

metrovancover

Welcome

View of the Second Narrows Bridge



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# Agenda

View of Metro Vancouver



# AGENDA

1. Welcome
2. Agenda – September 13, 2024
3. Meeting Notes – June 14, 2024
4. Independent Consultation and Engagement Panel Presentation
5. PTAC Member Presentations
6. Working Group Updates
7. Metro Vancouver Updates
8. Other Business
9. Information Items

# Meeting Notes

View of Metro Vancouver



# Action Items

View of Metro Vancouver



# ACTION/STANDING ITEMS

- 4.1 Action Tracker
- 4.2 Incoming/outgoing communication

# Independent Consultation and Engagement Panel

View of Metro Vancouver





# PTAC Member Presentations

View of Metro Vancouver

Metro Vancouver Zero Waste  
Public –Technical Advisory  
Committee

Case Study

September, 2024

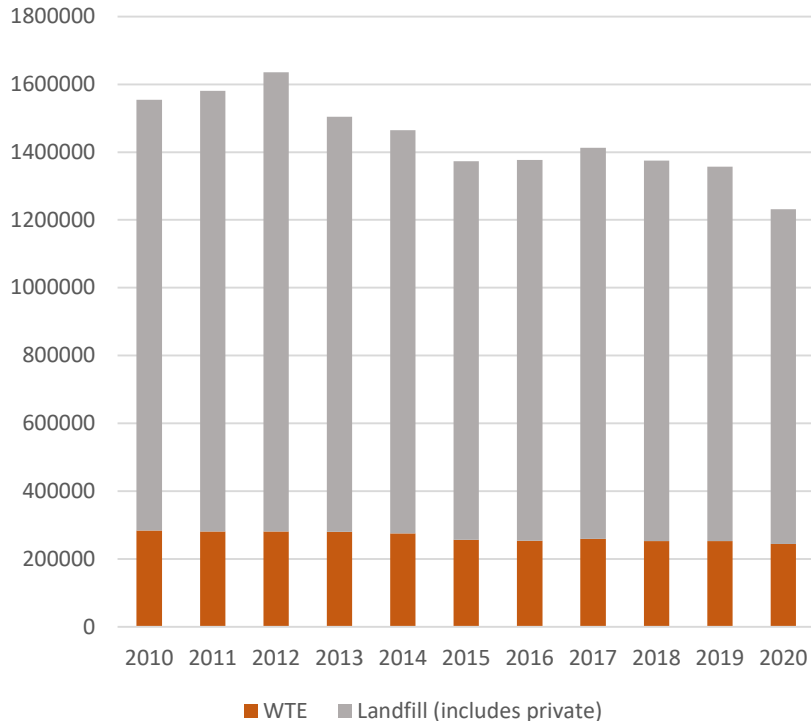


*A just world, of vibrant, resilient,  
regenerative Zero Waste  
communities, in harmony with  
nature...*

Slides provided by Zero Waste BC

# Results –Waste Disposed

Metro Vancouver Waste 2010-2020



- Disposal declined overall and per person (172 kg/person)
- In ten years removed the equivalent of over one incinerator

# Costs -2020

Costs	Incinerator	Landfills	Zero Waste -Not wasting
Operating Costs /t (2020)	\$96.64	\$47.97 (inc. capital)	\$8.58
Proportion of Waste	1/5	4/5	Negative
Capital (2010-2027)	\$244M (and increasing)	Included in above	0
Tonnes	244,362	987,163	476,435 avoided

# Costs over time



Landfill operating costs up 4% (2010-20) (10% by 2027)



WTE operating costs up 22% (74% by 2027)

