

Solid Waste Management Plan Independent Consultation and Engagement Panel**December 1, 2023****1:00 pm - 3:00 pm**The meeting recording is available [here](#).

AGENDA
1. OPENING REMARKS
2. ENGAGEMENT PANEL INTRODUCTIONS
3. ENGAGEMENT PANEL ROLE AND BACKGROUND
4. SOLID WASTE MANAGEMENT PLAN UPDATE
5. PRESENTATION: TreeCycle Canada
6. PRESENTATION: Binners' Project (verbal)
7. PRESENTATION: Nickel Bros
8. PRESENTATION: HSR Zero Waste
9. PRESENTATION: Waste Management Association of BC (verbal)
10. PRESENTATION: Zero Waste BC
11. PRESENTATION: BetterTable.ca
12. CLOSING REMARKS AND NEXT STEPS

Prioritizing Reuse of Materials Before Recycling of Resources



TREECYCLE
— CANADA —

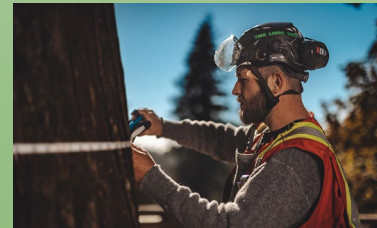


Ethos

Ben Magee-Patton, 31

Founder/President of TreeCycle Canada

- Site Monitor, Deconstruction Bylaw Monitoring Program
District of North Vancouver
- BCIT Applied Biology: Natural Resources & Environmental
Protection
- UBC Faculty of Forestry: Centre for Advanced Wood
Processing
Kiln Drying Operator's Certificate
- UNBC Forestry: Danger Tree Assessor
Mass Timber Program
- Director of Communications
North Shore Streamkeepers Non-Profit
- 2023 Youth Delegate
Sustainable Forestry Initiative/PLT Canada
- 2023 Top 20 Under 40 - Canadian Forestry
Professionals, Canadian Forest Industries
Magazine
- ISA Climbing Arborist, Rope Access Technician,
First Responder, Search & Rescue Volunteer, Red
Seal Carpenter, Wildlands Firefighter
- PLT Green Jobs Mentor
- UBC Forest & BioEconomy Mentor



Why do we waste materials if they are resources?



**We don't have better
solutions.**

“0.3% of all Metro Vancouver’s ‘recycled’ wood waste is actually reused . The rest is composted or burned, and we don’t like to talk about that.”

- National Zero Waste Council Management
Board Member

Unsustainable



e



Our current methods are

unacceptable

Let's change that, and become more sustainable.

It's time to shift our thinking about waste.

ZERO WASTE APPROACH FOR VANCOUVER



**Recovering energy from organic materials such as food and, in the case of single-use items, compostable packaging*

We can't skip steps of the hierarchy.




Metro Vancouver

Zero Waste Guiding Principles

- Highest & Best Use
- Closed Loop Systems
- Close to Source Processes
- Materials are Resources
- Source Separation + Information Collection

When we pile waste - we skip the opportunity to REUSE, and in turn, further REDUCE our consumption.



More than **90%** of all trees removed during Urban Construction/Development and Urban Forest Management are disposed as wood **waste** and green **waste** .

65 to 75% of materials can
be **RECYCLED FROM**
conventional demolition, including
WOOD, concrete, metals,
even trees and shrubs.



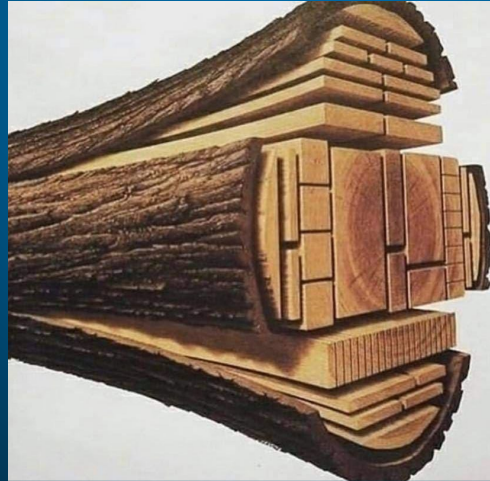


Total CO2 Value: 2.5 tons

“We’re suffering from ‘shoot yourself in the foot’ syndrome.” - Lem Elway

Carbon Stored: 300lbs

TreeCycling - Stopping Waste at the Source



Burnaby General Hospital Expansion Site Preparation



Visual Example of Urban Forest Waste Problem

(Log Recovery Pilot Project with VI Tree Service)

Burnaby General Hospital Expansion Site Preparation

Diverting waste at the source must occur to avoid downcycling.



Instead of Firewood - It should become this!





Precedent:

DNV Demolition Wood Salvage Bylaw

- Must salvage **3.5 kg (2.6 board feet)** of reclaimed lumber per square foot
- Creates a framework with guidelines
- Establishes a precedent for salvaging resources
- Easy to model + adapt for other wasted resources
- While not strictly enforced - it encourages better behaviour



Potential Tree Removal Salvage Bylaw Amendments

- “Protect all living trees over 8in DBH against removal *without salvage*”
- Require a Reuse/Salvage Assessment to be done in conjunction with Arborist Reports by Certified Arborists or Zero Waste Certified Auditors for Tree Removal Permits
- Require ‘*all reasonable efforts*’ to recover wood-fibre larger than **8in/20cm Diameter** in lengths **greater than 8 feet**; and wood-fibre larger than **30in/76.2cm Diameter** in lengths **greater than 4 feet**
- Provide variance options for permit process in regards to unsuitable wood-fibre, inaccessibility, overall feasibility, and/or other parameters
- Create public awareness campaigns to educate community on *Responsible* Tree Removal Salvage, other forms of Wood Waste Recovery like Building Deconstruction, and options for Circular Re-Use before Recycling



Thank you for your time.

