Yung, Chair

Metro Vancouver Board Director Sarah Kirby-Yung is currently serving her second term on Vancouver City Council. Director Kirby-Yung is on the Metro Vancouver Board and is the Chair of the Zero Waste

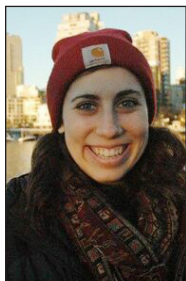
Committee. Director Kirby-Yung is also a National Zero Waste Council Board member, Liquid Waste Committee member, Pacific National Exhibition Chair, Vancouver Art Gallery Trustee, and Union of BC Municipalities Executive. Previously, she served as Commissioner and Chair of the Vancouver Park Board and her professional background is in marketing and communications, tourism, and hospitality.



Director Craig Hodge, Vice-Chair

Metro Vancouver Board Director Craig Hodge is a City of Coquitlam Councillor, a title he has held since 2011. Director Hodge serves on the Metro Vancouver Board, and is the Vice-Chair of the Zero Waste

Committee. Director Hodge is also Chair of the National Zero Waste Council Management Board, and serves on the Metro Vancouver Regional Parks Committee and Water Committee.



Alice Henry

Alice Henry is a researcher and facilitator with expertise in the circular economy and collaborative decision-making. As a Program Manager with the Share Reuse Repair Initiative, she focuses on fostering a just circular transition

and the repair economy, building cultural demand for circular goods and services, and supporting circular innovators.

She also works as an Associate of OneEarth to make sustainable living more accessible, and she provides strategic insight as a member of the Vancouver Economic Commission's Advisory Board. Henry enjoys supporting innovators, public institutions, and communities as we collectively rethink how our systems can work and how our economies can better support all peoples and our planet.



Ben Liegey

Ben Liegey is a Food Waste Reduction Ambassador with more than 9 years of experience consulting organizations throughout the food supply chain. He has a food engineering background combined with an Executive MBA,

and is always passionate about promoting business sustainability through reducing food waste.

He is the Founder and CEO of Rethink2gether, a Vancouver-based consulting company helping commercial kitchens reduce food costs and improve their bottom line. Rethink2gether empowers hotels and restaurants with training, app technology to track food waste, and support to become certified against the third-party audited certification The PLEDGE™ on Food Waste. He has been a member of the Vancouver Food Policy Council in 2021–2022 and is also the Co-Producer of the Food Synergy Movie, a BC documentary about food waste solutions from farm to plate.

Solid Waste Management Plan Public/Technical Advisory Committee Bios



Bill Chan

Bill Chan has over 25 years of senior executive management experience with Encorp / Return-It, a leading BC product stewardship organization. He was involved in the start-up phase, and directed, managed and led a dynamic team

to deliver a convenient, effective recycling network of Return-It depots for beverage containers, consumer packaging, and end of life electronic products.

Bill sits on the Board of Directors of Vancity Credit Union, Canada's largest community-based credit union with over 560,000 members and \$33 billion in assets. He is the Chair of the Audit Committee and member of the Governance and Risk Committees. His formal education includes a Chartered Professional Accountant designation (CPA, CGA) and a MBA from Asia Pacific University. He has received the ICD.D (Institute of Corporate Directors designation).



Brenda Martens

Brenda Martens has worked in the building industry for over 30 years as a practitioner, educator, and advocate in the field of regenerative building and circular economy.

Brenda has a focus on materials and waste reduction and is a TRUE (Zero

Waste) Advisor, and teaches courses on building circularity at British Columbia Institute of Technology.

She has led the zero waste efforts for many events, including the Vancouver Mini Maker Faire and Light House socials, and has spoken about waste at Buildex, Coast Waste Management Association, and the Vancouver Zero Waste 'meet-ups'. In 2018 she was appointed to the Order of British Columbia for her contributions to sustainability in the building industry.



Brianne De Man

Working alongside binners in the realm of environmental and economic justice since 2017, Brianne De Man has become a passionate advocate for the rights and voices of waste-pickers in Vancouver and globally. Brianne

is the Manager, Charitable Programs at Binners' Project, a charitable social enterprise dedicated to improving the economic opportunities of binners and destigmatizing their work as informal recyclable collectors.

In her role, Brianne is responsible for all advocacy initiatives that work to provide legitimacy and dignity to binners' work, while ensuring their voices are included in policy discussions that impact them, such as Metro Vancouver's solid waste management plan. In line with Binners' Project's mission to amplify the voices of binners at the policy level to both destigmatize their work and increase their political visibility, Brianne will be bringing those voices with her when possible to the advisory committee, ensuring binners' interests are well represented. She received a Master of Public Health from the University of Victoria in 2016.

Solid Waste Management Plan Public/Technical Advisory Committee Bios



Christian Dietrich

Christian Dietrich is the Vice President of Recycling and Waste Services at Ecowaste Industries. Christian's entire work experience centers around waste management, specifically hazardous waste and solid waste management. He has

worked in and led teams to design, commission, operate and maintain five separate waste processing plants ranging from a hazardous waste fuel blending facility in Tennessee, to fuel production from residential waste in London UK, to anaerobic digestion of food and garden waste in Surrey, BC.

Christian has also taken part in operational teams to improve safety and operational performance at a variety of waste processing plants including, material recovery facilities, mechanical biological treatment, combined heat and power incinerator, and waste-gasification. Christian holds a BSc Environmental Science from Lake Superior State University and an MBA from Seattle University.



Daniel Rotman

Daniel has an M.A. in Conflict Resolution and his mission is to engage in society's large, multi-party, cross-sector problems. This has brought him to the world of waste, where he now operates a consultancy at the crossroads of

waste management and behaviour change. He has experience working in waste audits, waste planning research, private recycling and Extended Producer Responsibility.

In the community, he has been co-facilitating and developing the Master Recycler Vancouver program since 2015, co-chairing the Society Promoting Environmental Conservation (SPEC) Waste Committee since 2017, and a multi-unit residential building waste committee most recently in 2020. Daniel is thankful to be able to live and play and work on this beautiful land and tries to live in a way to protect it for generations to come.



Cody Irwin

Cody Irwin has a strong connection and love for nature, as well as a powerful draw to technology and innovation. He was born on a remote farm in Manitoba and later raised in uptown Toronto. He went on to study Mechanical Engineering

at McGill University and moved to beautiful British Columbia after graduation.

For the last decade, he has called Vancouver home. There he started his first venture, Natural Source, offering corporate food services for technology companies. Over 10 years he grew this business into a local industry leader, until the pandemic closed offices and Natural Source's client base almost completely evaporated overnight. As devastating as this was, it proved to be an amazing opportunity. By repurposing his company's resources, he was able to build ShareWares with goals of eliminating single-use waste locally and worldwide.

Solid Waste Management Plan Public/Technical Advisory Committee Bios



Doug Schell

Doug Schell is currently the Manager of Recycling and Waste Management for BC Housing Management Commission. He has over 35 years' experience in the ever-evolving waste management sector. In collaboration with internal

and external stakeholders, he has been part of efforts to mitigate the effects of climate change through waste diversion, engagement and education.

Anyone that knows Doug sees by his example that we can all do better in reducing our waste and manage our natural resources better. He co-founded one of the first full-service recycling companies in Greater Vancouver, Waste-Not Recycling Inc. He has worked with organizations for over 30 years providing the tools to promote zero waste and continues to seek ways to reduce the barriers to recycling, especially within marginalized communities.



Grant Hankins

Grant Hankins has spent his career in the waste, recycling, and environmental industry, while achieving an MBA in the United States, an undergraduate degree from Simon Fraser University, and a business diploma from Capilano

University. While developing recycling, organics, and deposit return-to-retail programs as well as food reclamation recovery systems for the Overwaitea Food Group in BC and Alberta, he started his contributions to the broader sector by being a member of the first GVRD solid waste management plan local and technical solid waste advisory committees.

After fully developing return-to-retail programs, and in-house waste diversion systems at the Overwaitea Food Group, he worked for Browning Ferris Industries (BFI) as plant manager for its materials recovery facility, progressing to Divisional Vice

President. His career progressed to developing a first of its kind recycled glass optical sorting system for Environmental Technology. He then ventured into working for a large multinational company, Waste Management, as its Director of Operations for western Canada and northern California. He returned to Canada and was the General Manager for Progressive Waste/Waste Connections in the Lower Mainland. He now spends time investing in waste, recycling and environmental businesses, consulting within North America and is the Board Chair and President of the Waste Management Association of BC.



Hunter Bergen

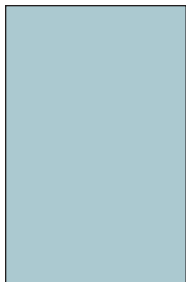
Hunter Bergen's degree in architectural science sparked her passion for sustainability and environmentalism, and gave her the tools to prosper in a leadership role with Nada for nearly two years (leaving September 2022) —

Vancouver's first package-free grocery store.

In her time with Nada, managing purchasing and inventory, she realized that there is still a lot of work to be done to make zero waste more accessible at a larger scale. While she is now travelling Australia, she continues to implement strategies of sustainability in her day-to-day life. She aims to educate, encourage, and empower individuals to realize their environmental goals through her blog *Golden Hour*, a space to provide insight and resources for environmental action and mental health.

Apart from zero waste, she has been fortunate to experience exciting industries such as photography, culinary arts, cosmetology, forestry, construction, design, touring and retail. The sum of her experiences has helped her navigate an emerging industry and she can't wait to share it with the rest of the world through the voice of the Public/Technical Advisory Committee.

Solid Waste Management Plan Public/Technical Advisory Committee Bios



Jake Turek

Jake Turek is the Waste Management Engineer with the BC Ministry of Agriculture, and leads several files related to agricultural by-products, composting, and bioenergy. He was the Ministry lead for mortality disposal during

the 2021 atmospheric river event, working with key stakeholders to ensure farmers had the ability to dispose of mortalities in an environmentally sustainable manner. Jake has supported the development and update of disposal protocols and legislation, specifically the Code of Practice for Agricultural Environmental Management. Jake is interested in participating on the committee to ensure that agricultural waste management practices are represented, as necessary.



Jamie Kaminski

Jamie Kaminski is a Zero Waste Business Associate (ZWA, TRUE Advisor) and is President of HSR Zero Waste. He is a Board Member of Zero Waste Canada and of the Zero Waste International Alliance, and is Chair of the Zero Waste

Definition working group and Zero Waste Hierarchy working group.

Jamie's experience is in solid waste management from both a ground level and policymaking perspective. His area of expertise lies within international best practices in zero waste, and in respect to internationally accepted zero waste policies and programs. He works with fellow policy advisors to create strong, practical and enforceable policies that drive change towards zero waste. With over 27 years of active engagement in the waste and waste diversion industry working for HSR, Jamie has developed extensive experience in understanding how regional policies and bylaws affect the existing waste management system from the perspective of the service provider, the client, as well as the region as a whole.

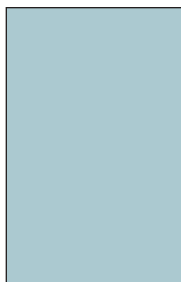


Jaye-Jay Berggren

Jaye-Jay Berggren brings over 15 years' experience in the organic waste management industry. He is a founder and a former owner of Sea to Sky Soils, which has successfully processed Metro Vancouver organics since 2017. Jaye-Jay

boasts the establishment of a local circular economy model, which tied organic waste and compost to local food production and local food security.

