

**metro**vancouver

# Welcome

View of the Second Narrows Bridge





An aerial photograph of Metro Vancouver, showing the city's skyline, the Fraser River, and the surrounding mountains. The city is densely packed with buildings, and the water is a deep blue. The mountains in the background are covered in green trees and have some snow on their peaks.

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# Agenda

View of Metro Vancouver

# AGENDA

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1. Welcome

2. Agenda – April 10, 2025

3. Meeting Notes – February 21, 2024

4. Action Items

5. Indigenous Zero Waste Technical Advisory Group Presentation

6. Draft Climate 2050 Solid Waste Road Map

7. Solid Waste Management Plan Update Presentations

8. Information Items

9. Other Business

10. Additional Items

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# Meeting Notes

View of Metro Vancouver



# Action Items

View of Metro Vancouver

# Invited Presentations

View of Metro Vancouver



# IZWTAG

INDIGENOUS ZERO WASTE  
TECHNICAL ADVISORY GROUP

Solid Waste Management Plan Public/Technical  
Advisory Committee  
April 2025



- About IZWTAG
- Programs and Services
- Partnerships
- Funding
- Challenges and Opportunities





# About IZWTAG

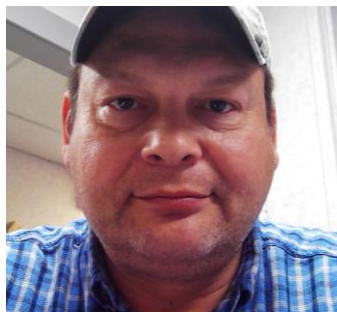
- Registered Non-Profit Society, 2019



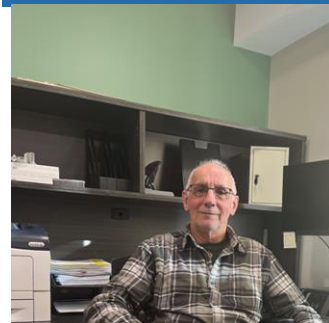
Calvin Jameson - President



Roger Vickers - Vice President



Shawn Quick Director



Rick Dobbs Director



Isaiah Robinson -  
Director



Vince Davies - Director



# IZWTAG Strategic Plan

- **Vision:**

To live in an environment  
where Mother Earth's water, land, and air are  
restored and preserved respectfully  
now and for future generations.



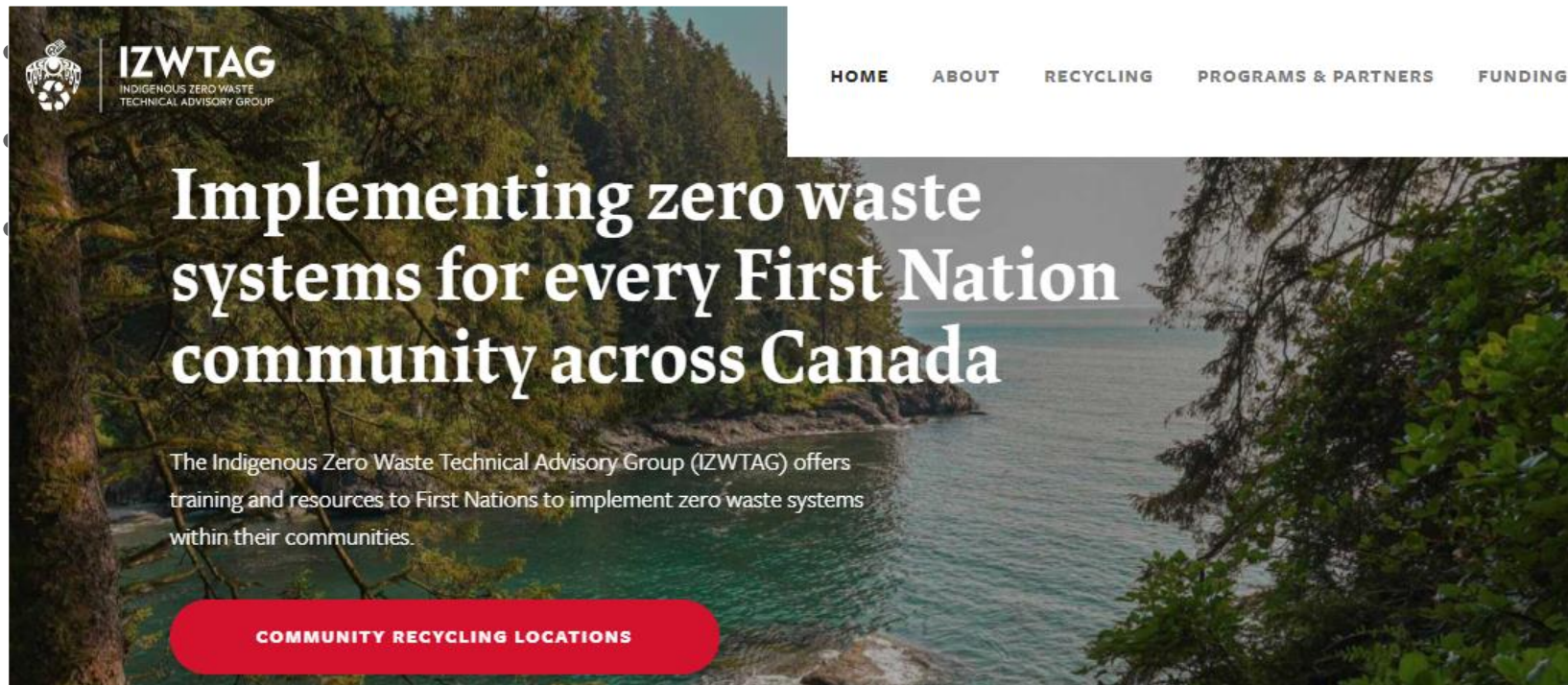
# IZWTAG Mission

IZWTAG is an **indigenous-led** organization that supports BC First Nations communities **to achieve zero waste** through programs, training, expertise, research, and advocacy.



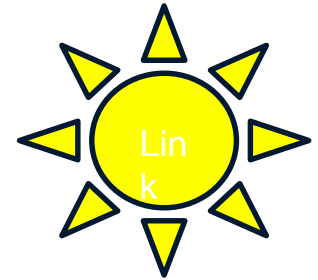
# Core Programs & Services

- Website [izwtag.com](https://izwtag.com)





- Website [izwtag.com](http://izwtag.com) learning portal **connect**



# Core Programs & Services

## Training

### Zero Waste Operator Training :

- Offered jointly with SWANA
- Level 1 and Level 2
- Indigenous Instructors

### Technical Training Module:

- 1<sup>st</sup> Technical Training Module (partner with BCUOMA)

### Recycle Champion Training:

- Offered by IZWTAG



- Training schedules and registration at [izwtag.com](http://izwtag.com)



# Core Programs & Services

## Zero Waste Circuit Rider Program

To ensure proper operations and maintenance activities and to support technical/operational employees of the solid waste management systems in First Nation communities.

(Modelled on the First Nations Water & Waste Water Circuit Rider program)



- Initiated by IZWTAG in 2020
- Funded by ISC

# Zero Waste Circuit Rider **On-site Services**

- Set up zero waste operations
- On-site training for crew
- Equipment repairs
- Stockpile clean-ups
- Collaboration with Product Stewards, Regional Districts and recycle companies



# Zero Waste Circuit Rider

## Advisory Services

For new Community Zero Waste Systems  
(as member of planning & engineering team):

- On-site feasibility assessments
- Design review
- Equipment specs
- Commissioning

New Community Zero Waste Systems are set  
up through the

**B.C. First Nations Zero Waste Program.**

For eligible nations, ISC funds:

- Capital infrastructure/Equipment
- Operations & maintenance (O&M)
- Waste/recycling transfer & disposal

To join the program, email

Rachelle.Ormond3@sac-isc.gc.ca



# Core Programs & Services

## Annual IZWTAG Day

- Held in April each year
- For Members and Associate Members
- Learning and Networking
- Celebrating and Recognizing Outstanding Performance



- Gerald Quash, Tahltan Nation
- IZWTAG Day 2022

# New Grant Opportunity

## Clean B.C. Plastics Action Fund

- IZWTAG available to assist with grant applications
- New Indigenous Funding Stream – up to \$1 million available (update info)
- To support indigenous-led projects that prevent plastic waste and provide zero waste solutions
- First time round funding we assisted 20+ First Nations communities and/or businesses totalling over \$2M
- Project as of March 31, 2025 - Completed



# Partnerships

- Indigenous Services Canada
  - Lands and Economic Development
  - Community Infrastructure
- Province of British Columbia
  - Ministry of Environment and Climate Change Strategy, Weekly Meeting with Province of BC
- FNRI – Recycle BC – April 2025
- FN Schools Association
- Solid Waste Association of North America (SWANA)
- Kelkim Trading Pty. Ltd. – New company out of Australia





# Funding

- Core funding by Indigenous Services Canada (ISC)
  - To deliver zero waste programs and services to BC First Nations
  - Annual proposal
- Fee for service
  - Specific contracts for services (Province of British Columbia , Ministry of Environment and Climate Change Strategy)
  - Administration for ISC projects
- Annual Member Fees
  - Nominal General Member Fees
  - Associate Member Fees



# Challenges and Opportunities

- Biggest challenge is the high demand for IZWTAG services
  - 203 BC First Nations (Currently working with 120)
  - National and international interest
- Adding in-house and indigenous capacity
  - Circuit Riders need particular skill set
  - Annual funding cycle