Please reach out to us with further questions or inquiries, and feel free to follow our social media pages!

(I can provide contact details separately)



Presented to:

**Solid Waste
Management Plan
Technical Advisory
Committee**

Presented by:

Cassidy v. Ros

40% of global production emissions are created by the manufacturing of new construction materials.

More than 50% of the lifetime CO₂ emissions of a typical housing block are emitted prior to or upon completion





Embodied carbon and operational carbon across the key life stages of a building. CLF



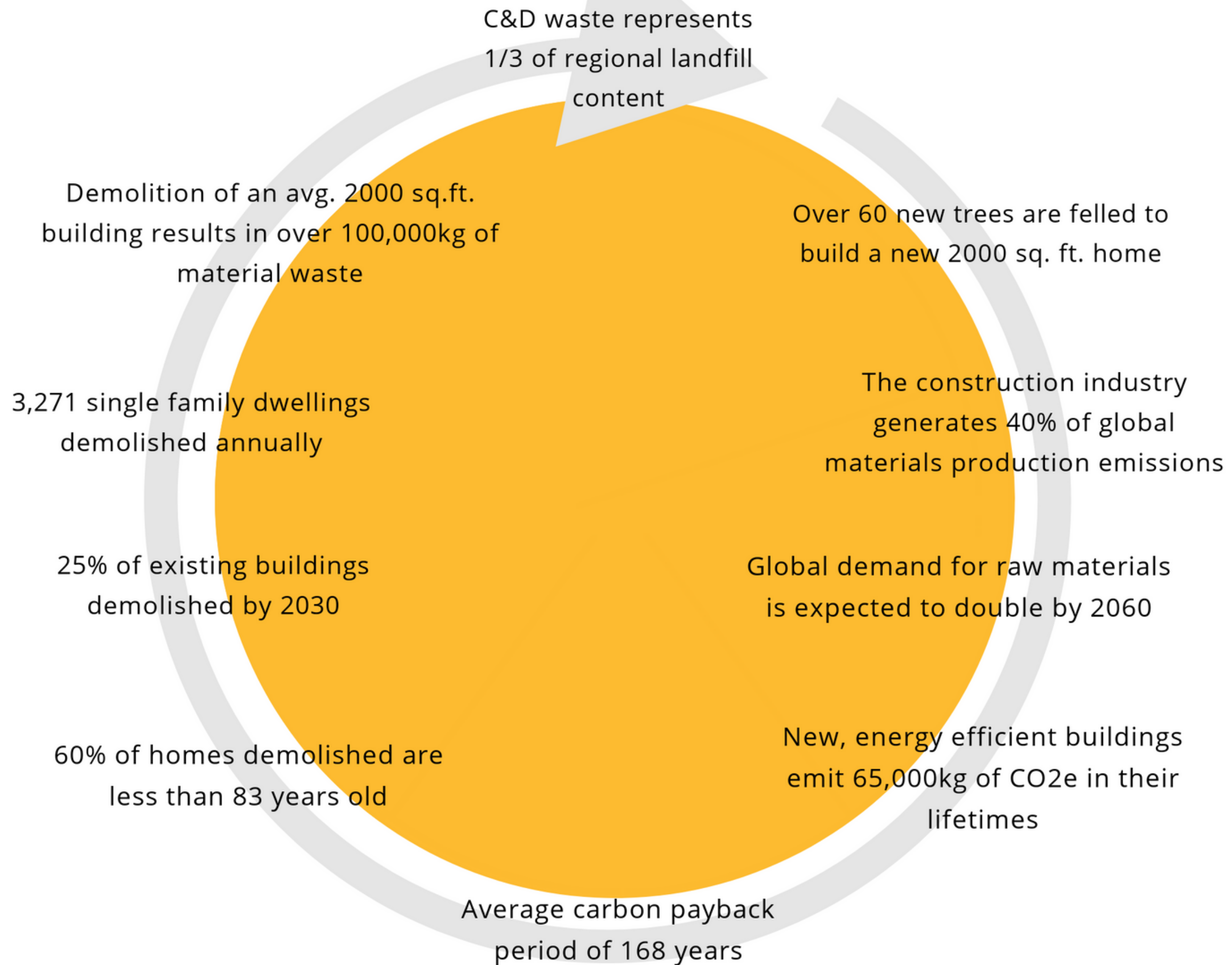
61,000 kgs of waste
81 trees
108,000 kgs embodied carbon
148 years left to complete carbon cycle
\$98 / sq.ft. to relocate



79,000 kgs of waste
105 trees
140,000 kgs embodied carbon
155 years to complete carbon cycle
\$87 / sq.ft. to relocate

The overall 70% diversion target implies the following approximate diversion rates by sector:

- Demolition, land clearing and construction 80%



*based on Metro Vancouver statistics

STRATEGY 2.4 Target demolition, land clearing and construction (DLC) sector for increased reuse and recycling. Although the DLC sector has very high recycling rates due to high levels of concrete and asphalt recycling, there are significant opportunities to improve with respect to a variety of other materials such as wood and roofing.

2.4.1 In collaboration with municipalities and industry groups, develop a process to require DLC recycling at construction/ demolition sites.

2011 2.4.2 Implement waste diversion strategies directed toward diverting DLC waste from disposal while supporting opportunities for beneficial use.

2.4.3 Review existing DLC recycling and processing capacity, project future needs and develop a strategy to address any identified gaps.

2010 2.1 MUNICIPALITIES WILL:

2.4.4 Work with Metro Vancouver to develop a process to require DLC recycling at construction/ demolition sites.

(a) Review municipal DLC permitting processes with a view to requiring waste management plans as a condition of such permits.