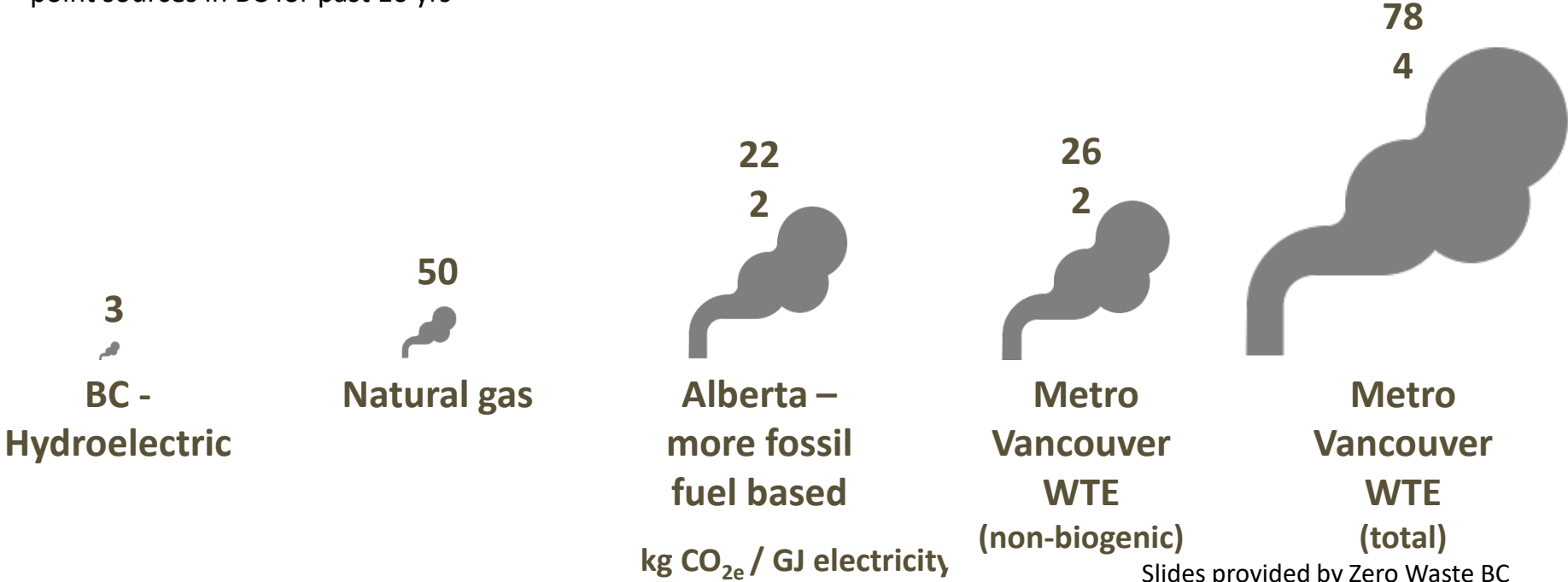
# GHG Emissions by disposal

GHGs - 2020	Incinerator	Vancouver Landfill	External Landfill	Waste prevented
Non-biogenic GHG (tCO <sub>2</sub> e/t waste)	0.58	0.26	0.08	negative
Including biogenic GHG (tCO <sub>2</sub> e/t waste)	1.28	0.32	0.14	negative
Percentage of GHGs (total)	64%	36%	<1%	negative
Percentage of waste	20%	54%	3%	-16%

- Declining from LF as decreasing organics and better landfill gas capture -75% less than 2010
- Increasing for incinerator as requiring more input energy to run - 101% more than 2010 and less efficient

# What about electricity generation?

the Burnaby Incinerator has been in the top 25 biggest GHG industrial point sources in BC for past 10 yrs



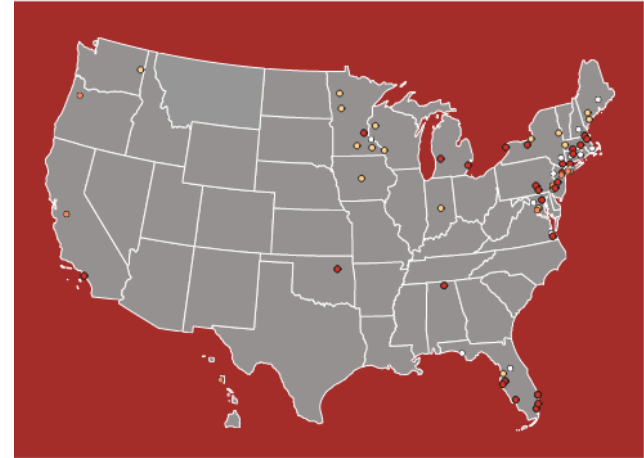
Slides provided by Zero Waste BC

# Time to retire

- Study shows US incinerators closing
  - Costs to maintain, replacement parts
  - Keeping up with evolving health and environmental standards
- Life expectancy 30 years, Burnaby WTE is 35 years old (1988)
- Oregon continuous monitoring –dioxin/furans, SO<sub>2</sub>, NO<sub>x</sub>, toxic metals
- Costs rapidly escalating
- Covanta contract expires in 2025
- BC Hydro power purchase agreement expiring 2026