He has successfully worked with numerous Indigenous communities over the last decade, and has a strong interest in fulfilling the commitments BC has made to Truth and Reconciliation, and the United Nations Declaration on the Rights of Indigenous Peoples. Jaye-Jay now continues to work towards educating others on the value of organic waste, and considers this an important resource for future generations.



Jessica Savoy

Coming soon

Solid Waste Management Plan Public/Technical Advisory Committee Bios



John Doherty

John Doherty is the Facilities Manager at the New Westminster Campus of Douglas College overseeing several areas including catering, parking, and waste management. He is a Prosci® Certified Change Practitioner

and has experience guiding groups through large-scale projects.

John is committed to and passionate about finding new ways to achieve lower waste output. He serves as a member of the strata council at his place of residence and brings both commercial and residential viewpoints on solid waste to the table. He has a background in security, art, and graphic design.



Kevin Huang 黃儀軒

Kevin Huang (he/him) is the co-founder and executive director of hua foundation, an organization with the mission of strengthening the capacity among Asian diasporic youth, in solidarity with other communities, to challenge, change,

and create systems for a more equitable and just future. His work has ranged from scaling culturally sensitive consumer-based conservation strategies through a project called Shark Truth, advancing municipal food policy to address inclusion and racial equity, to providing supports for youth from ethnocultural communities to reclaim their cultural identity on their own terms.

Kevin serves on committees with Vancity Credit Union, Vancouver Foundation, and the City of Vancouver; he is also on the board of two charities. Kevin's public policy experience includes managing hua foundation's work with the City of Vancouver on the single-use item reduction strategy where he oversees multi-lingual and culturally resonant stakeholder engagement and consultations.



Louise Schwarz

Co-owner of Recycling Alternative, Louise brings 30+ years of experience developing and delivering best practices waste reduction and recycling programs to the Industrial, Commercial, Institutional (ICI) sector. Her

commitment to community collaborations has led Recycling Alternative to partner with numerous groups, developing and supporting some of Vancouver's most innovative community diversion models including Vancouver Biodiesel Co-op, Food Scraps Drop Spots, Recycle in Strathcona, Zero Waste Events, and greenHUB co-location facility with community partner United We Can. Louise is currently working with local green innovators to create Vancouver's first Green Industrial Innovation District (the GrIIDTM), focusing on circular economy and inclusive, green employment.

Louise sits on the National Zero Waste Council's Management Board, Recycling Council of British Columbia's Board, Encorp's Community Advisory Committee, Share Reuse Repair Initiative's Steering Committee, Downtown Community Court's Advisory Council, and Urban Core's Executive Committee. She received the 'Woman of Distinction Award' in 2012, the Queen's Diamond Jubilee Medal in 2013, and City of Vancouver's Award of Excellence for Greenest City Leadership in 2014.

Solid Waste Management Plan Public/Technical Advisory Committee Bios



Love-Ese Chile

Dr. Love-Ese Chile is Owner and Technical Director of the circular economy innovation company, Regenerative Waste Labs, where she advocates for a whole system approach to product development. In her work, Dr. Chile advises

businesses on circular product design, closed loop recovery strategies and how to communicate the value of circular products.

Love-Ese's interests lie at the intersection of the circular economy, bioeconomy, green chemistry, and sustainable science. She has taken her scientific training into industry and is passionate about communicating and translating her knowledge into new ventures and initiatives that will add value to our communities. As a person who comes from diverse backgrounds both personally and professionally, Love-Ese is driven to connect people who may not usually come together to co-create products and services that will lead our communities into a greener and more equitable future.



Lyndsay Poaps

Lyndsay Poaps is the Executive Director of the Recycling Council of British Columbia (RCBC).

An accomplished leader with collaborative experience in multi-stakeholder consultations, she has a strong background in community

building and decision making. Before joining RCBC, she served as Executive Director for Leadnow, a national independent advocacy organization, and as Co-Chair of OPEN, an international network of digital campaign organizations. Lyndsay spent a number of years as a Communications Specialist with Metro Vancouver, with a focus on behavior change and waste diversion. She currently sits on the National Zero Waste Council Management Board.

Driven and energetic, Lyndsay has built and maintained personal and professional relationships across many communities. She was an elected Commissioner with the Vancouver Parks Board from 2002–2005, was an Urban Fellow with the City of Toronto, has been an Action Canada Fellow, and founded Frontrunner, a campaign school to train and support young women interested in running for election. Lyndsay has a Masters of Public Policy from Simon Fraser University.

Solid Waste Management Plan Public/Technical Advisory Committee Bios



Matthew Morin

Matthew Morin is a Cree/Metis descendant of the Morin family from Sandy Bay, Saskatchewan. He has been involved with Aboriginal Life In Vancouver Enhancement (ALIVE) Society since 2018

beginning as a Youth Leader on the Board of Directors and is currently serving the role of Youth Facilitator for ALIVE Society's Truth and Reconciliation Project. Matthew was rewarded the Dwight Dory National Indigenous Youth Award by the Congress of Aboriginal Peoples in 2021. His areas of interest are in family advocacy and language revitalization.



Michael Zarbl

Michael Zarbl joined the Major Appliance Recycling Roundtable as the Executive Director in July 2017. Prior to that, Michael was the Director of Operations at Recycle BC (formerly MMBC) the Extended Producer Responsibility program

for packaging and printed paper in British Columbia. Before joining Recycle BC, he was the Senior District Manager for Waste Management of Canada Company for four years, where he was responsible for the entire operation of the Vancouver Hauling District.

Prior to that, Michael held various private sector positions at major corporations such as Director of Operations with Ryder Container Terminals, a large export/import and distribution facility for Canadian manufacturers and major Canadian retailers, Distribution Centre Manager for Martin Brower of Canada (distributor for McDonald's Restaurants of Canada), and with Coca-Cola Bottling Co. He has an extensive supply chain management background with direct experience in the key activities along the supply chain, culminating in direct waste management industry experience. Michael has a BA from Concordia University in Montreal and is fluent in both English and French.



Raman Johal

Raman Johal is the Sustainability Specialist at London Drugs. Born and raised in London, England, he moved to Vancouver in 2009. He graduated from the Sauder School of Business at UBC with a Bachelor's Degree in Commerce

and a concentration in Sustainability. He also worked for the Sustainability and Ethics group at Sauder as a research assistant, helping them expand their sustainability education.

A firm believer in responsible business and the ability for business to be a force for good, he now works for London Drugs, managing their comprehensive Green Deal program. This includes their extensive return-to-retail recycling program, where customers can bring back many of the products they purchase to be responsibly recycled. The Green Deal program has four pillars in total: upstream purchasing, energy and operations, waste minimisation, and communication and education.

Solid Waste Management Plan Public/Technical Advisory Committee Bios



Sara Larter

Sara Larter is the Executive Director for the Vancouver Repair Collective, which offers free community repair events in the Lower Mainland that help people fix their broken gadgets, computers, or clothing in order to keep excess waste from

our landfills. Her passion is teaching and as a certified adult educator with a degree in Fashion Design and Apparel Production Management, she hopes to be able to teach new designers about the importance of sustainability in fashion and a circular economy.

Sara lives in a beautiful co-op in Vancouver with her husband and two fur-kids. When she isn't teaching or working with the Vancouver Repair Collective, she enjoys sewing, pattern making and crochet.



Sue Maxwell

Sue Maxwell is the chair of Zero Waste BC, a non-profit organization working to drive systemic change towards zero waste in BC. She is also a consultant for Ecoinspire, which for fifteen years has focused on sustainability and zero waste

planning, working with governments, Extended Producer Responsibility programs, and businesses.

Sue has been a councillor in Whistler and an active volunteer for waste reduction and community planning. She has volunteered with the Climate Caucus (Co-Chair of the Zero Waste/Circular Economy Working Group), Whistler Zero Waste Committee, Squamish-Lillooet Regional District Solid Waste Management Plan Monitoring Advisory Committee, the BC Intermunicipal Working Group on Zero Waste, Recycling Council of British Columbia Board and Policy Committee and others. She has a Master of Arts in Environment and Management from Royal Roads University and her thesis was on zero waste.



Tara Immell

Tara Immell is a university lecturer focused on financial and environmental risk management who also consults for an engineering firm in the field of solid waste management. Whether teaching or consulting, Tara is

passionate about raising everyone's awareness of how individual choices impact climate change. Tara's waste management expertise focuses on food and plastic waste. At Tetra Tech, she conducts waste audits, has written a technical roadmap on recycling plastics, and has supported US regulatory research to keep edible food out of landfills.

Tara is currently studying for a PhD at Simon Fraser University, where she has taught finance for over 20 years. She completed a Master of Agriculture degree focusing on the impact of food waste and has previous local food system experience as the general manager of the North Vancouver, West Vancouver, and Burnaby Artisan Farmers' Markets.

Solid Waste Management Plan Public/Technical Advisory Committee Bios



Ulwiana Mehta-Malhotra

Ulwiana Mehta-Malhotra is a student passionate about taking environmental action to positively impact the mindsets of her generation and better the earth. She has spearheaded initiatives to reduce waste, be it the unnecessary

disposal of food, clothing, or books, looking at how mindsets impact individual consumption and thus waste, and giving alternatives to throwing away items such as upcycling, passing on, or donating.

As a member of generation-Z, Ulwiana sees that she and her peers have the power as consumers to reduce waste, and must contribute to society's efforts to mitigate climate change so that they can live in a cleaner, greener world. She is an advocate of hopeful, solution-based thinking, and sees action through legislation as the antidote to anxiety. Ulwiana is looking forward to connecting her passion to policy to help Metro Vancouver reduce their solid waste.



Yasmin Abraham

Yasmin Abraham is Co-Founder of Kambo Energy Group and the visionary behind Empower Me, Canada's only energy and climate focused program designed for, and delivered by, members of underserved communities. Under

Yasmin's leadership, Kambo has become a leader and advocate for the inclusion of lower income families in climate policies, specifically advocating for supports for families experiencing energy poverty. Kambo's Community Power division is dedicated exclusively to reducing energy poverty and improving housing conditions with Indigenous communities.

Yasmin is a leading expert in equity-based energy and climate programming, working with governments and utilities across Canada to design and deliver inclusive solutions. Yasmin has assembled an employee roster representative of the communities they serve – 83% identify as visible minority, immigrant and/or multilingual, and 59% of employees are female.



William Selten

William Selten is an accomplished engineer with a mechanical engineering background. He has a solid background in the field of organic waste processing, specifically in processing more contaminated waste streams.

He has been involved in multiple projects from conception through to operations.

William has provided his expertise and services across the globe for various stakeholders including both public and private sectors on both new and existing organic waste processing facilities. He is passionate about improving the future of our planet by building renewable infrastructure in the waste to energy sector. Outside of work he tinkers around the house doing projects on his small acreage and attending to his animals in Whonnock, Maple Ridge, where he has lived with his family since 2019.