(b) Review the desirability and feasibility of deposit systems or other financial incentives to increase enforcement of DLC waste management plans.

Why is our collaborative priority recycling, the lowest tier of the zero waste pyramid?

STRATEGY 2.7 Target wood for reuse, recycle, and energy recovery Encouraging the reuse, recycling and energy recovery from wood should follow the waste management hierarchy to ensure highest and best use of wood.

METRO VANCOUVER WILL:

2.7.1 Encourage reuse of wood.

- (a) Examine and, where feasible, implement incentives for reuse and remove barriers to re-use of wood waste.
- (b) (b) Develop and implement information and education programs on the reuse and effective recycling of wood and other DLC waste.

(c) 2.7.2 Collect wood for reuse, recycling, and energy recovery at regional transfer stations and EcoCentres.

(d) 2.7.3 Encourage highest and best use for wood following the waste management hierarchy in the following priority:

(e) (a) Reuse wood for comparable structural and non-structural applications.

(f) (b) Recycle wood fibre into other fibre based products.

(g) (c) Compost wood with other organic materials.

(h) (d) Digest wood to produce biofuels.

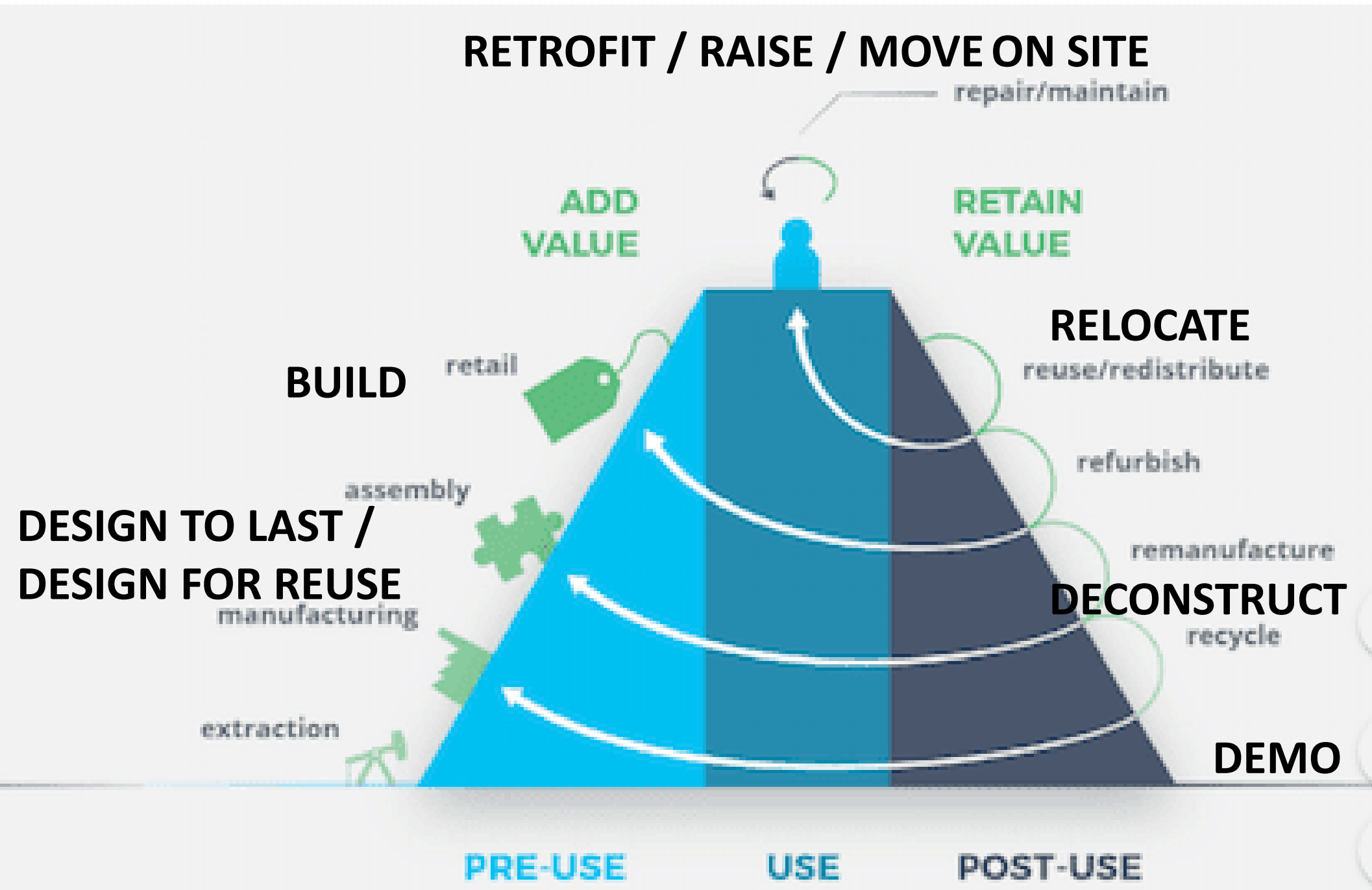
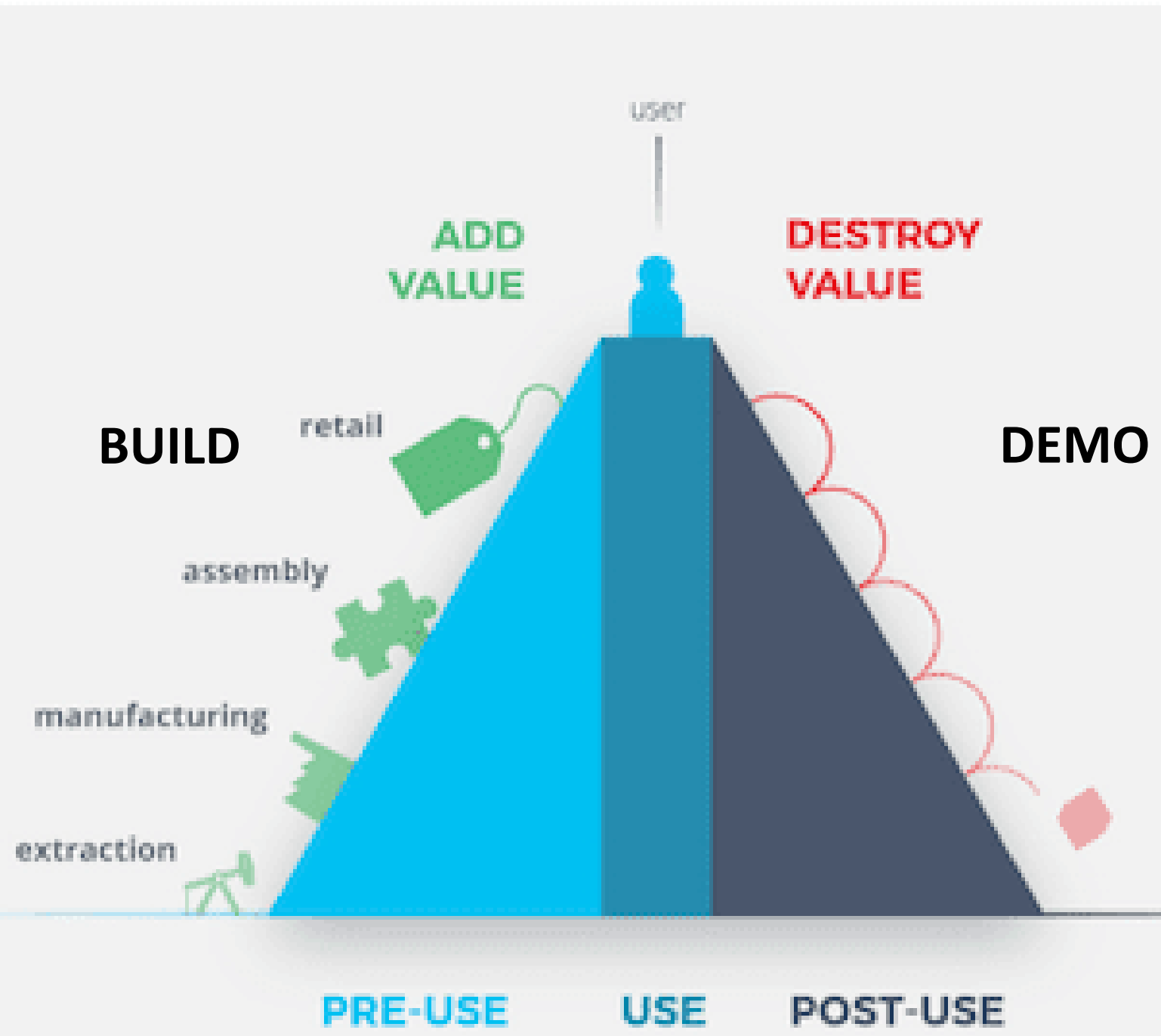
(i) (e) Process wood as a fuel for energy production.