THE  
NEW  
SCHOOL

TISHMAN ENVIRONMENT  
AND DESIGN CENTER



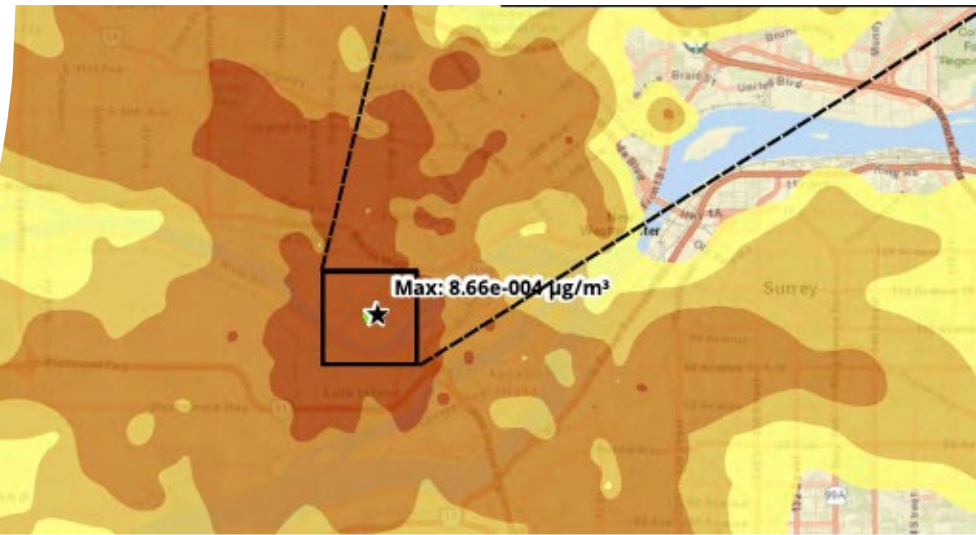
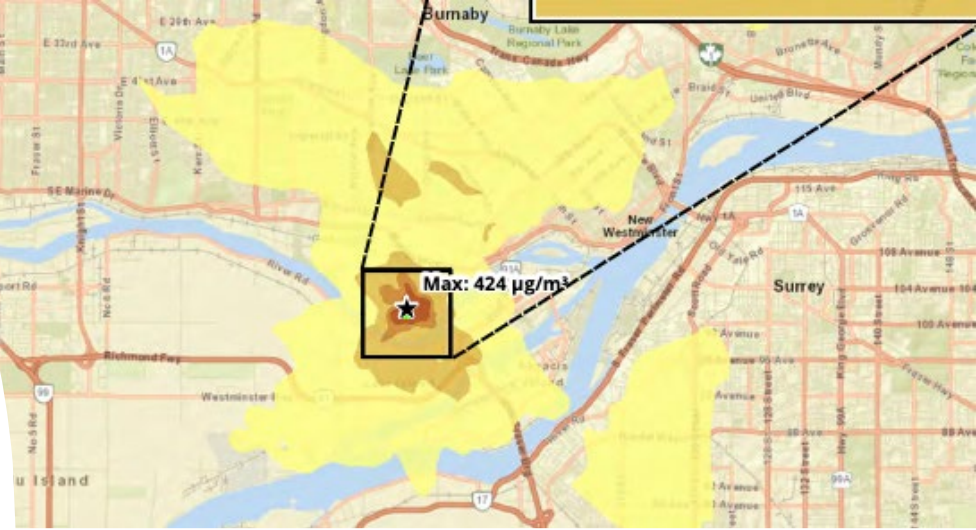
**U.S. Municipal Solid Waste Incinerators:  
An Industry in Decline**

May 2019



# District Energy

- Cost rising- from \$55M to over \$75M
- More people will be living closer to the incinerator (River District 6 km)
- Risk of relying on waste incineration
- District energy should only be based on renewable clean energy sources
- Can reduce GHGs more by closing WTE



# Benefits from incinerator closure



All future capital costs – shut down costs – transfer station costs + use of land



Operating costs (note contract ends 2025)



Staff time to report on emissions + monitoring costs



No need to try to find places for ash to go



Resilience improved



Decreased health and environmental risks  
Meet new standards



GHG savings



Air quality benefits



Opportunity costs

# Recommendations

- Adopt ZW definition and hierarchy
- Focus on first 3Rs
- Press pause on District Energy from WTE
- Close the WTE facility and pursue ZW instead



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## A Case Study on Waste Management Methods