**Thanks!**







Photo by Sahar

# Climate 2050 Solid Waste Roadmap

METRO VANCOUVER CLIMATE 2050 STRATEGY

Sahar Ahmadvand, PhD, EIT

Assistant Project Engineer, Solid Waste Services

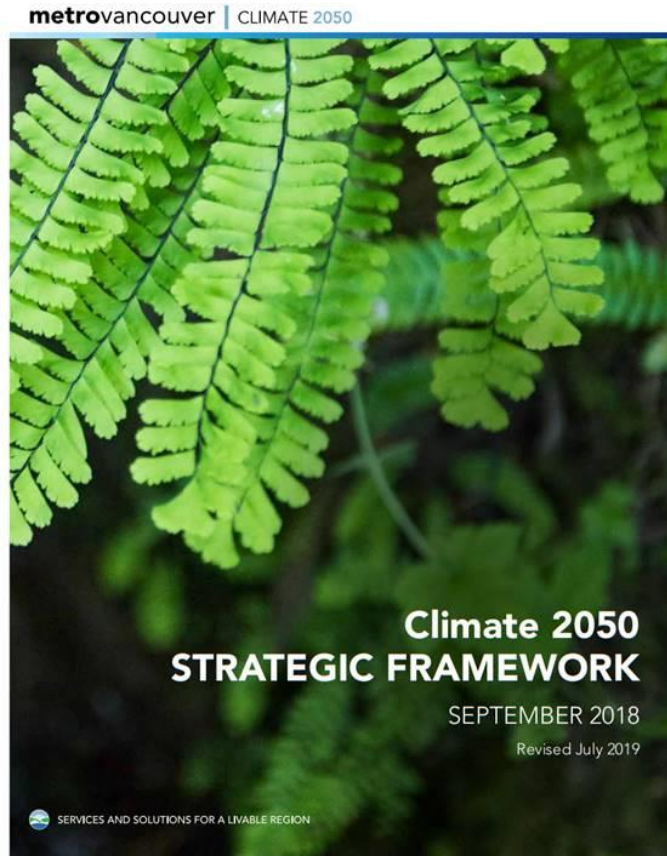
Solid Waste Management Plan Public Technical Advisory Committee Meeting, April 10, 2025

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# CLIMATE 2050 STRATEGY

A climate strategy for the Metro Vancouver region

- MVRD Board approved in 2018
- Carbon neutral region by 2050
- Target a 45% reduction in emissions from 2010 levels, by 2030
- Infrastructure, ecosystems, and communities resilient to the impacts of climate change