(j) 2.7.4 Pass bylaws as required to support highest and best use of wood as outlined in 2.7.3.

(k) 2.7.5 Ban all wood from disposal.

(l) 2015 ACTIONS REQUESTED OF OTHER GOVERNMENTS AND AGENCIES:

(m) 2.7.6 Provincial Government to expand the inclusion of the reuse of wood in building codes.



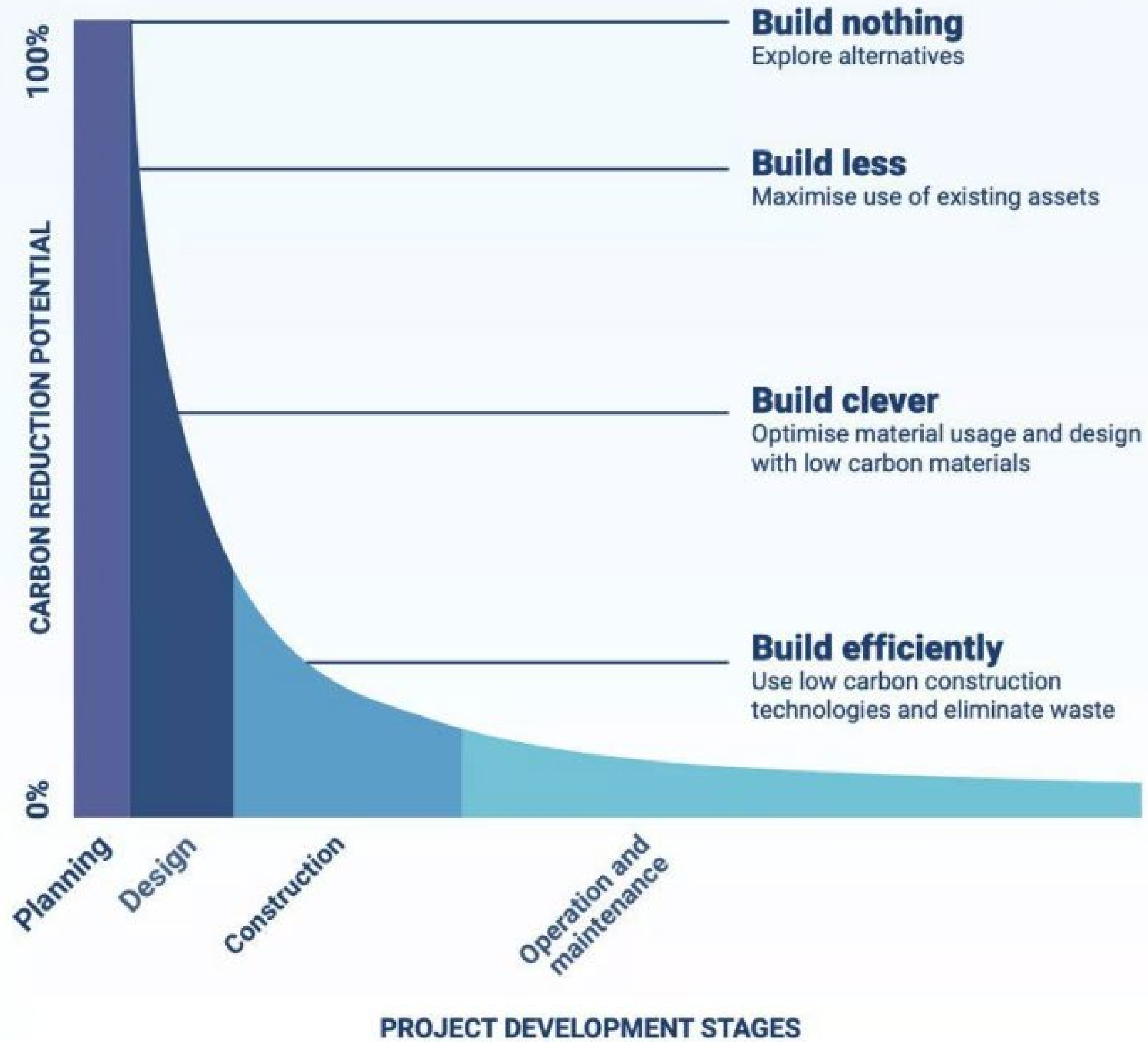
STRATEGY 4.2

Ensure a disposal site is available for DLC waste. Notwithstanding efforts to increase recycling, local public and private disposal sites for DLC waste are expected to reach their capacity in the near future. Collaboration with local and out-of-region stakeholders is necessary to anticipate DLC waste flows and identify future disposal sites.

METRO VANCOUVER WILL:

- 4.2.1 Assess long-term disposal of demolition, landclearing, and construction (DLC) waste remaining after recycling in collaboration with the private sector, neighbouring regional districts and First Nations communities.
- 4.2.2 Identify disposal sites for DLC waste remaining after recycling that will be available when existing disposal facilities reach their capacity.

**Shift priorities from,
“What do we do with the waste we create?” to
“How do we stop creating waste?”**



82,000 kgs of waste
109 trees
144,720 kgs embodied carbon
157 years to complete carbon cycle
\$100 / sq.ft. to relocate



60,000 kgs of waste
80 trees
104,000 kgs embodied carbon
136 years to complete carbon cycle
\$188 / sq.ft. to relocate



1. Require 'Responsible Removal Assessments'

- Pre-demo permit forms should require applicants to assess the home(s) for relocation and deconstruction.

2. Create & Promote 'Early Green Removal Permits'

- Allow all homes to be relocated or fully deconstructed anytime before the building permit is issued.
- Place Early Green Removal Applications at the top of pile.

3. Strengthen the 'Refundable Demolition Deposit'

- Require a \$15,000 - \$20,000 demolition deposit for *all* single family homes.
- Deposit is returned if home was relocated or 3.5KG per sq ft of finished floor space is deconstructed and salvaged.

4. Update Procurement Criteria for City Owned Buildings

- Whenever a building (residential, commercial, institutional) owned by the City is slated for demolition the building removal tender criteria should strongly favour relocation and then deconstruction.

5. Create Density Bonusing Incentives

- Provide developers additional FSR density for every home they commit to relocate or fully deconstruct.
- Current New Westminster model for heritage homes.



Thank you!!

Words Matter

Jamie Kaminski



Board Member of Zero Waste International Alliance (ZWIA)

- Jamie works with fellow policy advisors to create strong, practical and enforceable policies and programs that drive change towards Zero Waste.

Chair of the Zero Waste Definition Working Group

- Jamie's area of expertise lies within internationally accepted Zero Waste policies and programs including Zero Waste training, education, and Certification development.

Chair of the Zero Waste Hierarchy Working Group

Director of Zero Waste Canada

- As the lead policy advisor for Zero Waste Canada, Jamie represents the primary reference point for Zero Waste policies nationwide.

President of HSR Zero Waste

- Jamie's experience is in solid waste management from both a ground level as well as from a policymaking perspective. With 30+ years of active engagement in the industry, Jamie has developed extensive experience in understanding how regional policies and bylaws affect the existing waste management system.