Report: <https://www.zerowastebc.ca/about-us/our-work/#Research>

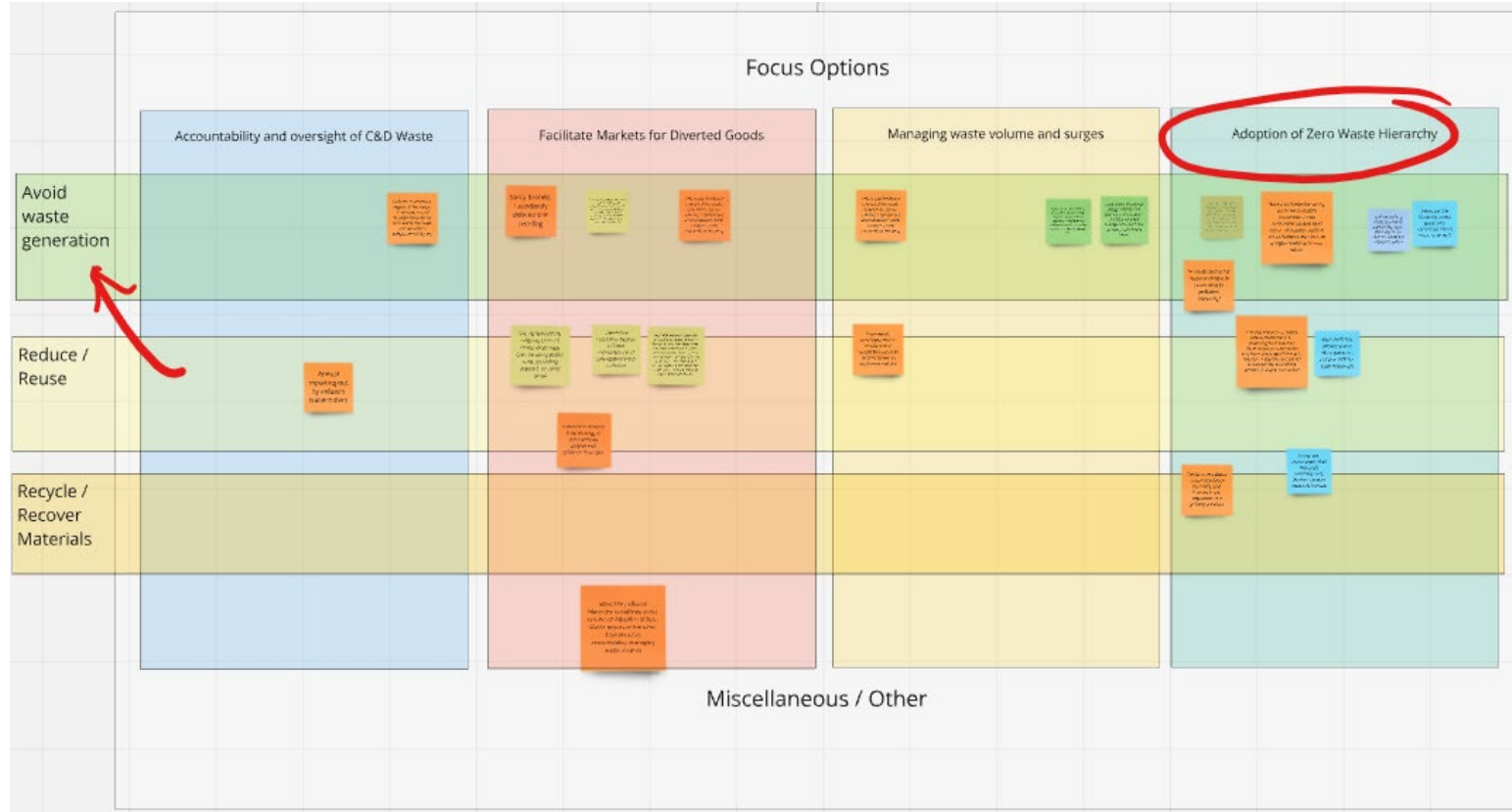
Slides provided by Zero Waste BC

# Working Group Updates

View of Metro Vancouver



# CONSTRUCTION & DEMOLITION WORKING GROUP



# Metro Vancouver Updates

View of Metro Vancouver





Transfer Station recycling bins

# Solid Waste Management Plan Update

## APPROVAL PROCESS AND COMPONENTS

Terry Fulton, P.Eng.

Senior Project Engineer, Solid Waste Services

Solid Waste Management Plan Update Public/Technical Advisory Committee Meeting, Sep.13 2024

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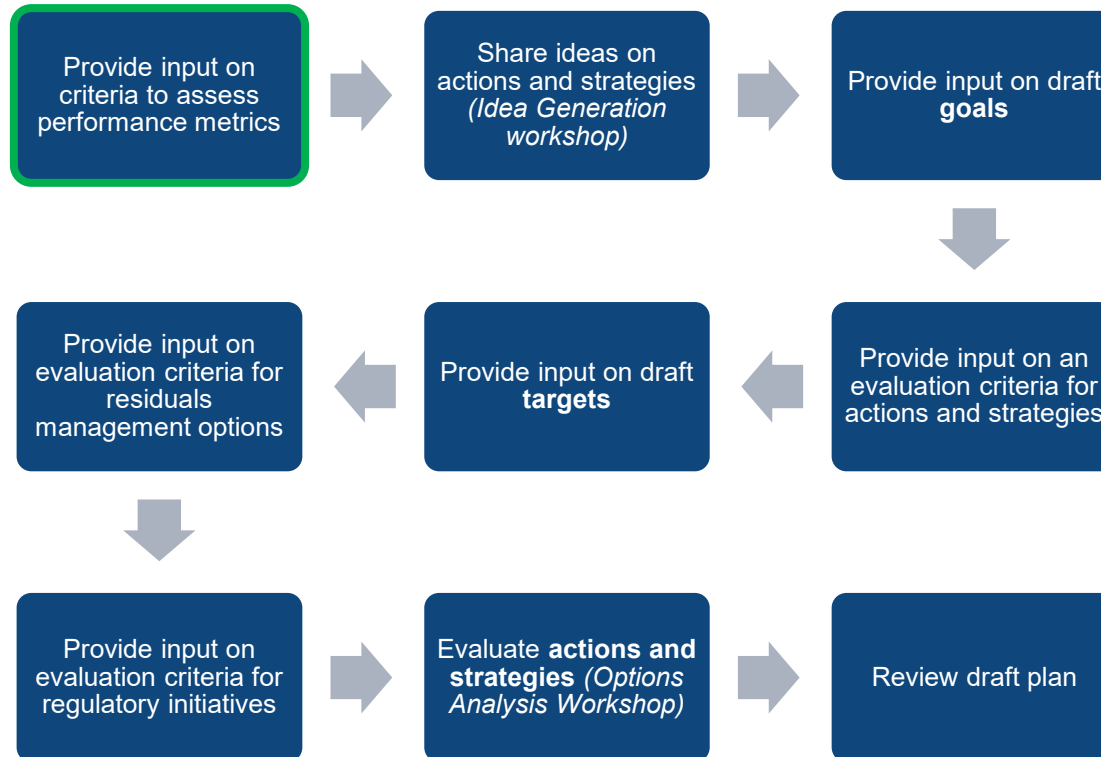