To: MVRD Board of Directors

From: Craig Hodge, Director, Metro Vancouver Board, and Co-Chair, Solid Waste and Recycling Industry Advisory Committee

Date: October 6, 2023 Meeting Date: October 27, 2023

Subject: **External Agency Status Report for Solid Waste and Recycling Industry Advisory Committee**

RECOMMENDATION

That the MVRD Board receive for information the report dated October 6, 2023, titled “External Agency Status Report for Solid Waste and Recycling Industry Advisory Committee”.

EXECUTIVE SUMMARY

The Solid Waste and Recycling Industry Advisory Committee (Industry Advisory Committee) provides a forum for industry contribution, discussion, and advice on management planning, operations, and policy issues related to solid waste and recycling services in Metro Vancouver, as well as the ongoing solid waste management plan update.

The 2023 Industry Advisory Committee consists of 30 industry members. In 2023, topics of discussion at Industry Advisory Committee meetings have included:

- Waste and recycling data and calculation methodologies
- Regional waste systems assessment study
- Vision and guiding principles for an updated solid waste management plan
- Draft Tipping Fee Bylaw updates and smart waste program

PURPOSE

To provide the MVRD Board of Directors with an update on the activities of the Solid Waste and Recycling Industry Advisory Committee in 2023.

BACKGROUND

In July 2021 the Board received for information the terms of reference for the Solid Waste and Recycling Industry Advisory Committee (Industry Advisory Committee). The terms of reference are approved by Industry Advisory Committee members through a vote. The committee held its first meeting in January of 2022. The Industry Advisory Committee reports through its Co-Chairs to the Zero Waste Committee in addition to providing advice and recommendations to Metro Vancouver staff. Director Hodge serves as the Zero Waste Committee representative and Co-Chair of the Industry Advisory Committee. Under the terms of reference, the second Co-Chair is elected by the Industry Advisory Committee members. Mary Polak held the position of committee member Co-Chair until July 2023. Lori Bryan of the Waste Management Association of British Columbia became Co-Chair following the October 2023 meeting.

Industry Advisory Committee membership is self-selected via an annual open call for submissions, and membership carries a one-year term with a requirement to re-submit a statement of interest each year. There are 30 committee members in 2023 with 24 returning members and six new this year. Member biographies are available on the committee [web page](#) (Attachment 3).

The 2023 Industry Advisory Committee has now held seven meetings and two workshops with one remaining meeting scheduled in November 2023.

Any member of the public is welcome to observe Industry Advisory Committee meetings. Starting September 12, 2023 online meetings are live-streamed and recorded. Any observers must attend in-person at in-person meetings.

INDUSTRY ADVISORY COMMITTEE

Key Topics of Discussion

In late 2022, Metro Vancouver received feedback on priority topics and themes that Industry Advisory Committee members are most interested in discussing and subsequently facilitated a workshop on September 7, 2022 to delve deeper into a few of the key priority topics. Some topics and interests discussed at the workshop and included in the 2023 work plan include the following:

- Construction and demolition waste management
- Extended producer responsibility
- Generator Levy
- Metro Vancouver disposal ban program
- Metro Vancouver procurement process
- Movement of waste across the region
- Public education and communications regarding contamination, behaviour change
- Recycling rates and statistics – metrics and transparency
- Residential and commercial/institutional residual garbage management
- Rising insurance rates for operators and facilities
- Role of public and private sectors in delivering solid waste services and advancing zero waste and the circular economy
- Solid waste management plan vision and guiding principles
- Waste composition study results
- Waste reduction and recycling data including calculation methodology
- Zero waste and circular economy

There was considerable interest in discussing recycling and garbage disposal data and methodology, with some members suggesting specific materials such as concrete and any materials used as fuel not be included in recycling statistics. Metro Vancouver includes those materials as they are municipal solid waste materials, and the materials are managed for recycling and beneficially used. Additional clarity was provided within Metro Vancouver *2021 Solid Waste Management Annual Summary* with respect to calculation methodology.

Industry Advisory Committee Actions

Under the Terms of Reference for the Industry Advisory Committee, the Terms of Reference, and any updates, are voted on by the Committee. The most recently approved Terms of Reference were approved by the Committee on July 11, 2023, and are attached as Attachment 1.

In June 2023, the Industry Advisory Committee participated in a workshop on the vision and guiding principles for an updated solid waste management plan. Twenty-two of 30 members attended and provided input on key themes to consider in the development of a vision and guiding principles for the updated plan (Attachment 2). Some key themes that emerged include improving accessibility to recycling and waste services; improving accountability in measuring waste and recycling; increasing convenience and consistency; advancing innovation in waste prevention, reuse, and repair; exploring technologies for managing waste and maximizing resource recovery; and ensuring policy allows for competition and innovation within the private sector.

In October 2023, the Industry Advisory Committee participated in engagement on the smart waste program implementation and draft Tipping Fee Bylaw updates. A workshop was facilitated by a third-party to gather input from industry representatives. The feedback will help to inform a draft smart waste program implementation plan and a revised draft Tipping Fee Bylaw.

ALTERNATIVES

This is an information report. No alternatives are presented.

FINANCIAL IMPLICATIONS

Coordination of the Industry Advisory Committee is included in the current Solid Waste Services work plan and budget.

CONCLUSION

The Industry Advisory Committee provides a forum for industry contribution, discussion, and advice on management planning, operations, and policy issues related to solid waste and recycling services in Metro Vancouver, as well as the ongoing solid waste management plan update.

Attachments

1. Industry Advisory Committee Terms of Reference, updated July, 2023
2. Workshop Summary – Solid Waste Management Plan Update Vision and Guiding Principles, June 6, 2023
3. Committee member biographies

Reference

[Solid Waste and Recycling Industry Advisory Committee Web Page](#)

Solid Waste and Recycling Industry Advisory Committee

Terms of Reference

Updated June 30, 2023

1. PURPOSE

The purpose of the Solid Waste and Recycling Industry Advisory Committee (IAC) is to provide a forum for industry contribution, discussion and advice on management planning, operations and policy issues related to solid waste and recycling services in Metro Vancouver.

The purpose of these terms of reference is to describe the role of the committee.

2. OBJECTIVES

The IAC will:

- Provide industry representatives with a formal structure through which they can receive information and provide management planning, operational and policy advice related to solid waste and recycling within Metro Vancouver;
- Provide Metro Vancouver with a venue to engage the private waste services sector on solid waste and recycling plans, policies, and services within the region; and
- Provide affected industry stakeholders with the opportunity to be heard and to channel ongoing feedback to Metro Vancouver, including engagement on Metro Vancouver's solid waste management plan update process as well as other waste management issues of regional importance.¹

3. MEMBERSHIP

The IAC membership is comprised of representatives of private waste and recycling collection and processing companies and their industry associations affected by existing and proposed operational and policy items related to solid waste and recycling plans, policies, and services within Metro Vancouver. A representative from the Zero Waste Committee will attend all IAC meetings and will be one of the Co-Chairs for the IAC.

Membership is voluntary, self-selecting, and carries a term of one year. The initial open call for membership will be advertised on Metro Vancouver's website and through Metro Vancouver's solid waste industry mailing list a minimum of 45 days prior to the inaugural IAC meeting. An annual open call for new members will be advertised a minimum of 30 days prior to each anniversary of the inaugural committee meeting. Existing members that wish to continue participation in the IAC will be asked to re-submit their statement of interest annually.

All private waste and recycling collection and processing industry representatives who express interest in participating in the IAC will be required to review the IAC Self-Selection Assessment Framework and complete the Statement of Interest Declaration confirming agreement and expressed intention, to work within the Terms of Reference. All persons who complete this process will become members of the IAC for a term of one year.

¹The IAC is not intended to be the sole venue or mechanism for industry consultation and engagement on the solid waste management plan update. Although the IAC will provide feedback and advice related to the plan update process, the scope of the committee includes other regional solid waste management considerations and will continue beyond the approval of the solid waste management plan.



4. EXPECTATIONS OF MEMBERS

- Members must be prepared to invest time and energy towards learning and understanding existing and proposed solid waste and recycling policies, practices, and bylaws, as well as the regional waste management system and issues associated with their administration and implementation.
- Members must be prepared to work constructively and collaboratively at committee meetings to address areas of mutual concern, recognizing the multi-faceted issues and interests of all impacted stakeholders. While it is recognized that private companies are not accountable to other members of their same industry, it is expected that all IAC members act in good faith to present the experience and concerns that are reflective of their broader community.
- Members must be prepared to commit the time required to attend monthly committee meetings, pre-read the agenda and all supporting material provided for each meeting, participate fully and constructively in committee discussions, and complete required actions and tasks on time.² Members must provide advance written notice to the Co-Chairs if they are unable to attend a meeting. Members are permitted to send alternate representatives if they are unable to attend a meeting, members must provide advance written notice to the Co-Chairs advising the name and position title of their alternate.

5. CONFLICTS OF INTEREST

Members are to file with the IAC Co-Chairs a written disclosure statement detailing their relationship with Metro Vancouver.

Examples of information that would be expected to be shared in the disclosure statements include:

- Contracts with Metro Vancouver entities;
- Contracts providing services to Metro Vancouver facilities as a sub-contractor;
- Addresses of facilities that are licensed under Metro Vancouver's Municipal Solid Waste and Recyclable Material Regulatory Bylaw No. 181, 1996; and
- The submission of a proposal in connection with a Metro Vancouver procurement process.

Any member or principal who does not have a relationship with Metro Vancouver must file a NIL disclosure statement to that effect. Members are asked to update that disclosure statement in a timely fashion to reflect any change of circumstances or if the IAC's deliberations expose relationships that may not have been initially apparent. Members who fail to file the requisite disclosure statement and updates will be excluded from the IAC and its deliberations until such time as he or she fully complies.

Alternate representatives are not required to provide a disclosure statement to the Co-Chairs unless the alternate representative is attending three or more IAC meetings within the year. IAC member disclosure statements will be posted online on the IAC website and publically available.

Members should excuse themselves from any IAC discussions or matters that may place them in a conflict of interest, unless explicitly requested to speak, on a majority vote of the IAC to do so. A conflict of interest is considered to be a pecuniary or other interest in the business of a Metro Vancouver entity that would cause a real or perceived conflict of interest in the member's ability to carry out his or her duties in connection with the IAC.

The Co-Chairs also have the power to remove any IAC member whose actual or potential conflicts of interest are inconsistent with a fair and objective deliberation of the issues that may come before the IAC. The Co-Chairs will rely exclusively on the information provided by members in their disclosure statements to inform such decisions.

² It is anticipated that this may represent a time commitment of 6 hours+ per month.

6. CHAIRS

There will be two IAC Co-Chairs. The Zero Waste Committee representative will be a Co-Chair and a second Co-Chair will be elected annually for a term of one year by a 50%+1 majority vote of voting members present.

Voting members are defined as IAC members who have held membership for at least one month prior to the day of the vote.

Co-Chair elections will take place at the meeting on the one-year anniversary of the member Co-Chair's appointment. Nominations will be called at the previous meeting, with additional nominations allowed on the day of the election.

7. ADVISORY STRUCTURE & DECISION MAKING

The IAC is an advisory body, providing advice and recommendations to Metro Vancouver staff and, through the IAC Co-Chairs, to the Independent Consultation and Engagement Panel and the Zero Waste Committee. While sincere efforts will be made to achieve consensus on recommendations and advice, consensus is not a precondition to advancing committee recommendations. Where consensus exists it will be noted, and where it does not exist, all perspectives will be included in the meeting minutes. The IAC is not generally a voting body. Voting will only occur in the following four circumstances, and in these circumstances, there will be one vote allocated per company/entity represented:³

1. annual election of the second Co-Chair;
2. updates to the terms of reference;
3. confirmation of the annual work plan; and
4. during the appeal of member's dismissal, as described in section 11 of this Terms of Reference.