# METRO VANCOUVER CLIMATE 2050

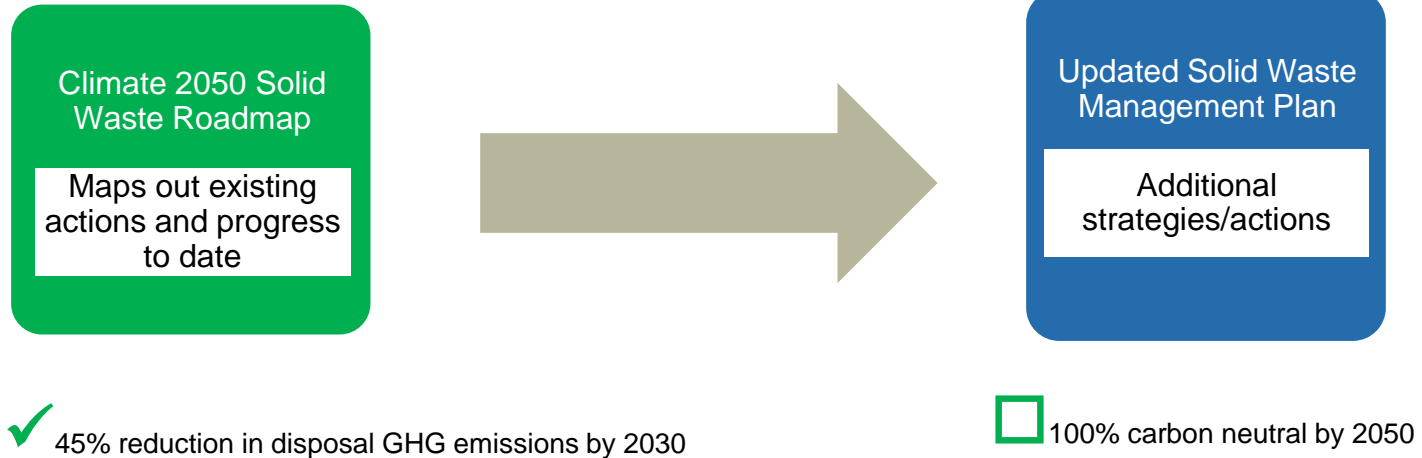
## Climate 2050 Roadmaps





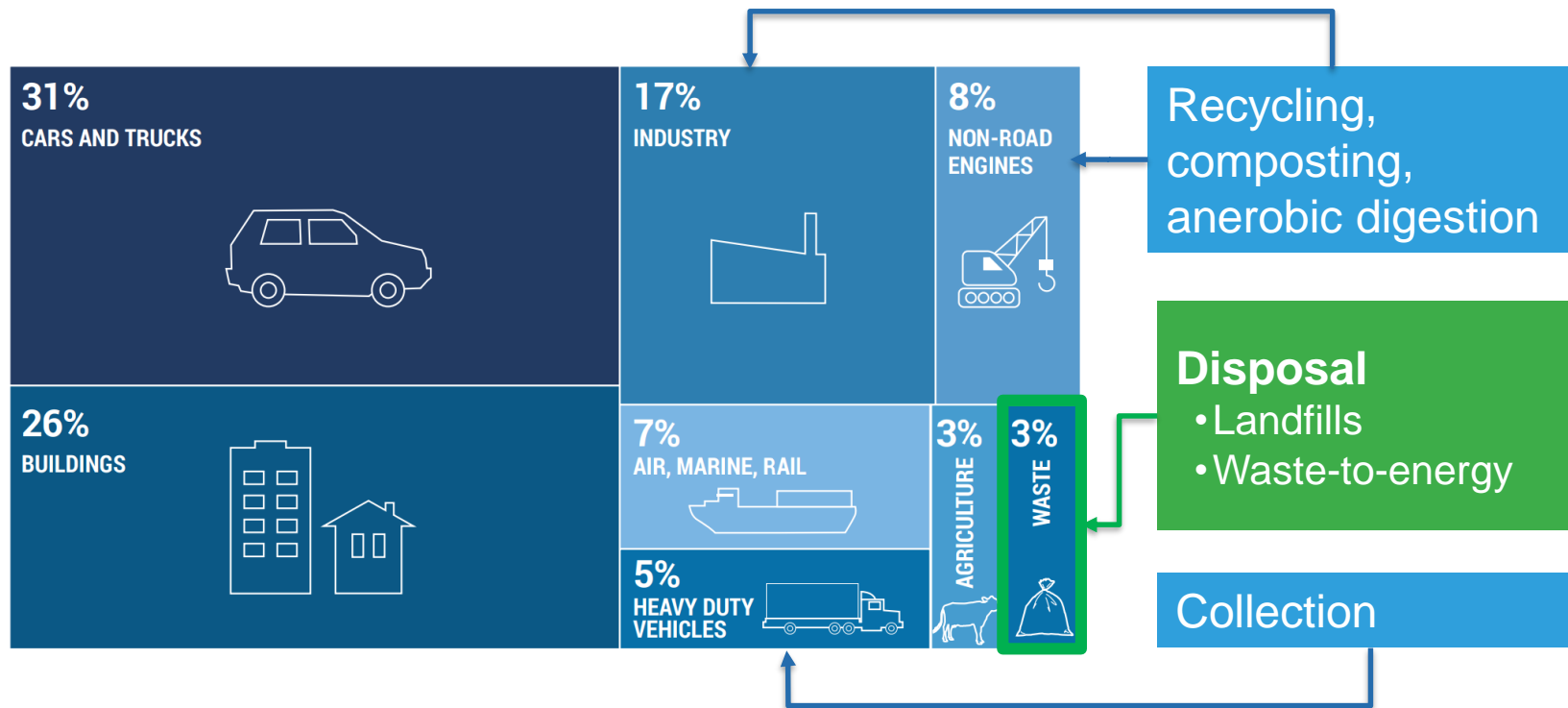
# METRO VANCOUVER CLIMATE 2050

Climate 2050 Roadmap relationship to solid waste management plan



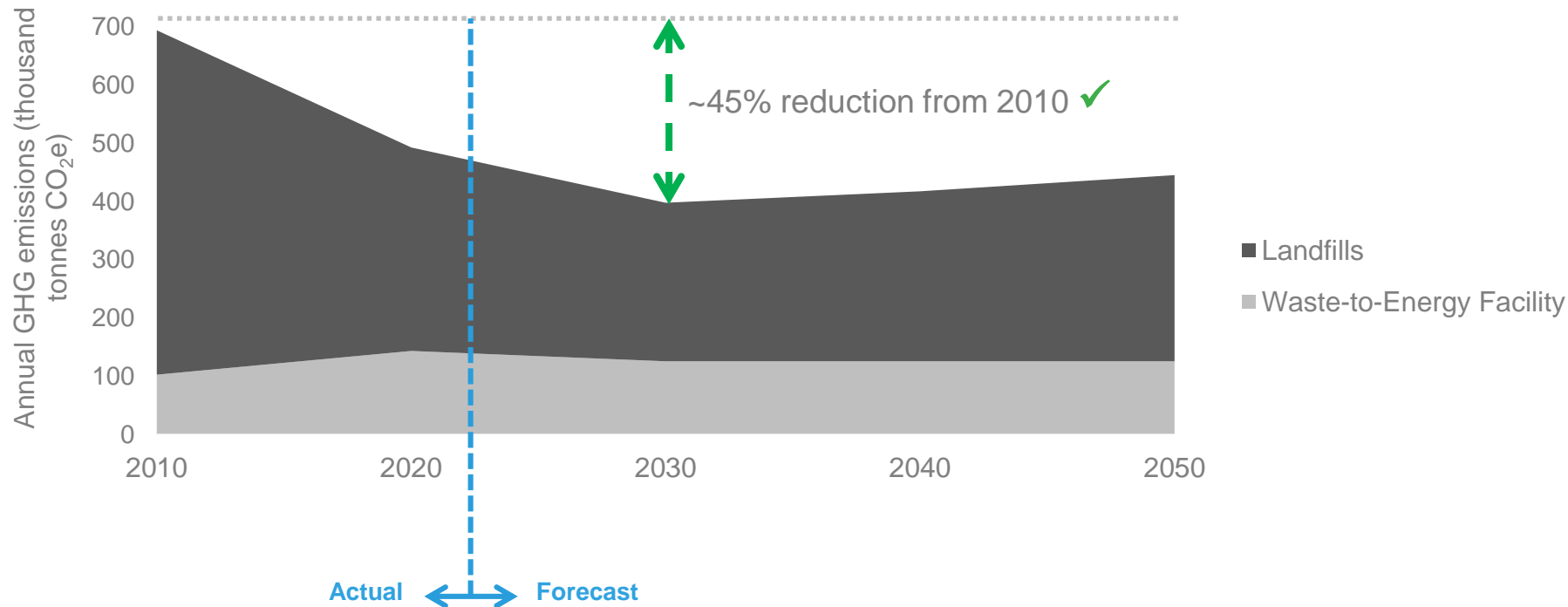
# CLIMATE 2050 SOLID WASTE ROADMAP

Scope and regional sources of emissions



# CLIMATE 2050 SOLID WASTE ROADMAP

Baseline inventory of Metro Vancouver solid waste disposal emissions

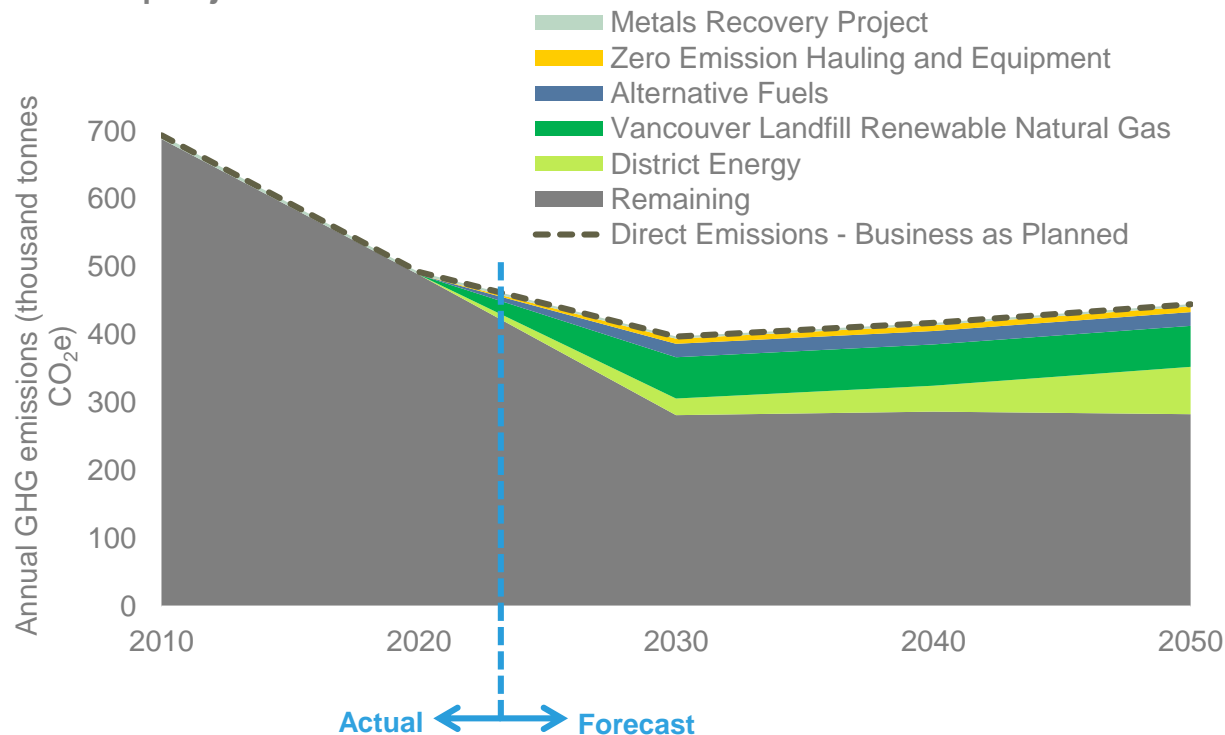


# CLIMATE 2050 SOLID WASTE ROADMAP

## Greenhouse gas emission offset projects

- Management of solid waste at Metro  
Vancouver provides many benefits and opportunities for emission reductions in other Climate 2050 Roadmaps such as

- Transportation
- Buildings
- Industry and Business
- Energy





# SOLID WASTE EMISSION OFFSET PROJECTS

## Buildings Roadmap

- **District Energy** - Metro Vancouver is developing a district energy system which will use excess heat from Waste-to-Energy Facility to heat up to 50,000 homes with a potential to reduce up to 70,000 tonnes of CO<sub>2</sub>e emissions annually.



***Building Roadmap – Strategy 3: Shift to Zero Carbon District Energy***



# SOLID WASTE EMISSION OFFSET PROJECTS

## Transportation Roadmap

- **Zero Emissions Hauling** - In 2023 Metro Vancouver worked with member jurisdictions and hauling companies to assess the business case for using zero emission vehicles for transporting solid waste, biosolids, and curbside waste collection.



**Transportation Roadmap – Strategy 3:** Reduce heavy truck emissions and support early adoption of zero emission heavy trucks



Metro Vancouver Project Highlights, Climate 2050 Progress Report 2024

# SOLID WASTE EMISSION OFFSET PROJECTS

## Industry and Business Roadmap

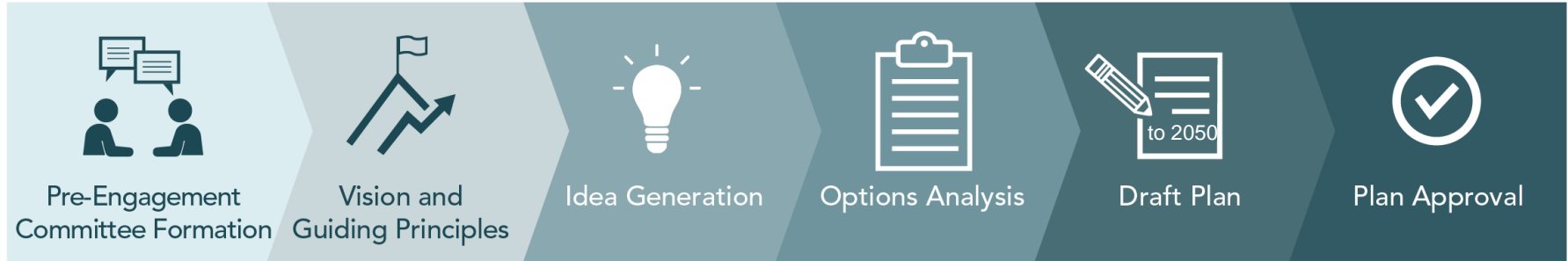
- **Zero Emissions Equipment:** Under new contracts Metro Vancouver's recycling and waste centre operators will be required to use renewable diesel for non-road mobile equipment and trucks that haul garbage to the Waste-to-Energy Facility and Vancouver Landfill, with incentives for transitioning to zero-emission equipment.
- **Metals Recovery:** Metals recovery and bottom ash beneficial use at Waste-to-Energy Facility (2018)



**Industry and Business Roadmap – Strategy 2:** Reduce non-road emissions and support early adoption of zero emission non-road equipment & **Strategy 4:** Reduce emissions through procurement and other business practices



# PLAN TIMELINE



we are here

- Climate 2050 Solid Waste Roadmap captures the emissions inventory of Metro Vancouver's solid waste disposal and emission benefits of current actions and offset projects.
- The updated solid waste management plan will include strategies and actions to help achieve the carbon neutrality goal of the Metro Vancouver Climate 2050 Strategy.