# PLAN COMPONENTS

- Vision and Guiding Principles
- Goals
- Targets
  - Performance Indicator Evaluation Framework
- Actions and Strategies
  - Regulatory Criteria
  - Residuals Management Options Framework
  - Overall Action Evaluation Criteria

# PATH TO DRAFT PLAN

## Committee Involvement



# PROCESS

	Committees	Public	Board
Idea Generation	<ul style="list-style-type: none"><li>Idea generation workshop</li><li>Input on goals, targets, and evaluation criteria</li></ul>	<ul style="list-style-type: none"><li>Idea generation engagement</li></ul>	<ul style="list-style-type: none"><li>Adopt goals and targets</li></ul>
Options Analysis	<ul style="list-style-type: none"><li>Options evaluation workshop</li><li>Input on regulatory criteria, climate roadmap, and residuals management criteria</li></ul>	<ul style="list-style-type: none"><li>Options analysis engagement</li></ul>	<ul style="list-style-type: none"><li>Approve draft plan</li></ul>
Draft Plan	<ul style="list-style-type: none"><li>Input on draft plan</li></ul>	<ul style="list-style-type: none"><li>Draft plan engagement</li></ul>	

# SUPPORTING WORK

Project	How we are using it
Performance Metrics Review	Creating framework to evaluate metrics to inform development of <b>targets</b>
Climate 2050 Waste Roadmap	Will highlight that emissions reductions will be key part of <b>evaluation criteria</b>
Residuals Management Option Study	Informs the development of <b>criteria for residuals management options</b>
Concrete/Asphalt Recycling Review	Generate potential <b>actions</b> as part of idea generation
Circular Economy 3Rs Study	Basis for developing <b>evaluation criteria</b>
Solid Waste System Assessment	Background information for draft plan



Metro Vancouver Skyline

Thank You

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TABLE 10

TABLE 9

TABLE 8

**Work Shops in Store/Schools** (2)

**Flash Food** (5)

- Pre-made bags with full items (2)
- QR code at store with items that attract customers / Alerts near food items on how they go best (3)
- Apps that can track food + warn you when food may go best (1)
- Govern, mandates that don't allow companies to use Exp / Return (1)

more messaging and education on what is best before date means

understanding multi-national laws and regulations

- shifting working practices away from best before to "use by" or "use or freeze" dates
- shifts in member date's improved policy and regulations around changing food past its "best before" date
- suppliers and retailers also have an obligation to reduce waste before it gets to the consumer
  - psychological marketing tactics by discounting food
  - changing labelling on non-perishable foods
    - leading to more spoilage rather than reduced health impacts
  - promoting food on its best before date to increase its longevity (best use, cooking)
  - using labels w/ full food to "exp" as a "best before" date
  - better claim on labels "use me first" / "reduce stigma around purchasing discounted items"

"ugly" food campaign

- product placement (discounted food often on "in season" rack)
- with influencers and different cooking techniques

**HORSE**

- take rotation of food - remove history
- logical placement (eg)
- education on how to use
- no labels
- delivery location food consumption
- intercepting food when at purchase point in store
- community education with agencies
- Subsidies
- incentives
- financial

- WANT THE MOST IN-JURY CASES
- MEANS AT CHAIRMAN'S PLEASURE
- MORE BE TRANSPARENT TO THE PUBLIC
- CITIES CAN PROVIDE EDUCATION
- CITIES CAN MAKE AWARENESS
- BEWARE HOODLUMS ON GREAT FOOD
- MAP OF FOOD ALLIANCE
- MEXICO - TRANSPARENT - EDUCATION
- STRAIGHT UP - RESPECT - SUSTAINABILITY
- GROWING UP AND BEING HELD
- LEADS AND MORE FOR BUSINESS
- ESTABLISH AROUND ZERO WASTE

- CIRCULAR FOOD MODEL
- BEHIND THE SCENES
- HOW TO INTEGRATE THE SUSTAINABLE SIDE IN FOOD SERVICE
- RELEASE THE BEST OF TERRAIN
- CREATE A CULTURE OF ZERO WASTE
- CREATE POSITIVE IN SPACES THAT SUPPORT BUSINESS
- RESOURCES OR INFRASTRUCTURE
- FOOD SERVICE SERVICE
- MANAGER USE CAN FOOD
- FOOD AWARE
- MORE FOOD PRODUCTION IN COMMUNITY