In each of these scenarios, voting will be a 50% +1 majority decision-making model of votes cast.

8. WORK PLAN

A work plan for the IAC will be developed by Metro Vancouver staff based on an annual call for work plan topics submitted by IAC members reflecting priority issues they would like to see considered during the year. The work plan, once confirmed by the IAC, will guide the development of meeting agendas for the year. The work plan may be amended during the year, at the agreement of both Co-Chairs, to allow for flexibility to address emerging issues or unanticipated, time-sensitive topics. Implementation of the annual work plan is at the prerogative of IAC members and does not direct activities of Metro Vancouver staff or resources, beyond the provision of committee secretariat support functions.

9. MEETINGS

- Meetings will be held monthly, except in July, August, and December, where no meetings will be held. The meeting dates and times will be determined by the Co-Chairs in consultation with IAC members, with a confirmed pre-set schedule for all meetings within the calendar year. On agreement of both Co-Chairs, meetings may be added or canceled as appropriate.
- Metro Vancouver will provide a venue, a third-party note taker, and refreshments for meetings, or as determined otherwise by the IAC. Through 2023 all meetings will be held virtually for IAC members, with the exception of two workshops to be held in person.

³ If there are multiple members representing a single company, they will be asked to convene among themselves to determine their collective vote.

- The Co-Chairs will work with Metro Vancouver staff to draft meeting agendas and coordinate any necessary meeting materials, which will be circulated to meeting participants a minimum of 72 hours in advance of the meeting.
- The meetings will be structured to encourage free and open discussion of relevant issues within the constraints of the planned agendas.
- Meeting minutes and action trackers will be kept for each meeting, through secretariat support provided by Metro Vancouver staff.⁴ Minutes shall not reflect the names of individual speakers or their stance on issues; rather, they shall reflect the issues discussed, significant points of view on the issues and the resolutions or actions to be taken.
- A meeting quorum will be 50%+1 of active members. The IAC may establish other meeting procedures, which will be considered as an appendix to these terms of reference.
- Meetings will be open to any individuals who wish to observe the discussions either in person or through video or teleconference, although only IAC members will be provided standing to participate in the discussion. Individuals interested in observing can request meeting information two weeks in advance of the meeting time and date. Non-member stakeholders may request an opportunity to present to the IAC, through two weeks' advance written submission for consideration by the Co-Chairs.
- The IAC may invite groups and subject-matter experts to present to the IAC and provide advice and feedback on specific IAC agenda items, at the discretion of the Co-Chairs.
- All IAC agendas will be published and publicly available in advance of meetings, with IAC presentations and meeting minutes posted for information on Metro Vancouver's website.

10. CODE OF CONDUCT

This code is intended to serve as a framework to guide the spirit and intent of how IAC members are expected to deliver on the IAC's purpose, objectives, and intent in an ethical and respectful manner.

1. **Respect and Collaboration:** Discussions and debates shall take place in an atmosphere of mutual respect and solutions-oriented collaboration, recognizing the value of different perspectives and seeking to understand the interests and needs of all affected parties.
2. **Transparency:** It is expected that all members speak honestly and transparently, engaging in good-faith dialogue and sharing information openly to encourage fact-based dialogue.
3. **Treatment of other Members:** Members of the committee have a duty to treat other members with respect during IAC meetings. Specifically, members have a duty to avoid:
 - a. Disrupting meetings by making continual interruptions or whispered asides;
 - b. Making offensive or abusive remarks directed at other members;
 - c. Impugning the motives of other IAC members or supporting staff;
 - d. Ignoring the legitimate direction of the Co-Chairs.

Members who object to the behaviour of another member as identified in this code of conduct are asked to identify their concerns immediately to the IAC Co-Chairs.

11. MEMBERSHIP DISMISSAL

IAC members must recognize the importance of their commitment through active participation, regular attendance, and adherence to the IAC Terms of Reference. The following are potential reasons for membership dismissal.

⁴ Metro Vancouver staff are not members of the IAC, but will attend meetings of the IAC to provide information on various issues, respond to questions etc.

- Failure to attend two or more consecutive monthly meetings, or,
- Lack of adherence to the IAC Terms of Reference, specifically including section 10: Code of Conduct, and Section 14: Media Protocol.

At the agreement of both Co-Chairs, members who have committed one or more of the potential reasons for losing membership may be dismissed from the committee by way of written notification. The dismissed member is ineligible for reinstatement at the subsequent annual call for membership.

If the member wishes to appeal the dismissal, they can request a vote from the IAC membership, to be undertaken using secret ballot. Voting will be a 50% +1 majority decision-making model. The impacted member is not eligible to vote in this process.

12. MEMBERSHIP RESIGNATION

Members wishing to resign from IAC committee membership should provide written notice of their intent to resign, including the effective date of their resignation, addressed to the IAC Co-Chairs.

If a member leaves the IAC, the company or association the member represents can appoint another representative for the remainder of the IAC term.

13. BUDGET AND RESOURCES

Funding for general meetings, secretariat, and support expenses is provided by Metro Vancouver. Any additional funding for special projects or studies is subject to Metro Vancouver approval.

14. MEDIA PROTOCOL

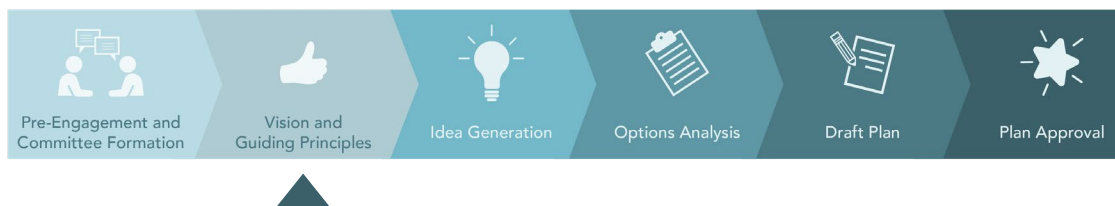
Individual IAC members will not speak on behalf of the IAC unless it has been approved by the Co-Chairs in advance.

15. REVIEW OF THE IAC TERMS OF REFERENCE

The IAC will review these Terms of Reference at least every 18 months, for consideration on whether any amendments or modifications to the process are required. Amendments will be provided to the Zero Waste Committee for information.

SOLID WASTE MANAGEMENT UPDATE VISION AND GUIDING PRINCIPLES
Solid Waste and Recycling Industry Advisory Committee Workshop
June 6, 2023

On June 6, 2023, Metro Vancouver held a workshop with members of the Solid Waste and Recycling Industry Advisory Committee (IAC) to discuss vision and guiding principles for the updated regional solid waste management plan. There were 22 of 30 IAC members present.



The vision and guiding principles phase of engagement sets the foundation and direction for the plan development process, by gathering feedback on values, priorities, interests, and key solid waste management considerations now and into the future.

At the June 6, 2023 IAC workshop, four key questions were presented to members:

1. What waste reduction, recycling and garbage disposal topics are most important, now and into the future?
2. List words or phrases that describe what matters, when deciding what to do with products, packaging and materials that are no longer needed.
3. The updated solid waste management plan is intended to reflect the values of everyone in the region. What values, interests, and priorities can be considered?
4. Thinking of how we purchase, use, reuse, repurpose, recycle and throw things away in the Metro Vancouver region, what could be better in the future than it is today?

A summary of themes that emerged at the workshop is presented in the *What We Heard* section below. Note that the feedback presented here is meant to highlight key themes from the discussion. Detailed discussion notes are being retained as part of the full engagement record, and individual comments will be included in feedback logs as part of an engagement report at the end of this phase on vision and guiding principles.

Next steps include providing an update report to the Zero Waste Committee on what we have heard so far through engagement with First Nations, member jurisdiction staff, and advisory committees, followed by the launch of public engagement on vision and guiding principles. Following public engagement, Metro Vancouver will produce an engagement summary report for this phase of engagement and provide a draft vision statement and guiding principles to the Zero Waste Committee and Board for consideration.

Members are encouraged to submit any additional feedback before June 30, 2023, to solidwasteoperations@metrovancover.org.

WHAT WE HEARD

The table below summarizes themes that emerged through the small group discussions, which will be taken into consideration as Metro Vancouver continues to engage on the vision and guiding principles for the updated plan.

Priority	What We Heard
Accessibility and inclusivity	<ul style="list-style-type: none"> • Improve recycling and disposal access in small and remote communities • Ensure dialogue with people who live close to facilities; engage with under-represented groups about the impact of facilities on communities • Consider cost of living and accessibility when planning services and facilities
Accountability	<ul style="list-style-type: none"> • Improve waste and recycling metrics (including for construction and demolition waste) • Ensure reporting of accurate recycling rates with clear definitions • Recognize the shared responsibility of individuals and industry • Provide incentives to build and operate recycling facilities • Financial accountability and transparency (related to contracts and procurement) • Eliminate “greenwashing”
Affordability	<ul style="list-style-type: none"> • Incentivize recycling and circular solutions to producers • Create solutions for high real estate costs – limited access, high costs, zoning
Circular economy	<ul style="list-style-type: none"> • Design products to be recyclable • Reuse construction materials • Define waste materials as a commodity (resource) instead of garbage
Climate action	<ul style="list-style-type: none"> • Promote lower GHG emission and carbon capture technology • Encourage low-carbon and low-emission vehicles • Focus on solutions to reduce GHGs in concrete and cement producers • Avoid activities that pose environmental liability in the future
Collaboration	<ul style="list-style-type: none"> • Collaborate with all levels of government, private businesses, and industry • Engage with and foster a sense of community • Ensure an open market for service providers
Convenience, consistency, simplicity	<ul style="list-style-type: none"> • Make recycling easier for the public, especially with separation and storage • Invest in facilities that take all waste streams (ex. North Shore facility) • Increase capacity and ease for easy plastics recycling
Education and behavior change	<ul style="list-style-type: none"> • Focus on and implement provincial waste hierarchy • Public education around understanding compostables, keeping recycling clean, and reducing contaminations • Public education around reuse of items and extending the life of products • Establish and promote clear values around waste disposal and recycling • Incentivize behavior change (reward people rather than penalize) • “Where Does it Go?” for recycling and disposal education, awareness • Encourage consumers to purchase less and purchase recycled/repurposed items

Environmental stewardship	<ul style="list-style-type: none"> • Restrict the use of natural resources, or premium pricing for natural resources • Ban the use of resources from areas immediately surrounding the city (ex. aggregate) • Consider capital costs and the overall environmental path
Equity	<ul style="list-style-type: none"> • Promote and enhance opportunities for a competitive market • Rebates and grants from the provincial government
Innovation	<ul style="list-style-type: none"> • Advance the waste prevention, reuse, and repair economies, as well as technological innovations and habit innovations • Provide options for reuse, repair, and recycling that are easier than disposal • Technology and AI to assist with contamination or multi-family homes Landfill mining and gas capture • Landfill mining and gas capture • Invest in circular solutions and ways to eliminate single-use items
Regulation and Policy	<ul style="list-style-type: none"> • Ensure policy allows market-driven outcomes; avoid conflict between the roles of regulator and market competitor • Extended producer responsibility (EPR) • Implement and maintain disposal bans for reduction of waste • Maintain organics disposal ban • Standardize and define the terminology used in measurement and metrics
Waste Reduction	<ul style="list-style-type: none"> • Eliminate waste at the source – focus on local processing and local re-use • Reduce daily deliveries from online retailers