ZERO WASTE IS ABOUT THE JOURNEY...MORE THAN THE DESTINATION

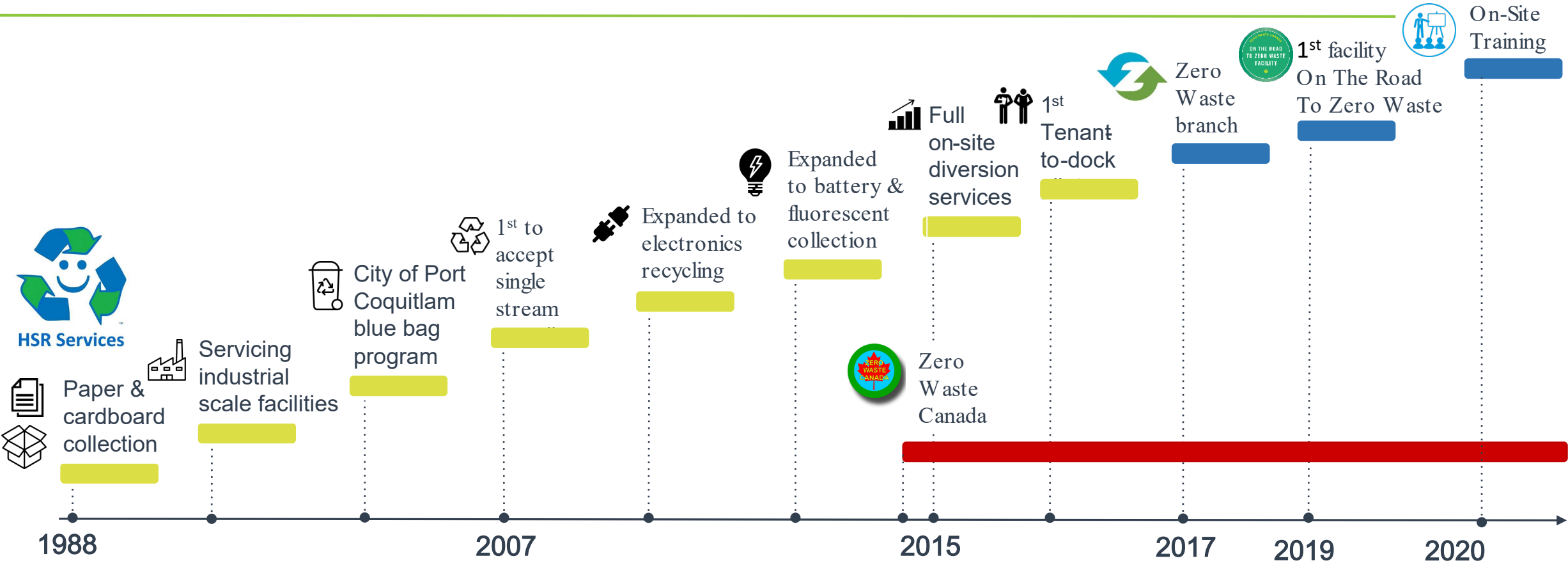
WHO



WHO



JAMIE'S STORY



HSR Services - Resource Management

HSR Zero Waste - Consulting





THE ZERO WASTE INTERNATIONAL ALLIANCE

WHO



COMMUNITY/BUSINESS/GOVERNMENT

WHO



THE ZERO WASTE INTERNATIONAL ALLIANCE

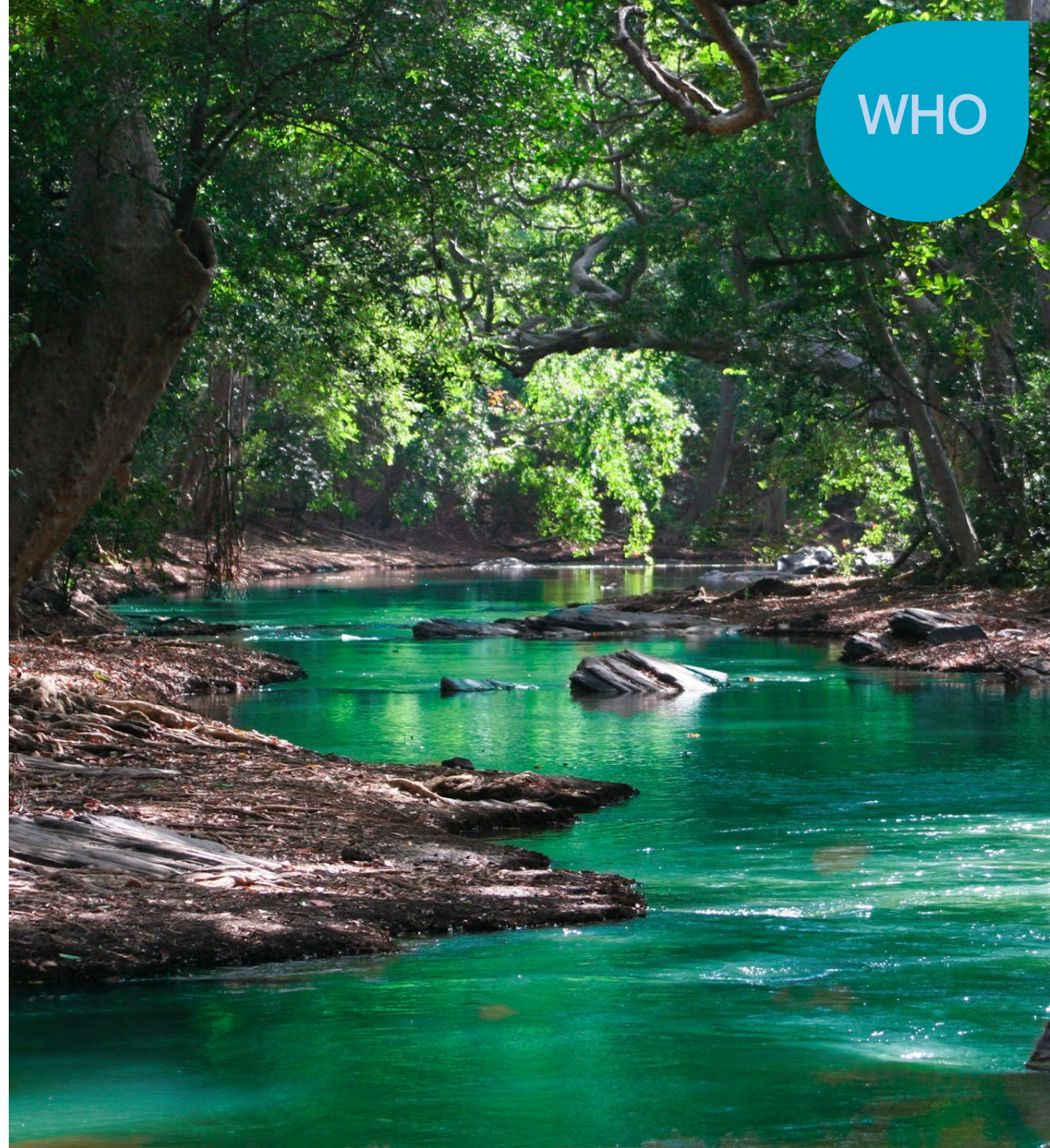
WHO



ZERO WASTE VISION & MISSION

Vision: A just world, of vibrant, resilient, Zero Waste communities, in harmony with nature.