# Developing Goals and Targets for an Updated Plan

Zero Waste 2023 Conference

Terry Fulton, P.Eng.  
Senior Project Engineer, Metro Vancouver

Solid Waste Management Plan Public/Technical Advisory Committee Meeting, September 13<sup>th</sup> 2024



# GOALS AND TARGETS

## Vision & Guiding Principles

- Set the plan direction and reflect fundamental values

## Goals

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

## Targets

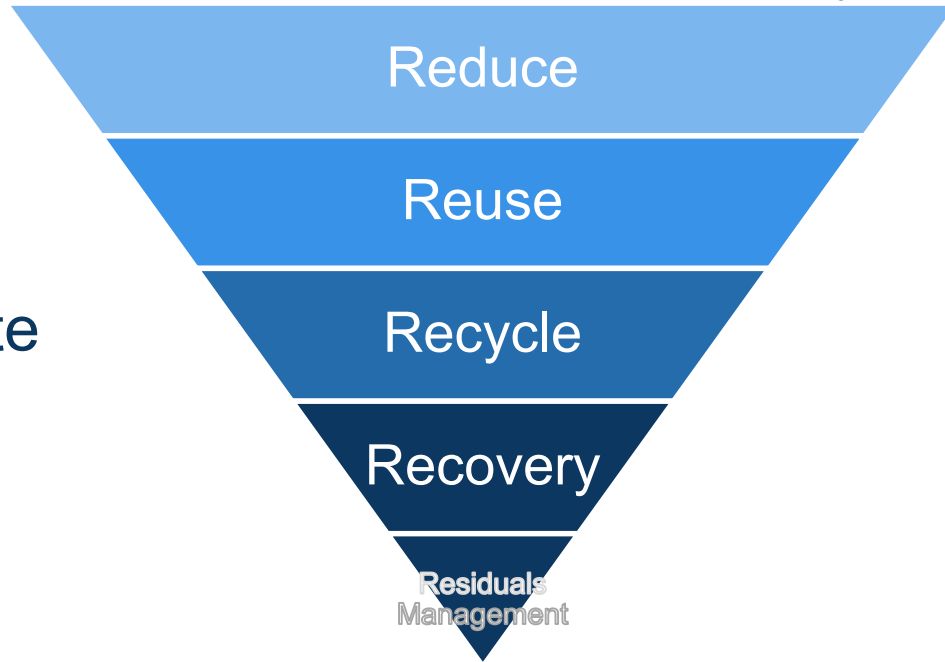
- A way of measuring progress

# IDEAS FOR POTENTIAL GOALS/HIERARCHY

1. Prevent waste
2. Keep material in circulation
3. Recycle effectively
4. Dispose of all remaining waste

- Refuse
- Rethink
- Reduce
- Reuse
- Repair
- Refurbish
- Remanufacture
- Repurpose

## BC Pollution Prevention Hierarchy





# TARGETS FOR AN UPDATED PLAN

## Process



Today

1. Performance Metrics Review
  - Provide example metrics from other jurisdictions
  - Develop framework for evaluating metrics
2. Evaluation of potential metrics
3. Discussion on draft targets with committees
4. Incorporation into updated plan

In parallel – development of goals with committees



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Thank you

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MORRISON  
HERSHFIELD

now



# Performance Metrics Study Update

September 13, 2024

# Presentation Outline

- Background
- Considerations for developing metrics
- Summary of current findings
- Discussion
- Next steps
- Questions