WORKSHOP ATTENDEES:

Director Craig Hodge, Co-Chair
 Mary Polak, Co-Chair
 Achilles Mallari – Sierra Waste Services Ltd.
 Aiden Kiani – Lock-Block Ltd.
 Christian Dietrich – Ecowaste Industries
 David Millman – Waste Management of Canada
 Edwin Berkhof – Evergen Infrastructure Corp.
 Gord Johnson - Empower
 Grant Hankins – Waste Management Association of BC
 Izzie Abrams – Waste Connections of Canada
 Jaimie Kaminski – HSR Zero Waste
 Jeremy Crawford – Waste Control Services
 Ken Carusca – Cement Association of Canada

Matthew McAra - GFL
 Maya Moucachen – Merlin Plastics
 Michael Zarbl – Major Appliances Recycling Roundtable
 Mike Lanin – Super Save Group
 Nicole Stefenelli – Urban Impact Recycling Inc.
 Nicole Victor - Covanta
 Pinky Vargas (Cynthia Shore) – Republic Services
 Ralph McRae – Revolution
 Sandy Sigmund – Encorp Pacific Canada
 Shad Prasad – Cascade Recovery +
 Terryl Plotnikoff – Canadian Mattress Recycling Inc.

Solid Waste and Recycling Industry Advisory Committee – Member Biographies 2023



Director Craig Hodge, Co-Chair

Metro Vancouver Board Director Craig Hodge is a City of Coquitlam Councillor, a title he has held since 2011. Director Hodge serves on the Metro Vancouver Board, and is the Vice-Chair of the Zero Waste Committee. Director Hodge

is also Chair of the National Zero Waste Council Management Board, and serves on the Metro Vancouver Regional Parks Committee and Water Committee.



Lori Bryan, Co-Chair

Lori Bryan is the Executive Director of the Waste Management Association of BC (WMABC) and has helped guide the association through a number of campaigns to ensure the private waste & recycling sector has a voice at government level discussions, to collaborate

on solutions and maintaining an open and competitive market.

Lori started in the waste sector by working for a small company in the 1990's, who she represented at WMABC meetings. She began raising a family in 1996, while continuing to be involved by working with independent companies and took on the ED position for the WMABC in 2010. Recently, she participated on the Emergency Management of BC (EMBC) committee, both for COVID-19 and the 2021 Flooding emergencies, providing guidance on waste & recycling issues to the Province.

Lori was part of the working group that brought about the Metro Vancouver IAC and became a member to continue to work together on industry solutions.



Achilles Mallari

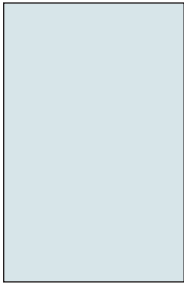
Achilles Mallari is the President of Sierra Waste Services Ltd. His background is in Operations and Quality Management through BCIT and been focused on collection and processing of solid waste and recycling, including logistics management over the past 23 years.

Through his work, he has been involved in all aspects of operations at materials recovery processing facilities (MRF) including design, set up, and management of various facilities in BC and MB. Achilles currently leads and directly manages teams in the collection of residential curbside

and ICI materials. Achilles is also involved with municipal partners to review, design, and implement environmental initiatives. Through working with local processing facilities and participating in their meetings related to current policies and industry best practices, this helps to understand the requirements for program success.

Achilles joined the IAC to collaborate and share his experience in the industry to contribute and assist Metro Vancouver as they plan new and innovative initiatives for the industry and region.

Solid Waste and Recycling Industry Advisory Committee – Member Biographies 2023



Aiden Kiani

Aiden Kiani is a Professional Engineer (P.Eng.), Geotechnical / Materials and has a Master's degree in Engineering. He also holds a Master's degree in Business Administration and a Master's degree in Educational Technology and Learning Design. Aiden is the

CEO of Lock-Block Ltd. & Green-Stone Aggregate, and is an instructor at BCIT in Civil Engineering.

Aiden joined the IAC to contribute to the development of public policies, engage in the activities of the community of practice, and help shape a sustainable lifestyle in our society.



Christian Dietrich

Christian Dietrich is the Vice President of Recycling and Waste Services at Ecowaste Industries. Christian's entire work experience centers around waste management, specifically hazardous waste and solid waste management. He has worked in and led teams to design,

commission, operate and maintain five separate waste processing plants ranging from a hazardous waste fuel blending facility in Tennessee, to fuel production from residential waste in London UK, to anaerobic digestion of food and garden waste in Surrey, BC.

Christian has also taken part in operational teams to improve safety and operational performance at a variety of waste processing plants including, material recovery facilities, mechanical biological treatment, combined heat and power incinerator, and waste-gasification. Christian holds a BSc Environmental Science from Lake Superior State University and an MBA from Seattle University.



Cynthia Shore

Cynthia Shore is celebrating 30 years in government relations specializing in solid waste policies.

She lives and works on the unceded, traditional, and ancestral territories of the x̱məθkʷəyəm (Musqueam), Sḵwx̱wú7mesh Úxwumixw (Squamish), and səliilwətaʔt

(Tsleil-Waututh) Peoples in downtown Vancouver.

In 1992, Cynthia was appointed by then Premier Mike Harcourt to the BC Waste Reduction Commission that, following province-wide consultations, made recommendations to government to expand the Extended Producer Responsibility policy framework to beverage containers. She has been involved in the industry since, primarily as a government relations consultant to companies in the waste management and composting sectors. She also volunteers with ocean plastics recovery and certified compostable initiatives.

Cynthia joined the IAC to contribute to the advice and feedback Metro Vancouver receives through this Committee.



Dave Millman

David Millman is a current member of the IAC, Director with Waste Management, and has 30 years' experience in the waste industry.

David joined the IAC to continue to have an impact on changes in the waste industry in the lower mainland as well as BC.

Solid Waste and Recycling Industry Advisory Committee – Member Biographies 2023



Edwin Berkhof

Coming from the Netherlands, Edwin has always been avidly interested in sustainable recycling and agricultural practices. Edwin received a degree in Mechanical Engineering and has been in the waste industry for over ten years with project and operations

experience in different capacities. Edwin has worked in waste-to-energy solutions, Anaerobic Digestion, Composting and Mechanical Treatment Technology, and the Surrey Biofuel Facility construction & commissioning. He currently works for Evergen Infrastructure Corp. as Vice President of Technical Services, using his knowledge to successfully assess and integrate new opportunities and acquisitions.

Edwin joined the IAC because he saw a major need for a strong connection between local legislation and waste processors to accommodate sustainable growth for the industry. Through his experience within Evergen, he has learned valuable lessons on operating at the highest levels of compliance and performance and looks forward to contributing this experience to the IAC.



Gord Johnson

Gord Johnson is a co-founder that developed a proprietary process for the recovery of 100% of the material from asphalt shingles. Gord has 30 plus years of experience in building, growing, and managing companies. He is the former CEO of Save Energy Walls, Lodgeview

Entertainment & Intrepid Security.

Gord is involved with multiple jurisdictions in Canada and the US with regard to material recovery facilities and the collection of solid waste as it relates to Construction & Demolition waste especially asphalt shingles.

Gord joined the IAC as he has some experience in this field and wants to understand & apply the best practices for solid waste management not only for his company but across the region and asses if they can be applied in other areas.



Grant Hankins

Grant Hankins has been involved in the industry for close to 30 years working for private and publicly traded companies in Canada and the United States. Grant currently own assets and investments in the industry and is the Chair of the

Waste Management Association of BC as well as a member of Metro Vancouver's Solid Waste Management Plan Public/Technical Advisory Committee. Grant has a MBA, an undergraduate degree in business from SFU and business diploma with Capilano University and is currently a consultant to various companies in the industry in Canada and the US.

Grant has an interest in working collaboratively with government to develop policies and processes that create a better environment, while creating a business environment that creates an open competitive and efficient market to drive higher environmental standards while doing it in a fiscally responsible manner for tax payers.

Solid Waste and Recycling Industry Advisory Committee – Member Biographies 2023



Izzie Abrams

Izzie Abrams is Vice President Government & External Affairs, Waste Connections of Canada and his career has spanned over five decades in the waste industry. He has held various executive positions successfully developing and implementing growth strategies as

well as government and community affairs programs. He has also held leadership roles in various trade associations, charitable foundations and not for profit organizations. Izzie holds numerous community and industry awards having been inducted into the National Waste and Recycling Association Hall of Fame in 2014.

Izzie would like to lend his industry knowledge and expertise to help bring about positive outcomes as they relate to solid waste and recycling issues in Metro Vancouver. As well as to be a thought leader as it relates to the formulation of public policy that will enhance the circular economy.



Jacqueline Lotzkar

Jacqueline Lotzkar, Vice President of Pacific Metals Recycling, is a fourth-generation metal recycler with over 10 years' experience in both the industrial recycling industry and deposit law programs within Greater Vancouver.

Passionate about the industry, she is actively involved with The Institute of Scrap Recycling Industries (ISRI), a trade association based in Washington, D.C. advocating for the global recycling industry. She is currently the ISRI Pacific Northwest Chapter President, representing member firms in B.C., Washington, Oregon and Alaska, and Chair of the National Trade Committee where she helps lead strategy and advocacy for global market access for recycled materials. Additionally, she has previously served as an ISRI Board-of-Director and Co-Chair of the Young Executive Council. Jacqueline was named

to Recycling International's Top 100 Global Recycling Stars list for 2021 & 2022 and she was named as ISRI's Young Executive of the Year for 2022. She holds a Master of Global Business degree and Bachelor of Commerce degree from the University of Victoria. Outside of work you will find her travelling, headed to a fitness class or out for walks on the seawall with her dog, Jet.



James Collins

After graduating from Royal Roads University's first Environmental Science class, James went to sea as a fisheries observer. But when he became a father for the first time, wanted to spend more time at home. He then started a job at Phillips Services Inc. in 2000 where

he got to know many of the manufacturing and transportation businesses across the city. He found one of his customers (Tymac Launch Service Ltd.) was very unique in its business model in the sense that it sought to recycle as much as possible from the waste it received from the shipping industry. James has now been working at Tymac Launch Service Ltd for 20 years and in that time the company has twice received the Recycling Council of British Columbia's Private Sector award for Excellence and Leadership in Environmental Stewardship (2014 & 2018).

James joined the IAC because he likes to be on the proactive side of the equation.

Solid Waste and Recycling Industry Advisory Committee – Member Biographies 2023



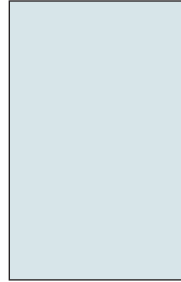
Jamie Kaminski

Jamie Kaminski is a Zero Waste Business Associate (ZWA, TRUE Advisor) and is President of Happy Stan's Recycling Services Ltd. Zero Waste. He is a Board Member of Zero Waste Canada and the Zero Waste International Alliance, and is Chair of the Zero Waste Definition

and Zero Waste Hierarchy working group.