Metro Vancouver Staff Workshop

# Solid Waste Management Plan Update

## TIMELINE UPDATE

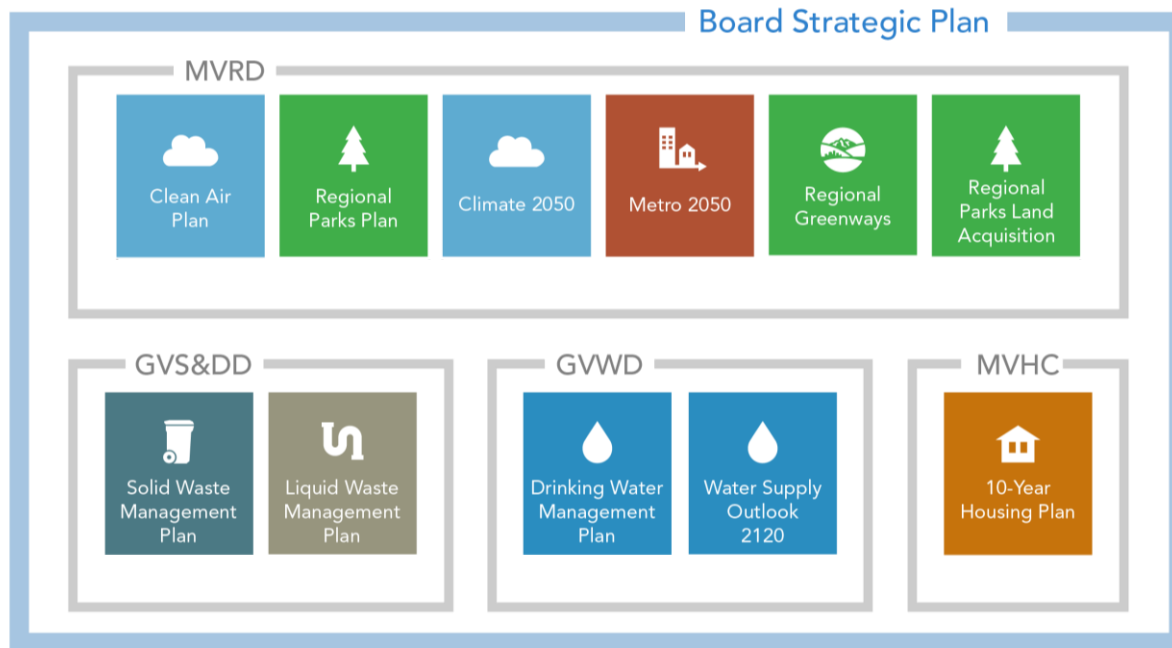
Stephanie Liu

Program Manager, Solid Waste Community Engagement

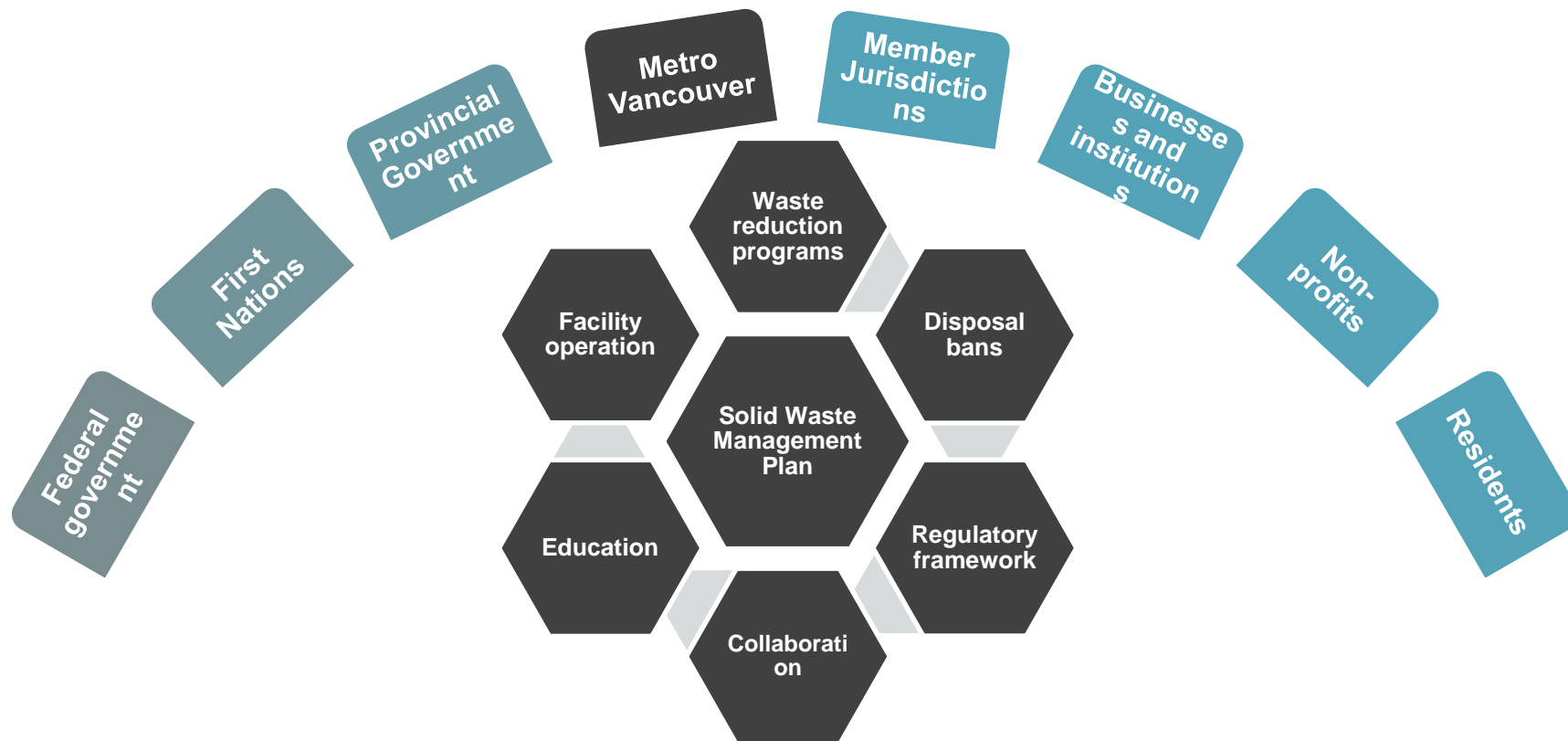
Solid Waste Management Plan Public/Technical Advisory Committee – April 10, 2025

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# MANAGEMENT PLANS



# ROLES & RESPONSIBILITIES



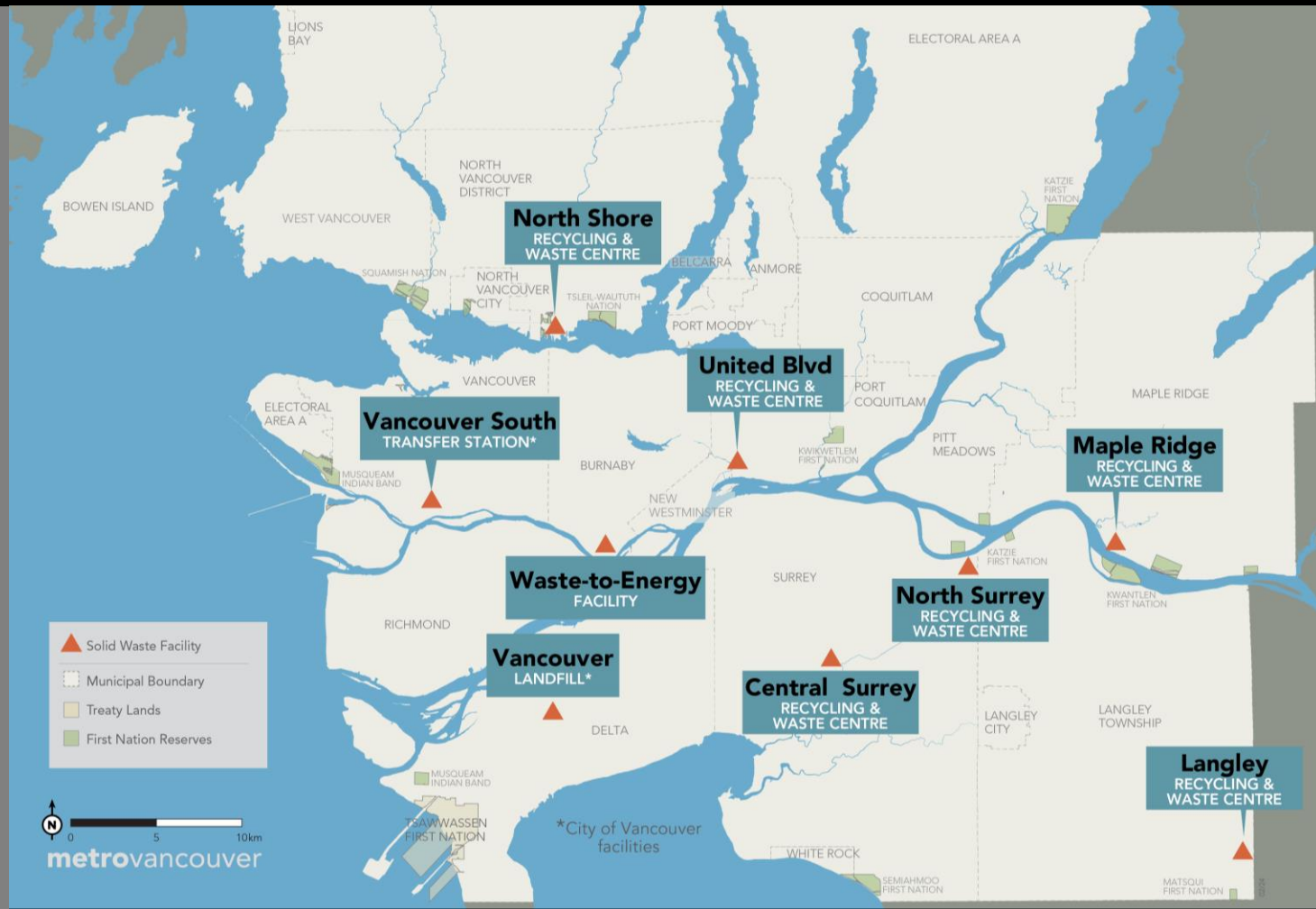


# Solid Waste Facility Locations

Responsible for 6 recycling and waste centres, 1 waste-to-energy facility

65% recycling rate

Advance waste prevention and the circular economy





# BEHAVIOUR CHANGE CAMPAIGNS

Single-use item reduction  
(What's Your Superhabit?)