Mission: To work together as a global community to drive systemic change towards Zero Waste using environmental and social justice principles.



THE VALUE OF ZERO WASTE

The 17 United Nations Sustainable Development Goals



INTERNATIONAL ZERO WASTE POLICIES

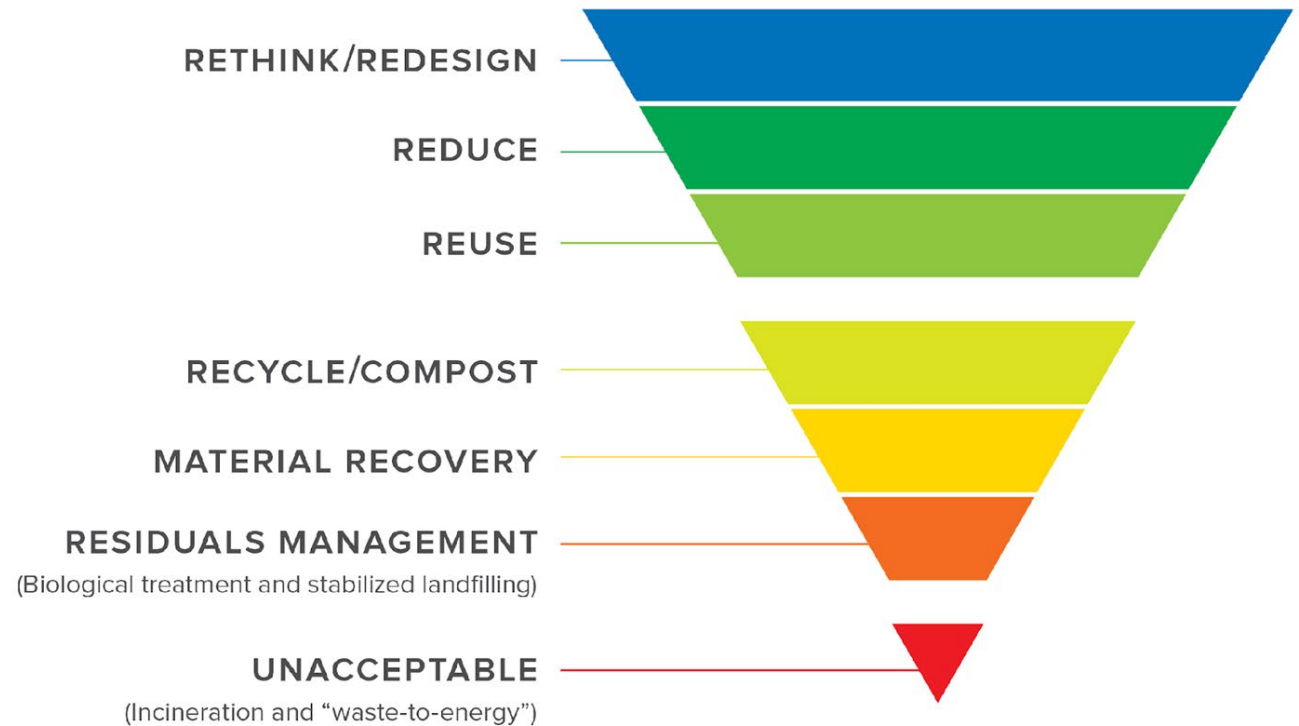
THE ZERO WASTE DEFINITION

“The conservation of all resources by means of responsible production, consumption, reuse, and recovery of products, packaging, and materials without burning, and with no discharges to land, water, or air that threaten the environment or human health.”