Jamie's 27 years plus of experience is in solid waste management from both a ground level and policymaking perspective. His area of expertise lies within international best practices in respect to internationally accepted zero waste policies and programs. He works with fellow policy advisors to create strong, practical and enforceable policies that drive change towards zero waste. Jamie has developed extensive experience in understanding how regional policies and bylaws affect the existing waste management system from the perspective of the service provider, the client, as well as the region as a whole.

Jamie joined the IAC to support Metro Vancouver in their desire to incorporate more Zero Waste programs, policies and metrics into their solid waste management plan update.



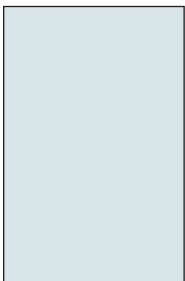
Josh JansenVandoorn

Josh JansenVandoorn is a 37 year old father of 3 and is passionate about waste and recycling.

Josh has worked in the waste and recycling industry for almost 10 years both on the hauler side of the business and more recently on

the processing side of things. He is on the board of directors for the Waste Management Association of BC and has been actively involved in working with Metro Vancouver, MOE and various other entities on various Waste and Recycling bylaws and Regulations.

Josh joined the IAC because it is a good fit for the industry as a collaborative approach to achieve waste and recycling goals in the Province of BC.



Jeremy Crawford

Coming soon.

Solid Waste and Recycling Industry Advisory Committee – Member Biographies 2023



Ken Carrusca

Ken Carrusca works with the Cement Association of Canada (CAC). His experience in waste management includes the areas of Zero Waste, waste transfer, energy recovery, and waste disposal. Ken's attention at CAC has been on climate policy and carbon

pricing, the transition from fossil fuels, and greater adoption of lower carbon intensity cement and concrete materials. The CAC is working with concrete producers to develop and release a Net Zero Concrete action plan.

The cement industry is an active participant in the local recycling industry. Selected, un-recyclable residues generated from local recycling operations are co-processed as alternative fuel in cement kilns. These materials would otherwise be landfilled.

Ken's knowledge and experience in Zero Waste and the circular economy can positively contribute to discussions of the IAC. Ken is interested in helping to contribute to the shaping of long-term waste management in Metro Vancouver.



Leanne Koehn

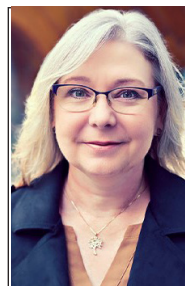
Leanne Koehn does Community Engagement work for Ridge Meadows Recycling Society (RMRS), a non-profit that works in partnership with the City of Maple Ridge to provide curbside and apartment recycling pickup services and manage the Maple Ridge

Recycling Depot. She organizes the annual Earth Day festival in Maple Ridge and in 2018, launched the popular Maple Ridge Repair Cafes, now in their 6th year.

Leanne's parents were two of the volunteers that started RMRS in the early 1970s, and she has grown up with an awareness of the industry and its constant evolution. She has been part of Metro Vancouver's Municipal Waste Reduction Coordinator's Committee

for many years, giving her both local and regional views of solid waste management.

Leanne enjoys working together with diverse stakeholders to find unique and sustainable ways forward. She brings her passion for a better future and over 10 years of boots-on-the-ground experience to the IAC.



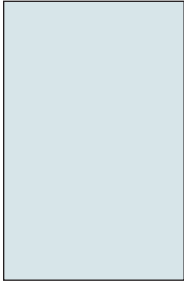
Mary Polak

Prior to joining Maple Leaf Strategies, Mary Polak was an elected Member of the Legislative Assembly (MLA) of British Columbia from 2005 until 2020. In her fifteen years in provincial elected politics, she held several key positions. She served as Minister of Environment,

Minister of Transportation and Infrastructure, Minister of Aboriginal Relations and Reconciliation, Minister of Children and Family Development, Minister Responsible for Child Care, Minister of Healthy Living and Sport, and Minister of Health. In each of those portfolios, Mary was recognized as a competent Minister who solved problems and worked well with stakeholders and the civil service.

She also served on several Cabinet Committees including Treasury Board, The LNG Working Group, The Climate Change Working Group, and The Environment & Land Use Committee. In opposition politics from 2017 to 2020, Mary served as the Opposition House Leader. She also served as a key spokesperson for the Opposition.

Solid Waste and Recycling Industry Advisory Committee – Member Biographies 2023



Matthew McAra

Coming soon.



Maya Moucachen

Maya Moucachen is an Electrical Engineer and Director of Business Development at Merlin Plastics. Maya holds a MS from University of Illinois at Urbana-Champaign, an MBA from INSEAD.

Maya joined Merlin Plastics in 2012. Since 1987, Merlin Plastics has planned, developed, and refined the re-processing of PE, PP, LDPE, and PET. The company began its recycling business out of a 2,000 square foot warehouse in Delta, B.C and now operates recycling facilities totaling over one million square feet with sister plants in Alberta, Ontario, California and Oregon. Merlin Plastics has been honoured to receive various awards including in 2005 when the Recycling Council of BC recognized it with an award “in recognition of ongoing commitment to the ideals of responsible environmental stewardship in the province of British Columbia”.

Maya is passionate about the environment, and feels blessed to have a career that is consistent with her personal environmental values. She is honoured to be a member of the Solid Waste and Recycling Industry Advisory Committee.



Michael Zarbl

Michael Zarbl joined the Major Appliance Recycling Roundtable as the Executive Director in July 2017. Prior to that, Michael was the Director of Operations at Recycle BC (formerly MMBC) the Extended Producer Responsibility program for packaging and printed paper in British Columbia. Before joining Recycle BC, he was the Senior District Manager for Waste Management of Canada Company for four years, where he was responsible for the entire operation of the Vancouver Hauling District. Prior to that, Michael held various private sector positions at major corporations such as Director of Operations with Ryder Container Terminals, a large export/import and distribution facility for Canadian manufacturers and major Canadian retailers, Distribution Centre Manager for Martin Brower of Canada (distributor for McDonald’s Restaurants of Canada), and with Coca-Cola Bottling Co. He has an extensive supply chain management background with direct experience in the key activities along the supply chain, culminating in direct waste management industry experience.



Mike Lannin

Mike Lannin has been working in the waste industry in varying capacities for 18 years. He is currently a manager at Super Save Group, a private waste hauling organization. Mike is joining the IAC because he feels it is important for private industry to have input and representation in regulatory decisions that affect not only business operations but the region as a whole.

Solid Waste and Recycling Industry Advisory Committee – Member Biographies 2023

Nicole Stefenelli

Nicole Stefenelli is the CEO and Founder of Urban Impact Recycling, a local waste management service provider. She has been involved in the industry since 1990 and looks forward to serving on the Industry Advisory Committee.

Nicole Victor

Nicole has more than 20 years experience in maintenance and operations with a background in project management for transitioning to green technology. Nicole is a first class power engineer with experience in operating and managing facilities

like a combined cycle power plant, large district heating plant, and Waste-to-Energy Facility. Nicole has a background in boiler plants for both electrical generation and district heating, she is much newer to the Solid Waste and Recycling industry. She is currently the plant manager for the Metro Vancouver Waste-to-Energy facility and working with Metro Vancouver on how to further leverage the plant to be an asset to the community. She is interested in networking with fellow industry professionals, gaining more knowledge about the industry locally and as a whole, and would like to bring her skillset and background to participate and possibly help.

Ralph McRae

Ralph McRae is the Chairman and CEO of Revolution Infrastructure Inc., one of the largest processors of municipal solid waste in the region. Ralph has been involved in the industry for almost 35 years. Initially Ralph co-founded a waste hauling company in 1988 and the

business expanded into various materials processing facilities and capabilities.

Ralph joined the IAC to promote transparency, practicality and a level playing field in the upcoming solid waste management plan update.

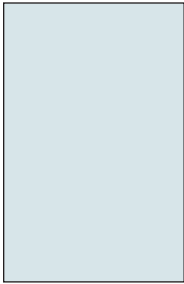
Sandy Sigmund

Sandy Sigmund is Vice President Development & Chief Marketing Officer of Encorp Pacific Canada. She has been a senior executive with Encorp since its inception in 1995 and leads the stewardship agency's marketing, communications and program

development efforts. Prior to Encorp, Sandy had an extensive career in retail management specializing in sales, marketing, and merchandising. Sandy is the Past President of the board for the Ridge Meadows Recycling Society and serves on the management board of the National Zero Waste Council.

Sandy has been working in a leadership capacity in the waste and recycling industry within the EPR programs, specifically Return-It for 27 plus years. As we move to decrease the solid waste and increase the use of the other waste reduction hierarchy initiatives, Sandy feels it is important to ensure the public has ease of access and convenience to ensure we can reach the goals set by all levels of government, industry and the public expectations.

Solid Waste and Recycling Industry Advisory Committee – Member Biographies 2023



Sean Kawakami

Sean is the Business Development Manager for Convertus Group who specialize in the design, construction, finance, and operation of organic waste processing facilities. Convertus operates 12 facilities in Canada, notably including the Nanaimo Circular

Waste BC and Surrey Biofuel sites. Sean started in the industry with Rehrig Pacific and his experience in supply, collection and processing affords him a unique perspective of the solid waste industry in our province.

As a resident of the lower mainland and a solid waste professional, contributing to the long-term success of the solid waste industry in the region is important to Sean on numerous levels. Sharing information from different stakeholders on the committee can help manage the unique challenges of solid waste in our region and it is the best way to ensure industry and government are working together to develop a sustainable plan for our future.



Shad Prasad

With over 30 years in the Logistics/Warehousing industry, Shad Prasad has seen a large amount of waste. Shad is driven to change habits and approach to recycling by educating people on available recycling alternatives through awareness and education.

Shad is the Plant Manager for Cascades Recovery +, Vancouver and Surrey, where the company is involved in recycling fibre from commercial facilities throughout the lower mainland. Cascades Recovery + is committed to reducing fibre waste entering the landfills.

Shad joined the IAC to gain knowledge on future recycling goals and initiatives and how he can contribute to a greener community.



Taufiq Ahmadi

Taufiq Ahmadi is the Sales Manager at Maple Leaf Disposal Ltd., a local British Columbian owned waste management company based out of Langley BC that has provided solid waste and recycling services in the Greater Vancouver area since the early 1990s.

Taufiq's responsibilities include managing the sales division, developing key growth sales strategies, tactics and action plans, and hitting annual targets, building relationships, understanding trends and large-scale contract negotiations.

Taufiq has worked for Maple Leaf Disposal since July 2015 and has been involved in large municipal contracts, and worked closely with over 40 shopping malls to set up their waste diversion plans and decrease their overall carbon footprints.

Taufiq is excited to be a member of the IAC to acquire practical experience of effective board functions and the decision-making process around solid waste. He also brings his knowledge and experience with working and dealing with municipalities, housing complexes and shopping malls with waste diversion plans.