Food scraps recycling (Food  
Scraps Aren't Garbage)

Food waste prevention (Love  
Food Hate Waste)

Textiles waste reduction (Think  
Thrice)

Holiday waste reduction (Create  
Memories, Not Garbage)



# ABOUT THE SOLID WASTE MANAGEMENT PLAN

- Priority solid waste strategies, actions, goals, and targets
- Current plan approved in 2011 by the Province
- Required under the *Environmental Management Act*
  - Provincial *Guide to Solid Waste Management Planning*

The new plan will identify how the region can continue to:

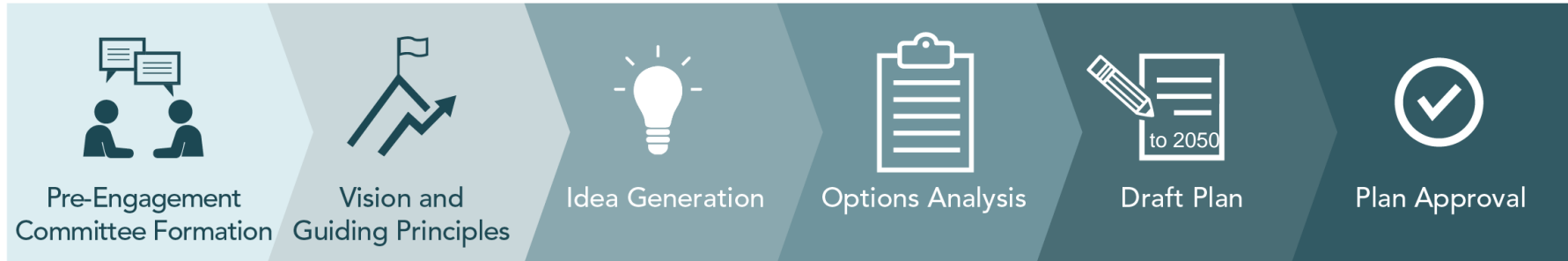
Reduce waste

Increase  
reuse and  
recycling

Reduce  
greenhouse  
gas emissions

Work towards  
a circular  
economy

# PROJECT TIMELINE UPDATE



▲  
we are here

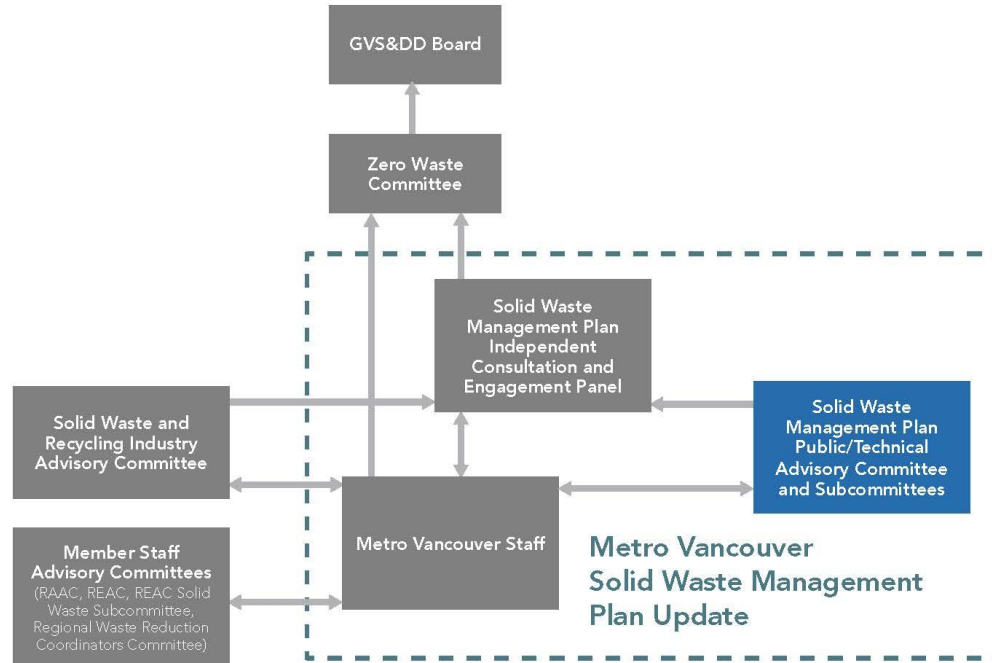
# PLANNING HORIZON

Actions focused on the next 10 years, planning for 2050





# GOVERNANCE FRAMEWORK



# VISION AND GUIDING PRINCIPLES

Complete

“A thriving region where nothing is wasted and resources are valued.”



A solid waste and recycling system that is **affordable**, **convenient**, and **consistent** across the region.



A solid waste system that is **resilient** to climate change and future challenges.



**Accountability** from residents, businesses, and governments to prevent waste.



**Environmental stewardship** and climate action.



**Inclusive** solid waste services and programs.



**Innovation and collaboration** to support a vibrant regional economy that keeps products and materials in circulation.



**Transparency** about what happens to waste and recycling.

# IDEA GENERATION

## Idea Generation

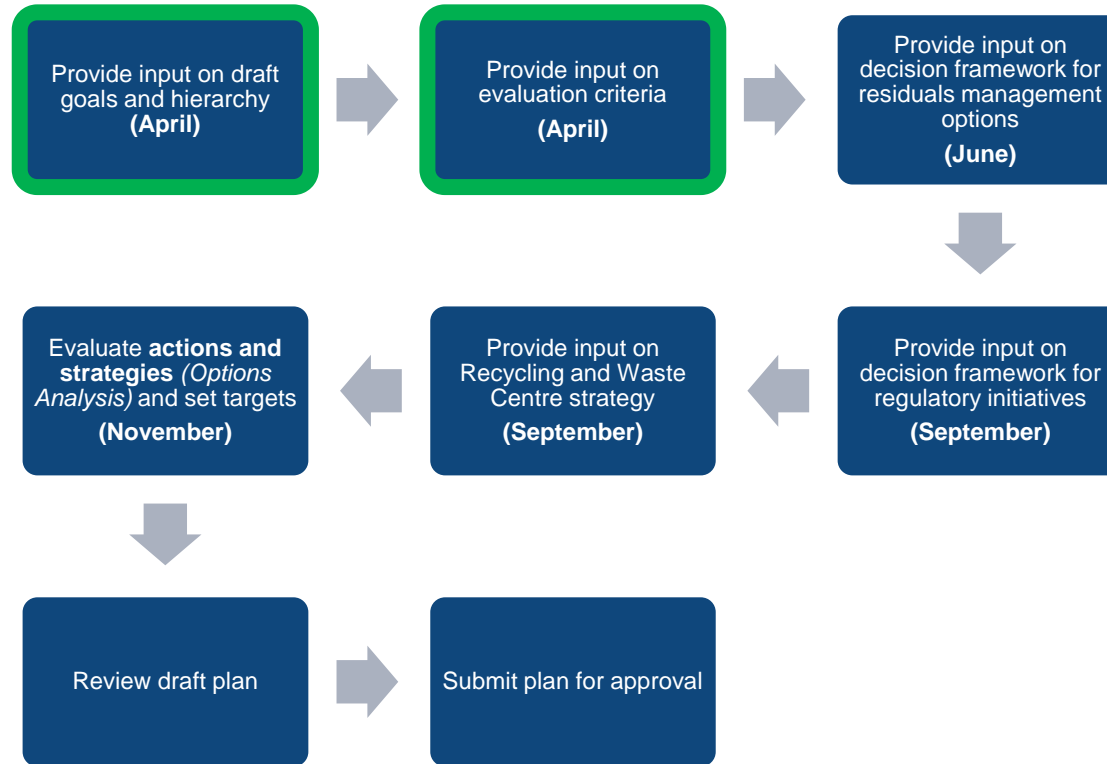
- Seven issue/opportunities discussion question asked to engagement audiences
- Responses captured in feedback log
- Led to development of long list of potential actions

## Options Analysis

- Ideas will be narrowed down and evaluated according to criteria discussed with committees



# PATH TO DRAFT PLAN – REMAINING STEPS





- Hierarchy
  - What are our priorities?
- Goals
  - What do we want the plan to achieve?
- Metrics
  - How will we measure our progress?
- Evaluation Criteria
  - How will we evaluate options?

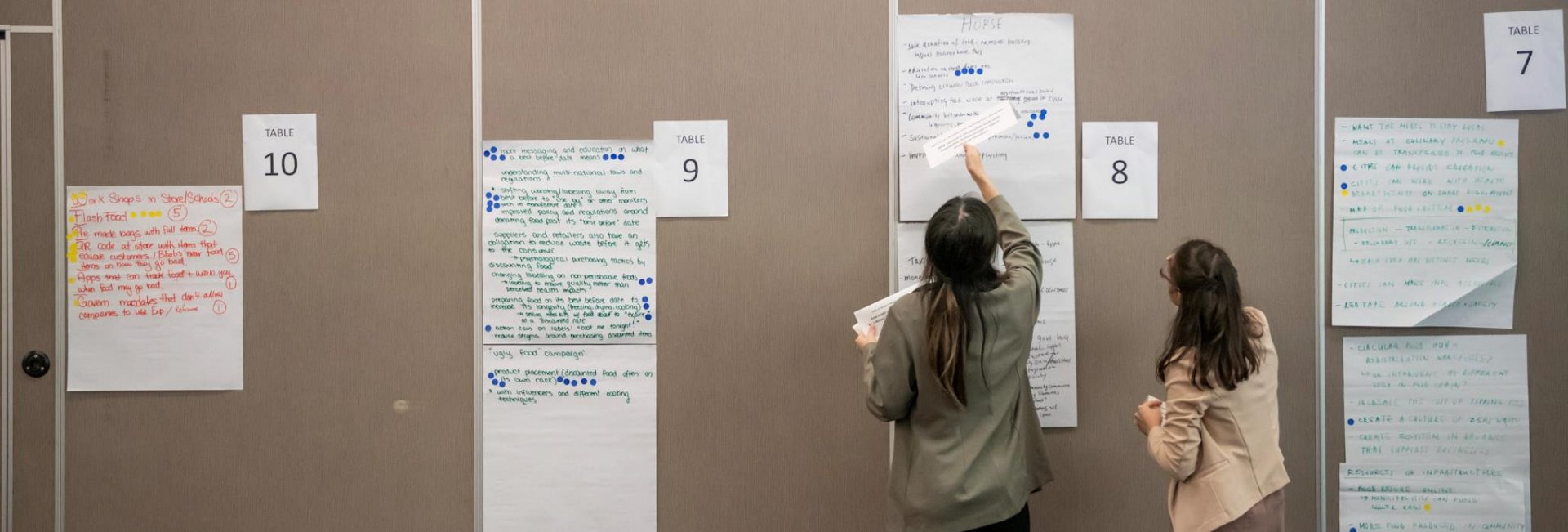




Metro Vancouver Skyline

# Questions?

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# Solid Waste Management Plan - Goals & Hierarchy

Terry Fulton, P.Eng.