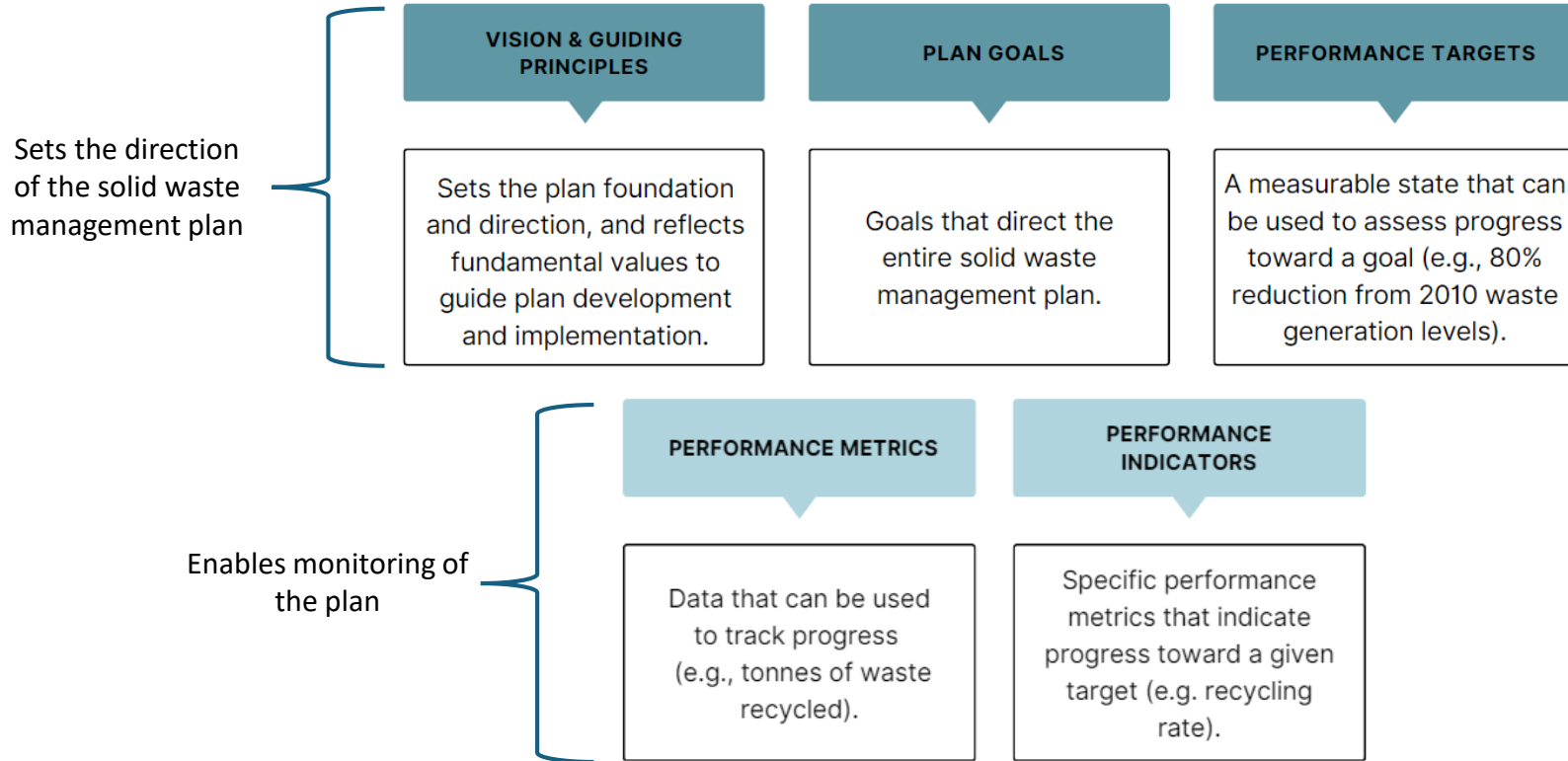
# Background

Work completed to-date:

- Jurisdictional/Organizational Scan
- Interviews
  - 7 jurisdictions
  - 5 organizations
  - 4 Public/Technical Advisory Committee members
- Data summary and comparison

City of Montreal	City of Richmond	City of Rotterdam
City of Victoria	City of Toronto	Oregon Metro
RECYC-QUEBEC	RCBC	Food Mesh
Invest Vancouver	Finnish Environment Institute	BCIT

# Developing Metrics and Indicators



# Considerations when Selecting Metrics

- Monitoring progress – relevance of metrics
- Suite of metrics (quantitative and qualitative)
- Data availability and reliability
- Applicability criteria