Solid Waste and Recycling Industry Advisory Committee – Member Biographies 2023



Terry Plotnikoff

Terry Plotnikoff is the Founder and CEO of Canadian Mattress Recycling Inc and has been passionate about environmental issues since she was a teenager. Terry's company is one of the only mattress and furniture recycling companies in the region and she

works with a wide variety of clients across many different industries who need the company's services. Terry founded the company 12 years ago and is still involved in the day-to-day operations at the facility on Annacis Island.

Terry enjoys connecting with others in the green economy and working towards creative but practical solutions to waste and recycling challenges.

Terry joined the IAC to learn more about Metro Vancouver's waste management policies, strategies, and future possibilities, as well as contribute to discussions about recycling programs for furniture items. It is also a good way to hear from other stakeholders in the local waste management and recycling industries and learn about what their challenges and successes are.

To: MVRD Board of Directors

From: Craig Hodge, Director, Metro Vancouver Board, and Chair, National Zero Waste Council Management Board
Sarah Kirby-Yung, Director, Metro Vancouver Board, and National Zero Waste Council Management Board Member

Date: September 15, 2023 Meeting Date: Oct 27, 2023

Subject: **External Agency Status Report for the National Zero Waste Council**

RECOMMENDATION

That the MVRD Board receive for information the report dated September 15, 2023, titled “External Agency Status Report for the National Zero Waste Council”.

EXECUTIVE SUMMARY

Metro Vancouver established the Zero Waste Council in collaboration with the Federation of Canadian Municipalities in 2012 to advance waste prevention in Canada. It was borne from a recognition that ambitious waste reduction targets set regionally would not be achieved unless collaborative action across sectors and jurisdictions took place to design waste out of the system. The Council’s focus is to work upstream on waste prevention – acting as an agent of change by collaborating with other leaders in government, business and the community sectors across Canada and internationally. Through 2023 the Council work plan has focused on advancing new solutions and approaches in the areas of food loss and waste, the built environment, reusable packaging, and the development of circular cities and regions.

PURPOSE

To provide an update on the activities of the National Zero Waste Council for 2023.

BACKGROUND

The National Zero Waste Council is a leadership initiative of Metro Vancouver. It was established in 2012 to advance waste prevention nationally, recognizing that regional success can only be achieved in the context of harmonized policy and practice across local, provincial, and federal government jurisdictions and throughout supply chains. The Council is committed to acting collaboratively with business, government and community actors, at the national and international level, as an agent of change to prevent waste in the design, production and use of goods. The Council’s work includes a focus on accelerating the transition to a circular economy - an important solutions framework for designing waste out of the system and addressing climate change.

The Council forms part of Metro Vancouver’s zero waste collaboration program and is supported by a Secretariat housed in the External Relations Department, working closely with Solid Waste Services. A Management Board of elected members provides guidance on the work of the Council. Metro Vancouver has two seats on the Council’s Management Board who are appointed annually

by the Metro Vancouver Board based on recommendations from the Chair. Metro Vancouver is the permanent Chair of the Council Management Board.

In 2023, Directors Craig Hodge and Sarah Kirby-Yung were appointed to sit on the National Zero Waste Council Management Board, and Director Hodge serves as the Chair of the Council. Attached is a list of the members of the Management Board for 2023.

NATIONAL ZERO WASTE COUNCIL –2023 PROGRESS

The work of the Council is advanced through strategic initiatives, partnerships, and working groups. The work of the Secretariat is augmented by the involvement of Council members. Currently, the Council has approximately 185 members from across Canada. Members include:

- provincial and local governments (including agencies);
- businesses from multinational corporates to small Canadian start-ups;
- industry and trade associations; and
- NGOs and community organizations.

Strategic Initiatives and Partnerships: 2023 Progress

Food Loss and Waste: In 2022, the Council worked with the Government of Canada to support innovation and policy change to reduce food loss and waste as a member of Canada's National Food Policy Advisory Council that provides recommendations directly to the Minister of Agriculture and Agrifoods Canada. The Council also continued its role as Chair of the jury adjudicating submissions to the Government of Canada's Food Waste Reduction Challenge. Lastly, the Council is leading work to better understand how place-based food hubs can advance circular food systems and reduce food waste. In 2023, the Council continues to build on this work - providing stakeholder input to on-the-ground testing, piloting pilot place-based food hub development work in Nova Scotia, and linking change agents across Canada in a peer-to-peer learning network that builds the capacity of peer leaders to advance circular food hubs in their own jurisdictions, including Metro Vancouver.

Love Food Hate Waste (LFHW) Canada: Love Food Hate Waste Canada is national bilingual campaign to prevent household food waste. The campaign is led and coordinated by Metro Vancouver through the Council, alongside campaign partners. In March of 2023, the Council hosted Food Waste Action Week –focusing on food-saving lifestyle tips. A significant focus for the remainder of the year is preventing fresh produce from being wasted. This work, partly funded by Environment and Climate Change Canada, will include activities into 2024.

Circular Cities and Regions Initiative (CCRI): The CCRI is national collaboration developed and managed by the National Zero Waste Council and Metro Vancouver, the Federation of Canadian Municipalities, the Recycling Council of Alberta, and RECYC-QUEBEC to build circular economy knowledge and capacity in the Canadian local government sector. In the CCRI's first two years, 25 cities and regions have participated in the program. Participating local governments receive on one guidance and action planning support to advance their own circular economy objectives, and meet regularly to discuss common barriers and solutions and hear from experts in the field. This work with communities is supplemented by national webinars series. To-date, seven public

webinars have been hosted and can be viewed on the [CCRI website](#). The CCRI was recently recognized as a national leader in sustainability excellence, receiving a Canada Clean50 Project Award for 2023.

Canada Plastics Pact (CPP): The CPP operates as a pre-competitive platform, bringing together corporate leaders and other key actors across the plastics supply chain to advance a circular economy for plastics packaging. Recognizing the Council's work in waste prevention and its role in creating the CPP, the Council was invited to lead the source reduction work of the CPP in 2022. The Source Reduction Rapid Action Group drafted a list of problematic and unnecessary plastics that should be eliminated, and is now being considered by CPP partners. Staff from the Council Secretariat and from Metro Vancouver Solid Waste Services continue to actively participate in the CPP, and advocate for upstream changes to design out waste and pollution.

Working Groups: 2023 Progress

Construction, Renovation and Demolition: This working group is assessing opportunities to prevent waste and promote circular economy principles in the built environment sector in Canada. In 2022 the working group organized a virtual workshop on road pavement projects and created a Recycled Asphalt Toolkit. The group transitioned into a working group within the Transportation Association of Canada (TAC) with the goal of developing guidelines for using recycled asphalt content across the public sector.

In 2022 the working group completed a pilot with the Center for Advanced Wood Processing at UBC to produce an engineered wood product from wood waste for higher value applications. Subsequent work will focus on performance testing of engineered wood waste products, and the economic viability of producing engineered wood for use in construction. This wood waste pilot continues throughout 2023 as the sole focus of the Construction, Renovation and Demolition working group.

Reuse Working Group: In 2022 the Reuse working group contracted a landscape scan of the current reuse economy in Canada. The scan is complete, and the findings were used to build a scope for the formation of a Reuse working group, which will focus on reusable packaging for its first two years.

ALTERNATIVES

This is an information report. No alternatives are presented.

FINANCIAL IMPLICATIONS

Core funding for the National Zero Waste Council is provided by Metro Vancouver. The 2023 budget of \$437,071 included salaries for two full-time equivalent staff, who also work on the annual zero waste conference. This budget also includes project development funding of \$120,700.

This core funding has been leveraged to seek funding and contributions from external project partners. Love Food Hate Waste Canada (LFHW) is funded by service fees from its campaign partners. Other Council initiatives are supported through additional funding and in-kind support from partners and funding agencies.

CONCLUSION

Over the past ten years, the National Zero Waste Council has built a strong reputation across Canada by bringing together key actors from across the system to develop innovative collaborations, fund ground breaking research, and create dynamic engagement offerings that develop our collective understanding of the intersection of waste prevention and the circular economy. In 2023, the Council work on LFHW Canada, the CCRI, and food loss and waste continues, while new work on the built environment and reuse emerges.

Attachment

National Zero Waste Council Management Board 2022 - 2023

References

1. [National Zero Waste Council website](#)
2. [Love Food Hate Waste Canada](#)
3. [Circular Cities and Regions Initiative](#)
4. [Canada Plastics Pact](#)
5. [Recycled Asphalt Pavement Toolkit](#)
6. [Reuse in Canada Landscape Scan: Understanding Opportunities to Advance Reuse Systems](#)



Canada united in the achievement of zero waste, now and for future generations

2022-2023 MANAGEMENT BOARD

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VICE CHAIR David Fung, Canadian Manufacturers and Exporters (CME)

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Sandy Sigmund	Return-It
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Vanessa Timmer	OneEarth Living
Lyndsay Poaps	Recycling Council of BC (RCBC)
Christina Seidel	Recycling Council of Alberta (RCA)
Lori Nikkel	Second Harvest
Tonny Colyn	The Salvation Army Thrift Store



MORRISON HERSHFIELD

October 26, 2023

Terry Fulton
Senior Project Engineer, Zero Waste Implementation
Solid Waste Services, Metro Vancouver

Dear Terry:

Re: Metro Vancouver Solid Waste Management Plan – Performance Metrics Review 2023, Tasks 2 - 5

Background

As part of updating Metro Vancouver's Solid Waste Management Plan (SWMP), Metro Vancouver has identified the need to review current performance metrics including targets and performance measures. MH has completed Task 1 for the Scope Development and we are summarizing our work completed to date and describing the remaining tasks (Tasks 2 – 5), which have been requested by Metro Vancouver.

Metro Vancouver is looking to identify and assess potential new performance metrics and ultimately develop targets in terms of data availability, measurement feasibility, benefits, and applicability to an updated SWMP. Currently, the key performance metrics for solid waste management in Metro Vancouver include:

- Waste generation rate (tonnes/capita)
- Disposal rate (tonnes/capital and tonnes/household)
- Recycling rate (%)
- Reuse estimates

In 2022, Metro Vancouver conducted a Jurisdictional Scan of Recycling Statistics and Methodologies including a jurisdictional comparison of overall recycling rates, materials included as “recycling”, and performance metrics used from 11 other jurisdictions in Canada and the United States. The findings from this Jurisdictional Scan will be used to inform the development of the performance metrics for the SWMP update.

Metro Vancouver commissioned Dillon Consulting to prepare a report titled The Circular Economy and 3Rs Study. This report provides an extensive suite of circular economy case studies currently established in other jurisdictions and outlines opportunities for waste diversion and reduction in eight main materials and goods categories: food, paper, plastics, household hygiene, building materials, electronics, textiles, and other.

The Jurisdictional Scan and the Circular Economy and 3Rs Study both provide excellent information on areas that Metro Vancouver can build on when the region is looking to expand and improve its performance metrics and key performance indicators as part of the SWMP update.

The following are Metro Vancouver's terms and key phrases along with definitions, that are used to describe MH's methodology.