Senior Project Engineer, Metro Vancouver

Solid Waste Management Plan Public/Technical Advisory Committee – April 10, 2025

metrovancouver

Zero Waste 2023 Conference

# PLAN COMPONENTS

## Vision & Guiding Principles

- Set the plan direction and reflect fundamental values

## Goals

- Long-term aims to be achieved as an outcome of the plan

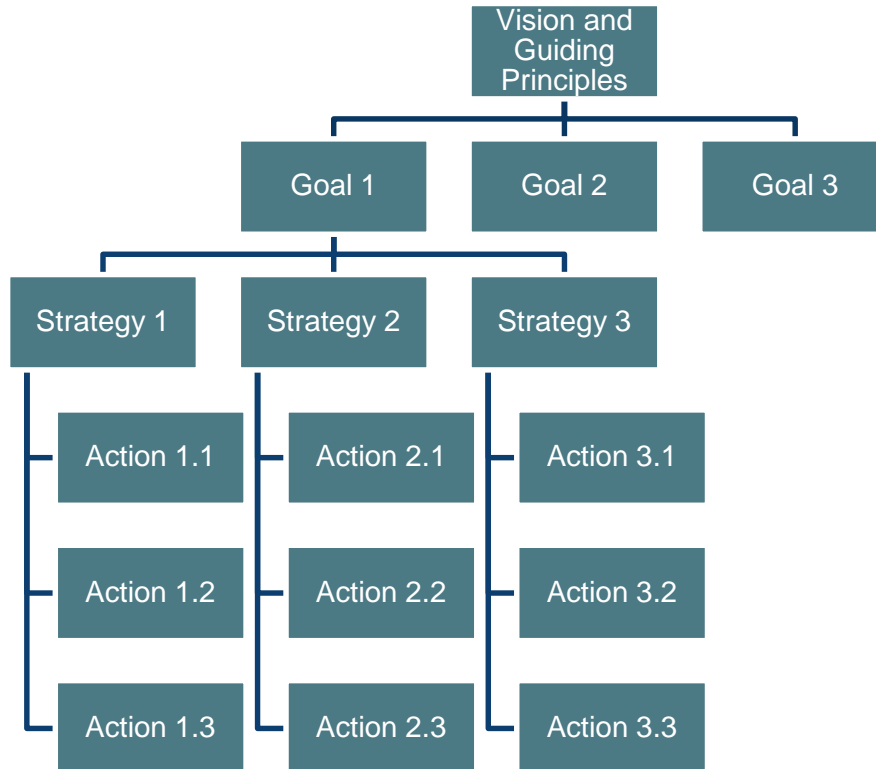
## Metrics & Targets

- A way of measuring progress

## Strategies & Actions

- Product of idea generation and options analysis

# ORGANIZING THE PLAN



**Goals** – long term aims to be achieved as an outcome of the plan

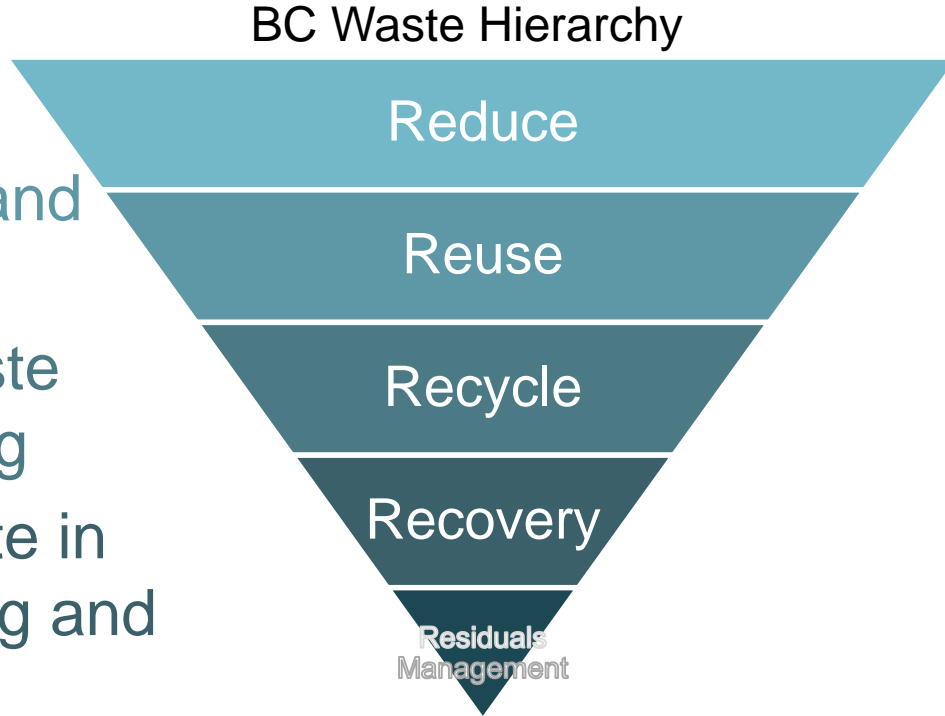
**Strategies** – approaches to accomplish the plan goals

**Actions** – specific programs, policies and initiatives



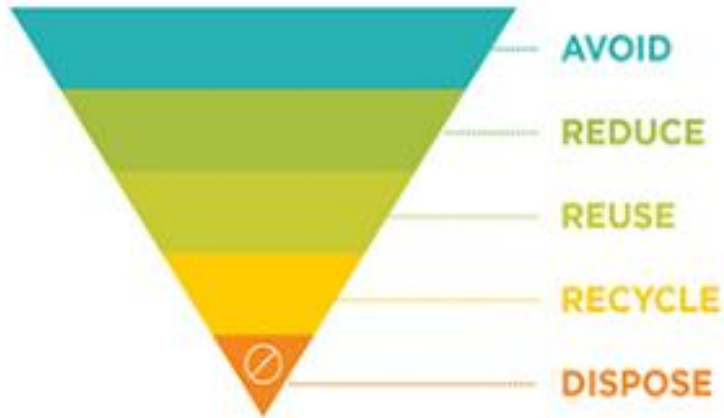
# 2011 PLAN GOALS

1. Minimize Waste Generation
2. Maximize Reuse, Recycling and Material Recovery
3. Recover energy from the waste stream after material recycling
4. Dispose of all remaining waste in landfill, after material recycling and energy recovery

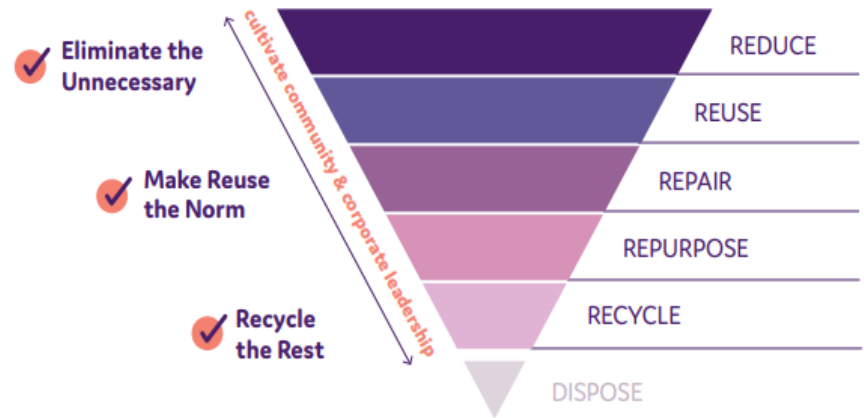


# OTHER HIERARCHIES

## ZERO WASTE APPROACH FOR VANCOUVER



## CITY OF VICTORIA



# WHAT WE HEARD



A word cloud of feedback points. The most prominent text is 'Waste prevention should be a priority' in large, bold, dark blue font. Other significant text includes 'Keep it simple' and 'Focus on highest and best use' in bold, dark blue font. Smaller text in dark blue includes 'Disposal should not be a focus', 'Prioritize environmental stewardship', 'Adopt a more circular model', 'Don't count fuel as recycling', 'Adopt the zero waste hierarchy', 'Use accessible language', 'Be careful about definitions', 'Do not include waste-to-energy', 'Expand reduction and reuse', 'Consider the 9 R's framework', 'Ensure transparency', 'Increase recycling efforts', and 'Use an existing standardized hierarchy'.