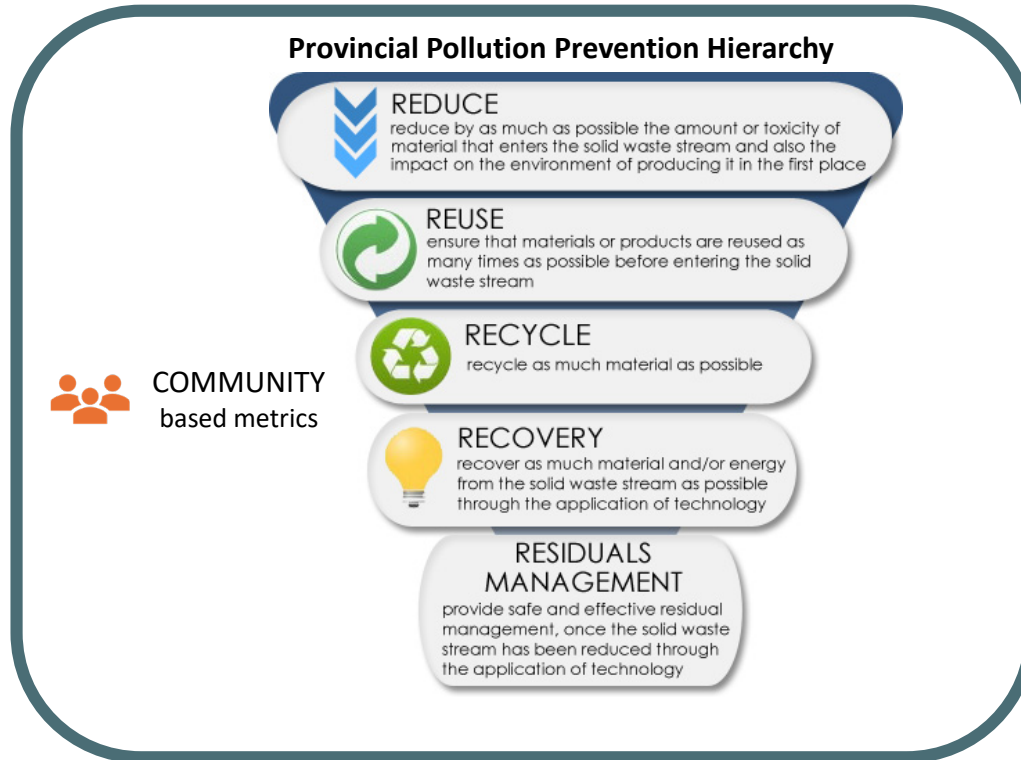


# Summary of Findings

Examples of metrics from jurisdictional interviews



# Common Themes for Grouping Metrics



# Reduction Examples

## Waste generation

- % decrease in waste generation
- Per capita waste tonnage generated

## Economic development

- # of “circular jobs”
- # of circular economy business models in region
- \$ granted for waste reduction and/or circularity projects

## Local regulations

- # of single-use items covered by regulation
- # of deconstruction bylaws
- # of materials covered by extended producer responsibility regulation

# Reuse Examples

## Economic development

- # of businesses / organizations with lending or reuse business models (e.g., tool library)
- # of businesses with reuse options such as
  - reusable containers/cups
  - reusable shipping options

## Repair events

- # of events
- # of items repaired
- # of participants

# Recycling Examples

## Residential programs

- Tonnage recycled from curbside programs
- # of multi-family recycling programs
- Participation rates
- # of residents with access to diversion programs

## Commercial/Institutional programs and depots

- # of recycling programs
- # of participating commercial/institutional entities
- # of depot users
- Travel radius of depot serving customers

## Recycling and collection rates

- Recycling rate
- Tonnes collected
- Tonnage of material recycled through extended producer responsibility programs
- % contamination in recycling streams

# Recovery & Residual Management Examples

## Disposal

- Tonnage of waste disposed
- Per-capita disposal rate

## Illegal dumping/littering

- # of incidents
- \$ to clean up sites
- Amount of litter – by category (e.g., single-use items)

## Material specific

- # (or tonnage) of single-use items disposed
- Tonnage of textiles disposed

# Community-Based Examples

## Outreach

- # of audience members engaged at events
- Virtual outreach (social media and website)
- # of local behaviour change campaigns

## Climate change

- Consumption-based emissions (CO<sub>2</sub>e)
- Greenhouse gas emission reduction from programming
- Greenhouse gas emissions from disposal options (waste-to-energy and landfill)

## Equity and innovation

- Equitable access to recycling programs (e.g., multi-family recycling access, depot accessibility, etc.)
- Diversity in industry
- \$ invested in related R&D

# Applicability Criteria

- Plan Goals
- Vision and Guiding Principles
- Alignment with Regional Priorities based on Board Strategic Plan
- Resources Required/Available
  - Availability and reliability of data

What else do you think should be considered to develop the applicability criteria?

# Next Steps

- Assessment of metrics with applicability criteria
- Present potential suite of metrics for the updated solid waste management plan







# Thank you!



MORRISON HERSHFIELD

now



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# Breakout Group Discussion

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Overlooking Second Narrows Bridge

# Metro Vancouver Updates

Paul Henderson

General Manager, Solid Waste Services

PTAC September 13, 2024 Meeting

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# ZERO WASTE COMMITTEE UPDATES – SEPTEMBER

- Biennial report feedback
- Waste-to-Energy financial summary
- Extended producer responsibility update
- Manager's report
  - Upcoming engagements:
    - Notice of Bylaw Violation
    - Waste-to-Energy Facility Operational Certificate
    - Solid waste management plan – idea generation
  - Single-use item and plastic waste prevention update
  - Textiles update
  - 2024 Smart Waste Program Report published – August 2024
  - District Energy – BCUC exemption granted

# ORGANICS MANAGEMENT / CAPACITY

- Metro Vancouver receives approximately 60,000 tonnes per year of organics at recycling and waste centres:
  - North Shore Single Family Residential
  - Yard Trimmings
  - North Shore Commercial
- Developing procurement process with goal of entering into a long-term contract for a portion of organics to be managed within a specified radius of United Boulevard

# Other Business

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# **PUBLIC PRESENTATION DAY TO PTAC AND ZERO WASTE COMMITTEE**

- November 7, 2024 from 2 – 5 pm
- Opportunity for the public to present to both committees on solid waste management plan update input
- Calendar invitation sent out
- Open to PTAC members to present
- Further information to sign up will be posted online in September

# NOVEMBER 21 PTAC PRESENTATION DAY

## Discussion on Format

- Working groups will provide their findings to PTAC members and Metro Vancouver staff
- Working group topics:
  - Plastics Management
  - Food Waste and Organics
  - Construction and Demolition

What format is preferred for presentations?



# PTAC RECRUITMENT FOR NEW MEMBERS

- Applications open until September 27, 2024
- Please promote opportunity to your networks
- Application link available on website
- Hoping to have new members join in 2025

# Information Items





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Thank you

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