Performance Metrics

- Data that can be used to track progress (e.g., tonnes of waste recycled)

Key Performance Indicators

- Measurements that indicate progress toward a given target (e.g., % diversion)

Performance Targets

- A measurable state that can be used to assess progress toward a goal (e.g., 80% reduction from 2010 waste generation levels)

Performance Measurement Methodologies

- A standard or written methodology that can be followed to obtain or calculate a given performance metric (e.g., residential GAP methodology for calculating diversion)

Scope of Work

Task 1 – Scope Development (Completed)

To date, MH has completed Task 1 for the Scope Development. The task included presenting to four stakeholder groups at four separate meetings. MH presented the scope of work and approach for developing the performance metrics and welcomed feedback in three main areas:

1. What's important to your organization for reporting?
2. What data do you have access to that can inform this project?
3. Are there specific jurisdictional examples we should consider?

Committee feedback from:

- Regional Engineers Advisory Committee (REAC)
- Municipal Waste Reduction Coordinators Committee
- Public and Technical Advisory Committee (PTAC)
- Solid Waste Recycling Industry Advisory Committee

Metro Vancouver and MH staff took formal and informal meeting notes on stakeholder feedback and these notes were reviewed to inform the development of the future tasks presented below.

The following outline describes Tasks 2-5 requested by Metro Vancouver relating to performance metrics. The tasks include:

- Task 2: Review of Existing Report and Performance Metrics
- Task 3: Conduct Jurisdictional and Organizational Review
- Task 4: Assess and Develop Identified Potential Performance Metrics and Areas for Improvement on Existing Performance Metrics
- Task 5: Communication and Final Reporting

The tasks are outlined in detail below. Many of the tasks involve interviews and time has been assumed to coordinate and undertake the interviews, transcribe, analyze, and report on interviews.

A technical memorandum (memo) will be developed to summarize findings and conclude Tasks 2 and 3. Task 4 findings will be included as part of a final report (Task 5). The memos developed after Tasks 2 and 3 will be amalgamated as part of the final report with all findings and recommendations.

Each deliverable will be prepared by MH for review by Metro Vancouver staff and we have assumed that two iterations of each deliverable will be required to finalize the documents. If suitable, Metro Vancouver can choose to circulate the final versions of each memo with the four stakeholder groups as an ongoing update on progress.

Task 2 – Review of Existing Performance Metrics for Metro Vancouver and Existing Reports

MH will analyze current performance metrics and build on the work completed to date. Specifically, MH will:

1. Review Metro Vancouver's Jurisdictional Scan from 2022 and The Circular Economy and 3Rs Study and identify themes relating to performance metrics that can be explored further.
2. Review Metro Vancouver's methodology for measuring and reporting on performance metrics and identify gaps, limitations, and assumptions on current data collection and analysis methodology, data transparency, accessibility, reliability, and accuracy. Opportunities for improvements will be assessed in Task 4, after further research has been done.
 - Identify the areas within the existing performance targets used in the current SWMP that can be expanded upon in the future.
3. Report on the findings.

Task 3 – Conduct Jurisdictional and Organizational Review

MH will conduct a jurisdictional and organizational review of performance metrics and key performance indicators for the SWMP update. For this, MH will:

1. Identify best practices globally for waste management performance metrics and key performance indicators. These can be both quantitative and qualitative in nature. MH will interview up to 5 interested parties from the stakeholder committees for an in-depth discussion on best practices. For example, there has been interest from two representatives from Zero Waste BC who are PTAC members.
2. Research, identify, and assess potential additional performance metrics (quantitative and qualitative) and associated key performance indicators to contribute to the creation of new metrics in emerging areas.
 - Identify metrics being reported on by various public and private sectors pertaining to identified key themes (e.g., partnerships, circularity, economy, reconciliation) and how they are being tracked. For example, building on Metro Vancouver's Circular Economy and 3Rs study. MH will interview:
 - A maximum of 10 interested parties that are currently working with Metro Vancouver to support waste prevention initiatives, including other departments within Metro Vancouver. Examples include non-profit organizations (Circular Innovation Council) and industry involved in supporting reuse/ sharing (e.g., FoodMesh, Ocean Ambassadors, Share Reuse Repair Initiative).
 - Leading governmental jurisdictions in Canada including all member municipalities (including the BC government), following up with a maximum of 10 with interviews.
3. Compile all potential additional performance metrics to be considered for an updated SWMP, to measure progress toward agreed goals and targets which will be agreed upon later in the SWMP process.

Key themes of Waste management include:

- Solid waste management
- Carbon emissions and climate action
- Circular economy
- Equity
- Diversity and inclusion principles
- Reconciliation

MH received feedback and ideas on possible performance metrics, key performance indicators, and methods of measurement from the four stakeholder group discussions (completed as part of Task 1). This feedback is provided as a list in **Appendix A** and will be considered as we work through the scope of work.

4. Report on the findings.
5. Present a summary of findings, in-person, for Tasks 2 and 3 to the stakeholder groups, for a total of four presentations.

Task 4 – Assess and Develop Potential Performance Metrics

MH will assess the applicability and transferability of potential performance metrics identified in Task 3 and provide recommendations on how Metro Vancouver can expand and improve current performance metrics. MH will:

1. Assess the applicability and transferability of identified performance metrics in Task 3 to Metro Vancouver – MH will assess the identified performance metrics using the following criteria and considerations:
 - Determine if the newly identified performance metrics align with engagement feedback on a Vision and Guiding Principles for an updated Metro Vancouver SWMP.
 - Assess if there are data collection challenges and opportunities such as availability of data, degree of certainty/uncertainty, and means of acquiring data. As well as the impact on data collection/ reporting by private industry. If so, identify the challenges and opportunities for each performance metric. For example, accessibility and transparency of data.
 - Alignment with other Metro Vancouver strategic and management plans including cross-cutting themes.
2. Develop a list of applicable performance metrics for Metro Vancouver including comments on applicability, transferability, and benefits to Metro Vancouver.
3. For each performance metric, research and provide information on best practices for data collection and reporting. As part of best practices, provide information on options for establishing a baseline for the Metro Vancouver region and sources of qualitative and quantitative data that could be used to assess performance against each target. Best practices for data collection and reporting should consider the following:
 - Determine if there are any available data collection systems, including opportunities to increase reliability and accuracy of data collected. Explore and

document potential initiatives that could be implemented to collect data such as programs and surveys.

- Determine if there are any existing data sharing platforms and opportunities to utilize verified primary, secondary, and tertiary sources of data both internal and external to Metro Vancouver.
 - Determine if there are opportunities to minimize uncertainty and quantify uncertainty if present.
4. Identify specific opportunities for improvement with metrics and performance measurement methodologies for Metro Vancouver's current SWMP. Provide areas for improvement or expansion of existing performance targets utilizing the prioritized list of performance metrics and best practices identified in Task 3 and information from steps 2-4 of Task 4.

Task 5 – Communication and Reporting

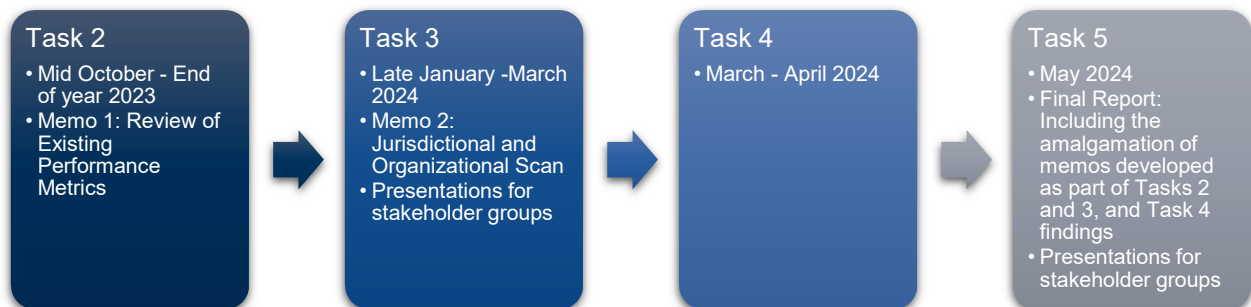
MH will develop a final report summarizing all findings and recommendations following the completion of Task 4. The final report will be an amalgamation of the memos finalized as part of Tasks 2 and 3. This will also include four in-person presentations for the stakeholder groups on the findings from all tasks.

Task 6 – Project Management

MH will coordinate and hold monthly meetings with Metro Vancouver staff during the study and these will act as check-in periods.

Schedule

A preliminary schedule, including deliverables, for Tasks 2 - 5 is as follows:



Assumptions

The following assumptions are made as part of the scope of the work:

- Interviews:
 - A maximum of 20 interviews will take place with an assumed time of 3 hours per interview for coordination, undertaking the interview, and documenting.
- Presentations:
 - A total of four in-person presentations will be completed to update the stakeholder groups at the end of Task 3. This will include an update of Tasks 2 and 3.
 - A total of four in-person presentations will be completed to update the stakeholder groups as part of Task 5. This will be to present on the final combined report of all tasks, with an emphasis on Task 4.
- Each deliverable will be prepared by MH for review by Metro Vancouver staff. Combined feedback will be provided through the Project Manager at Metro Vancouver. MH assumed that two iterations of each deliverable will be required to finalize the deliverables (two memos and one final report). The deliverables will be:
 - At the end of Task 2: One (1) draft memo sent to Metro Vancouver for review, one (1) final memo
 - At the end of Task 3: One (1) draft memo sent to Metro Vancouver for review, one (1) final memo
 - At the end of Task 4, as part of Task 5: One (1) draft final report (amalgamated with the first two memos) sent to Metro Vancouver for review, one (1) final report.
- Travel within Metro Vancouver is assumed for MH staff. No disbursements are included for the sub-consultant (sonnevera) to attend the meetings in-person.

Sincerely,
Morrison Hershfield Limited



Todd Baker, P.Eng.
Project Manager

Appendix A – List of Waste Management Areas to Consider for the Performance Metrics Review

MH has developed the following examples of key themes to be explored as per feedback from stakeholders. This is a *work-in-progress* and lists associated information such as possible methods of measurement, associated performance metrics, and other feedback from stakeholders.¹²

1. GHG Emission Reduction
 - a. Feedback: Look at consumption, embodied carbon. Possibly through consumption based and embodied carbon, e.g., work relating to BCIT's Centre for Ecocities
2. Increasing Education and Awareness
 - a. Feedback: Look at behaviour change, values, attitudes. Possibly through surveys, % adoption to programs, People/organizations participating in educational programs, e.g., BCIT's Centre for Ecocities
3. Economic Circularity
 - a. Feedback: Look at green and inclusive jobs, Reuse. Possibly through consumption metrics, number of jobs in certain industries (DoNV tracking job relating to deconstruction and Vancouver Economic Commission is tracking green jobs), incubators/funding initiatives. Consider decoupling growth and environmental impacts.
4. Material Circularity
 - a. Feedback: Look at overall system capacity. Possibly through reuse/repair resources available, accessibility to reuse/repair organizations or businesses such as refilleries, demand for recyclables. Consider ISO/TC 323 on circular economy standards.
5. Partnerships and Collaboration
 - a. Feedback: Consider measuring success of partnerships.
6. Reconciliation
 - a. Feedback: needs further research – no specific examples have emerged to date.
7. Supporting Social Equity
 - a. Feedback: needs further research – no specific examples have emerged to date.
8. Resiliency
 - a. Feedback: needs further research – no specific examples have emerged to date.

¹ Some of these metrics are in emerging fields and measurement techniques will likely need to be researched and developed.

² Stakeholders supported using a business licensing framework as a potential tool to obtain data for some metrics.