Adopt a more circular model

Don't count fuel as recycling

Prioritize environmental stewardship

Adopt the zero waste hierarchy

**Disposal should not be a focus**

**Keep it simple**

Use accessible language

**Waste prevention should be a priority**

Be careful about definitions

**Focus on highest and best use**

Do not include waste-to-energy

Expand reduction and reuse

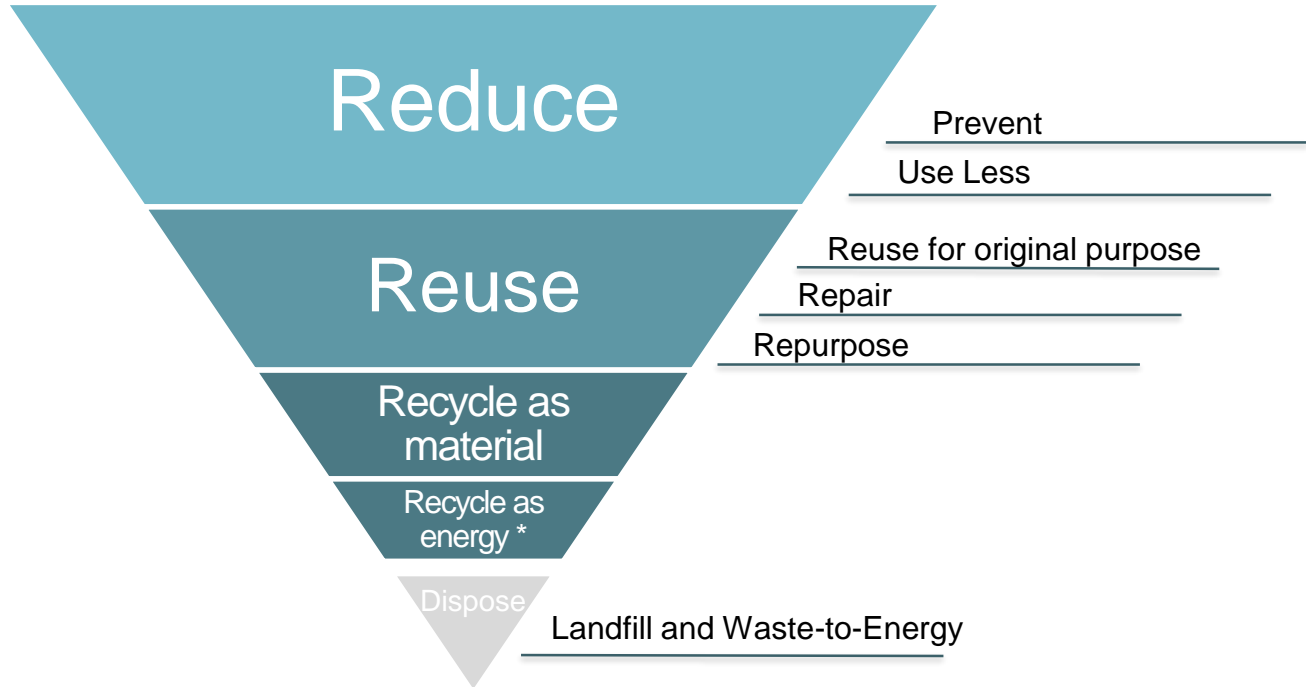
Consider the 9 R's framework

**Ensure transparency**

**Increase recycling efforts**

Use an existing standardized hierarchy

# DRAFT HIERARCHY



\* Recycled as fossil fuel substitutes

# DRAFT GOALS

1

Prioritize waste prevention

3

Make it easier to recycle effectively

2

Keep materials in use as long as possible

4

Dispose of remaining garbage responsibly



# SMALL GROUP DISCUSSION QUESTIONS

## Draft hierarchy

- Is there anything missing from the draft hierarchy?
- Is there anything that should be changed or removed from the draft hierarchy?
- Other feedback?

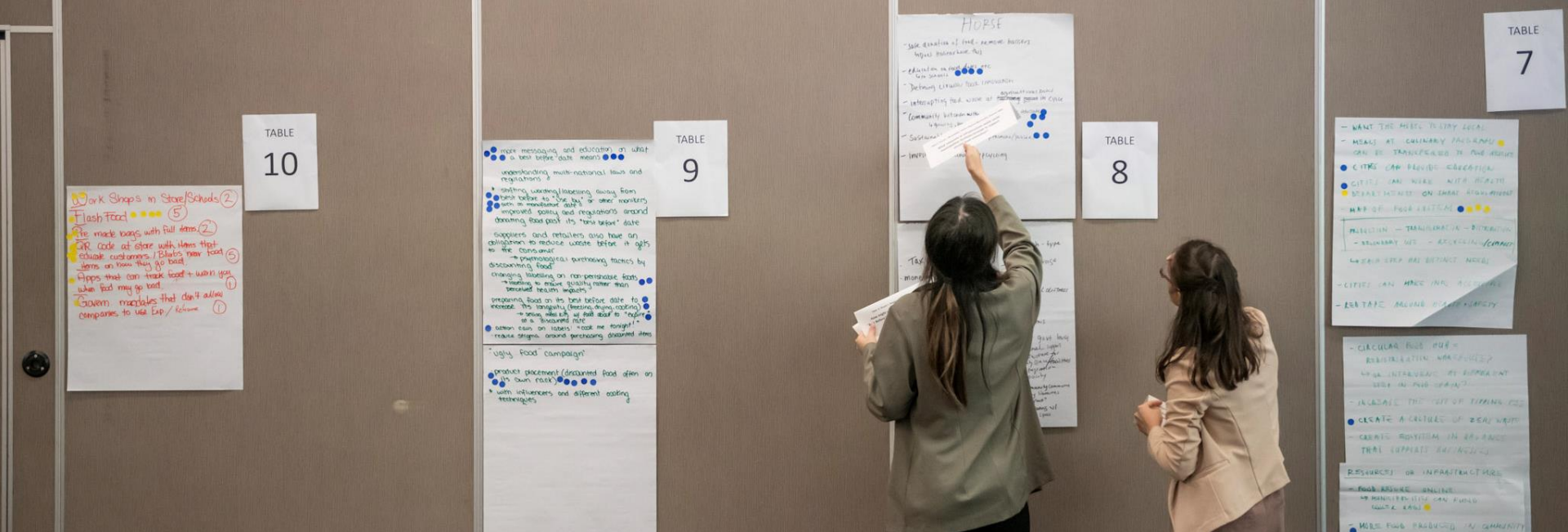
# SMALL GROUP DISCUSSION QUESTIONS

## Draft goals

- Is there anything missing from the draft goals?
- Is there anything that should be changed or removed from the draft goals?
- Other feedback?

BREAK

View of Metro Vancouver



# Solid Waste Management Plan - Metrics

Lindsay Seidel-Wassenaar, P.Eng.

Project Lead, Sonnevra

Solid Waste Management Plan Public/Technical Advisory Committee – April 10, 2025

Zero Waste 2023 Conference

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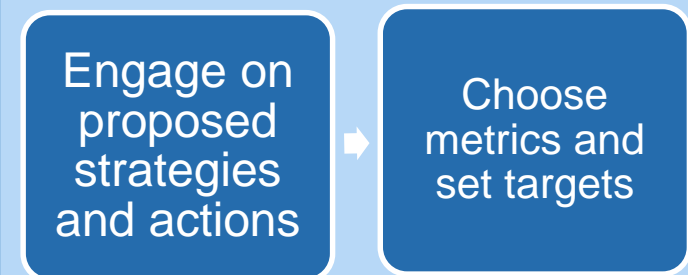
# MEASURING PROGRESS TOWARD PLAN GOALS

- Plan progress will be monitored using a suite of metrics:
  - High level primary metrics linked to goals (e.g. disposal rate)
  - Secondary metrics linked to specific strategies (e.g. tonnes food rescued)

## Stantec Performance Metrics Review (Today)

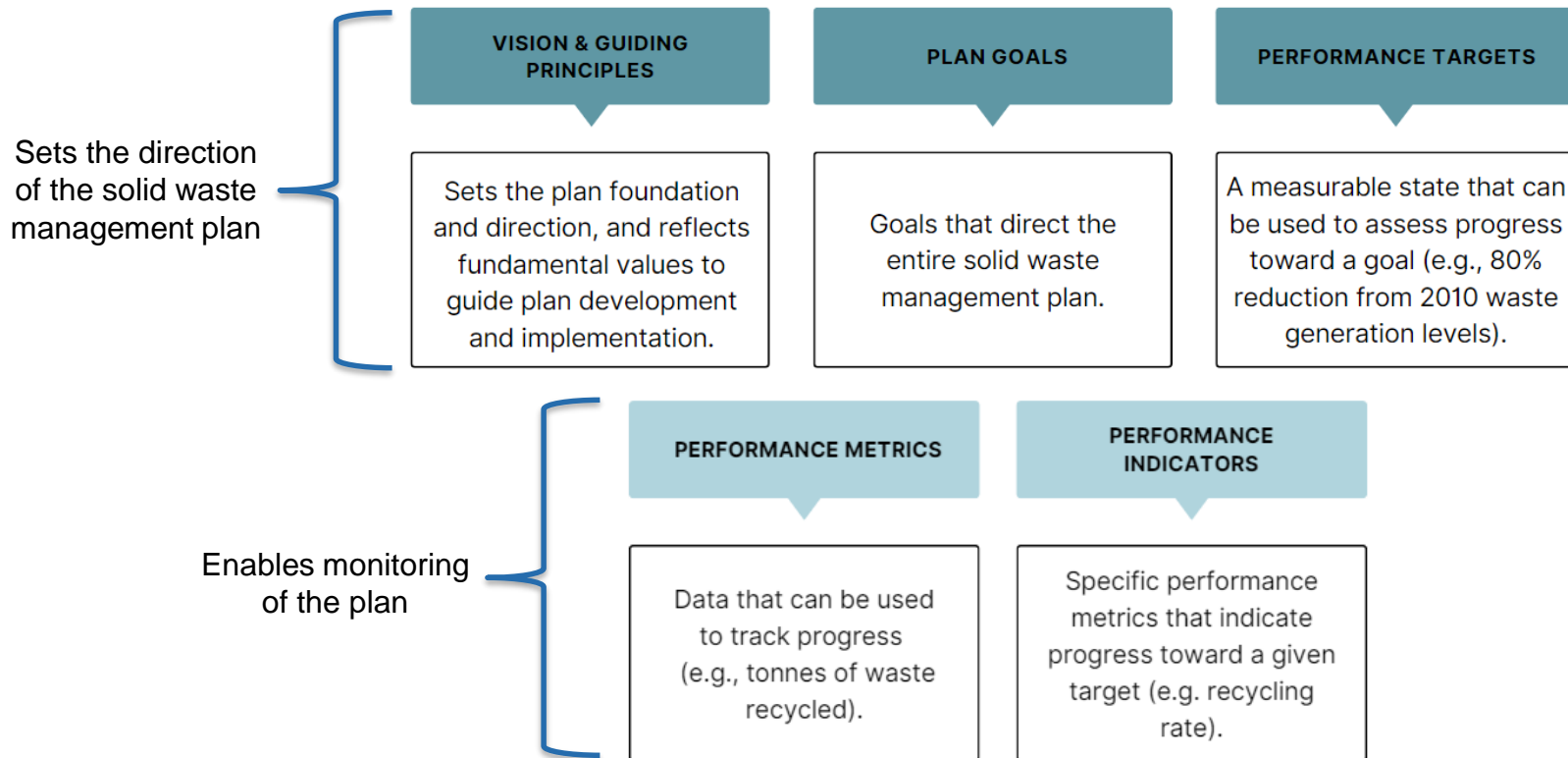


## Committee Discussions (Fall 2025)





# Developing Metrics and Indicators



# Background – Stantec Performance Metrics Review

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Work completed to-date:

- Jurisdictional/Organizational scan
- Interviews with jurisdictions and organizations
- Data summary and comparison
- Assessment of metrics against criteria

# Performance Metrics Applicability Criteria

**Specificity** How specific is the metric?

**Data Type** How is the data measured?

**Data Quality** Is the data measured or estimated?

**Data Source** How frequently is the data measured?

**Effort** How many resources does the metric require to measure and/or report on?

**Data Accessibility** Is the data easily accessible or harder to access?

# Primary Metrics

The following are recommended primary metrics that Metro Vancouver could use to measure progress toward each goal:

Goal	Metric
All Goals	<b>GHG emission reductions from solid waste initiatives</b>
Prioritize waste prevention	<b>Decrease in tonnes of waste generated per capita</b>
Keep materials in use as long as possible	<b>Increase in tonnes of measurable reuse</b>
Make it easier to recycle effectively	<b>Increase in Recycling rate (Total recycled/total generated)</b>
Dispose of remaining garbage responsibly	<b>Decrease in kg/capita disposal</b>

# Secondary Metrics

The following are example secondary metrics that Metro Vancouver could use to measure progress toward each goal:

Goal	Example Metric
Prioritize waste prevention	– Awareness of prevention practices
Keep materials in use as long as possible	– # of items repaired at repair events – # of homes relocated – Tonnes of food rescued by local organizations
Make it easier to recycle effectively	– kg/capita recycling by collection method (curbside/depot) and sector – Contamination rate of recycling streams – Recycling program participation rates
Dispose of remaining garbage responsibly	– % of waste generated sent to disposal – # of cases of illegal dumping – Direct GHG emissions from disposal



# Next Steps

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Finalize performance metrics report with recommended primary metrics



Publish draft report and distribute to advisory committees for feedback



Use report to inform discussions on targets once options are analyzed



Metro Vancouver Skyline

Questions?

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# Options Analysis Criteria and Process

## EVALUATION CRITERIA AND RUBRIC FOR ANALYSIS

Karen Storry

Senior Engineer, Solid Waste Services

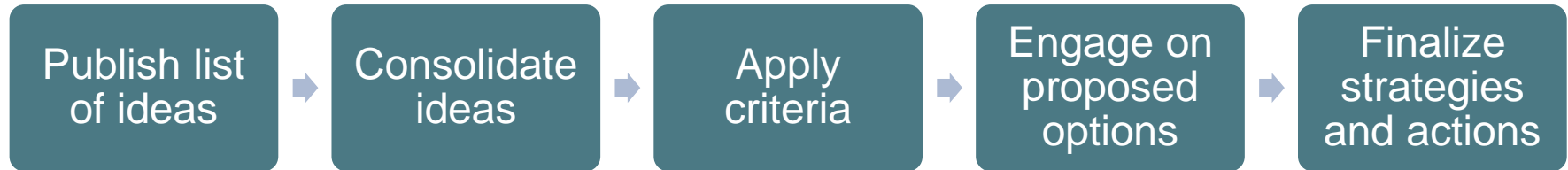
Solid Waste Management Plan Public/Technical Advisory Committee – April 10, 2025

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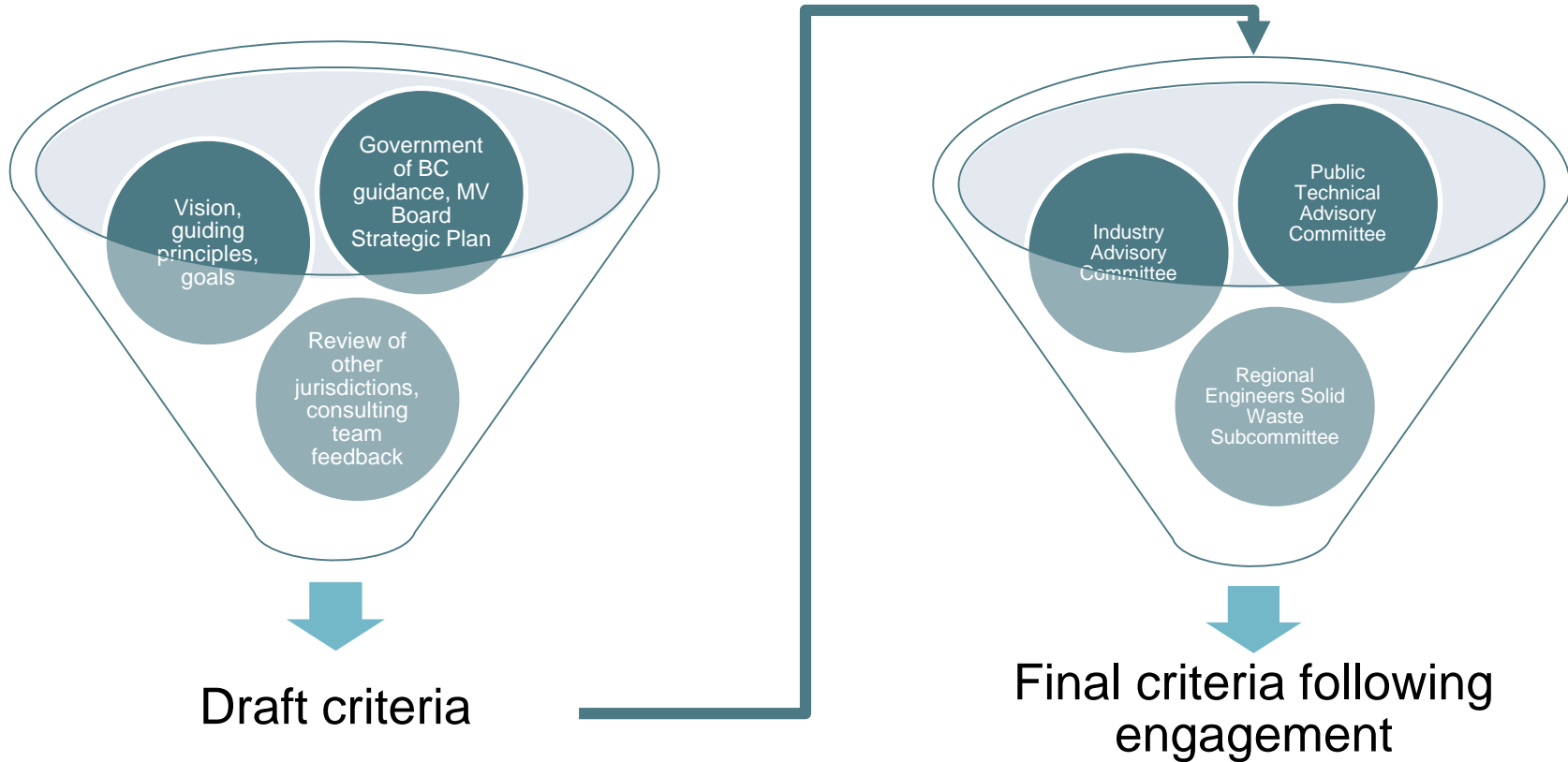
# OPTIONS ANALYSIS PHASE

## Purpose and Process

Involves evaluating all input from the Idea Generation phase to produce a list of strategy and action options for engagement.



# EVALUATION CRITERIA DEVELOPMENT



# DRAFT IDEA EVALUATION CRITERIA

For developing options

Economic	Environment	Social	General
<ul style="list-style-type: none"><li>• <b>Affordability</b></li><li>• <b>Economic Prosperity</b></li><li>• Collaboration</li><li>• Innovation</li></ul>	<ul style="list-style-type: none"><li>• Circularity</li><li>• Waste reduction</li><li>• Greenhouse gas emissions reduction</li><li>• Resilience</li><li>• Environmental stewardship</li></ul>	<ul style="list-style-type: none"><li>• Inclusion</li><li>• Convenience</li><li>• Community participation</li><li>• Supports waste prevention habits and actions</li></ul>	<ul style="list-style-type: none"><li>• Practicality of Implementation</li><li>• Accountability</li><li>• Transparency</li><li>• Consistency/harmonization</li></ul>



# QUESTIONS FOR DISCUSSION

## Draft criteria

- Is there anything missing from the draft criteria?
- Is there anything that should be removed or changed?
- Any other feedback?

# Information Items

View of Metro Vancouver

## 7.1 ZERO WASTE COMMITTEE AND OTHER UPDATES

March and April

- No meeting in March
- Notice of Bylaw Violation Enforcement and Dispute Adjudication
- Single-Use Plastics Reduction Actions
  - Per-capita disposal of SUI in Metro Vancouver has decreased to below 2018 levels
  - Current focus on behaviour change, supporting province-wide regulations, and increasing reuse at public events and venues.

# Other Business

View of Metro Vancouver

# PTAC LANDFILL TOUR REMINDER

- September 18, 2025 from 10:00 am – 1:30 pm
- Meet at Annacis Research Centre
- Bus to Landfill tour, then back to Annacis Research Centre for light lunch and short meeting
- Wear Long pants, long sleeves, and sturdy footwear (e.g. boots) are required
- Calendar invitation will be updated



# Additional Items





# PTAC UPDATED WORK PLAN 2025

Item	Proposed Meeting Date
Public/Technical Advisory Committee Updated Terms of Reference	February 21, 2025 - Complete
2023 Solid Waste and Recycling Statistics	February 21, 2025 – Complete
Solid waste management plan update:	
Introducing Goals and Options Analysis Criteria	February 21, 2025 – Complete
Hierarchy, Goals, Performance Metrics, and Criteria Workshop	April 10, 2025 – In-progress
Climate 2050 Solid Waste Roadmap	April 10, 2025 – In-progress
Idea Generation Engagement Summary Report	June 19, 2025
Regulatory Framework	June 19, 2025
Concrete and Asphalt Recycling Opportunities Report	June 19, 2025
Residuals Management Options Report	September 18, 2025
Options Analysis Workshop	November 20, 2025
Vancouver Landfill Tour	September 18, 2025



Vancouver Skyline

Thank you

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