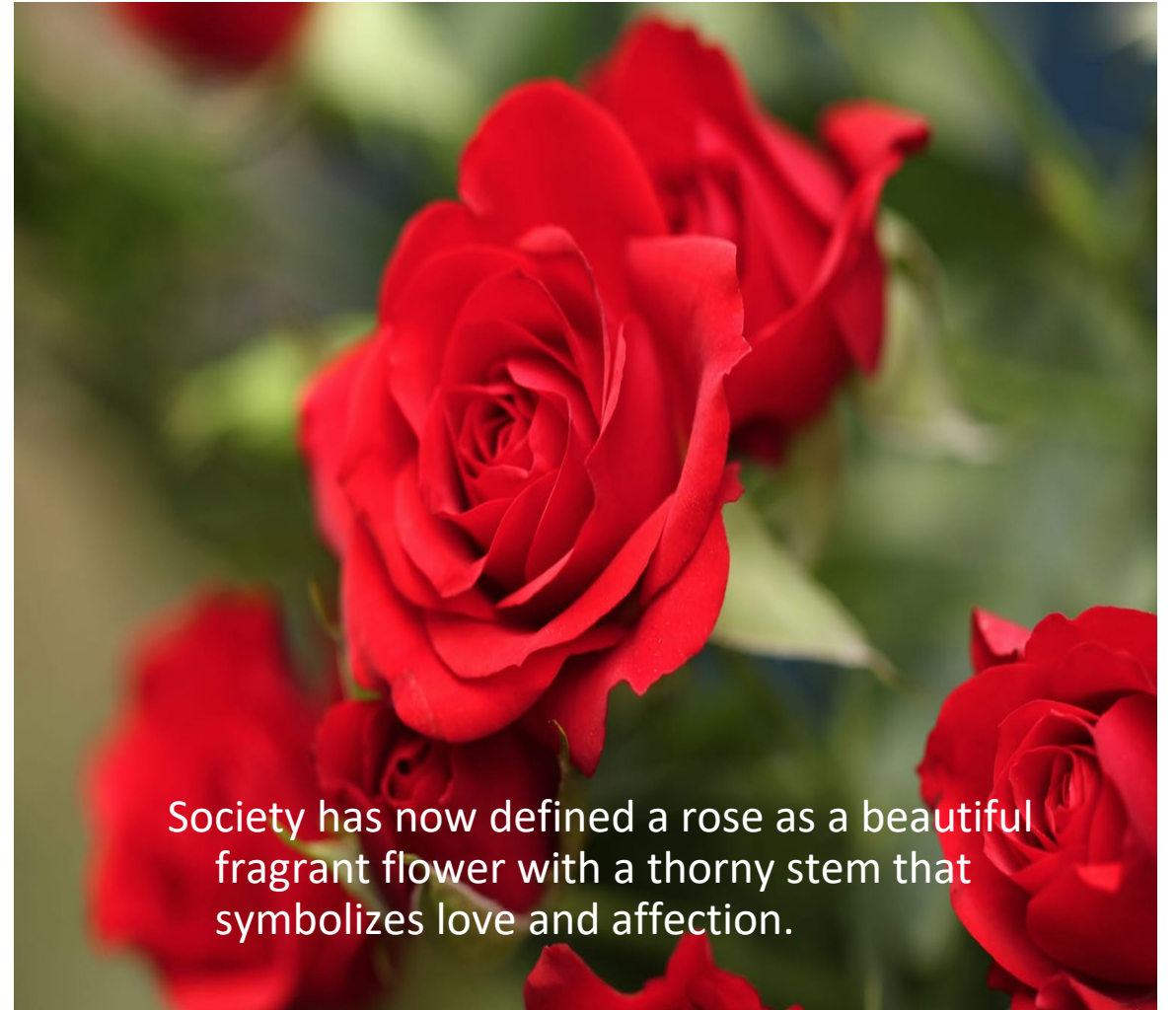
THE ZERO WASTE HIERARCHY

For detailed version visit www.zwia.org/zwh



WHY WORDS MATTER

**“A rose by any other name would
smell just as sweet” William
Shakespeare**



Society has now defined a rose as a beautiful
fragrant flower with a thorny stem that
symbolizes love and affection.

WHY WORDS MATTER



The devil is in the details

By calling something it is not we risk misrepresenting something. Everybody knows what the common rose should look and smell like.

If we were to call it something else people would not know that we were actually talking about a rose or question our understanding of what a rose is..

WHY WORDS MATTER

Recycling



Recycling of waste is defined in the Waste Framework Directive as any recovery operation by which waste materials are reprocessed into products, materials or substances whether for the original or other purposes.

It includes the reprocessing of organic material but does not include energy recovery and the reprocessing into materials that are to be used as fuels or for backfilling operations.

Recycling can be split into the subcategories 'Material recycling' and the organic recycling 'Recycling - composting and digestion'. The latter is only possible for separately collected organic waste.

https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Glossary:Recycling_of_waste

WHY WORDS MATTER

**Metro Vancouver
Stated Recycling Rate**

61%

**Metro Vancouver
Recycling Rate as per EU**

?%

This includes:

- Waste processed into fuel for cement kilns
- Waste processed into fuel for pulp mills
- ????

WHY WORDS MATTER

By classifying waste that is converted to fuel products as recycled we:

- Destroy all incentives for industry to continue to innovate real recycling solutions that would keep materials in circulation perpetually. “Why bother if we get the same credit for burning it.”
- Create competition between companies who would use that material for manufacturing vs. companies who simply convert it into fuel. Less cost to process for fuel.
- Divert resources and incentives away from reuse activities. Most items that have limited recycling markets, often have better reuse markets. Less cost to process to fuel.

By using the term Zero Waste without following the international peer reviewed definition or hierarchy we:

- Miss the opportunity to be part of an international movement that is growing in local communities all over the world.
- Draw attention and resources away from other Zero Waste organizations that are part of an international community, most of whom are non-profit grassroots organizations.
- Misrepresent the intentions of the organization and risk confusing their audience with policies and activities that do not align with international understood policies, principles and activities.
- Put our organization at risk of greenwashing and create an unnecessary liability for our community

MY REQUESTS

Proper Classification of Waste Disposal

Classify waste that is being converted into a fuel product as waste material. Consider this material as disposal and not diverted.

Adopt the following definition of recycling

Any recovery operation by which waste materials are reprocessed into products, materials or substances whether for the original or other purposes.

It includes the reprocessing of organic material but does not include energy recovery and the reprocessing into materials that are to be used as fuels or for backfilling operations.

Recycling can be split into the subcategories 'Material recycling' and the organic recycling 'Recycling - composting and digestion'. The latter is only possible for separately collected organic waste.

Commit to the definition of Zero Waste

“The conservation of all resources by means of responsible production, consumption, reuse, and recovery of products, packaging, and materials without burning, and with no discharges to land, water, or air that threaten the environment or human health.”

Use the Zero Waste Hierarchy as the foundation of their Solid waste management plan



The United Nations General Assembly on 14 December 2022 formally recognized the importance of zero-waste initiatives and proclaimed 30 March as the International Day of Zero Waste, to be observed annually beginning in 2023.



Thank you

Jamie Kaminski

jamie@zerowaste.com

[linkedin.com/in/jamie](https://www.linkedin.com/in/jamie-kaminski) -kaminski

Metro Vancouver Solid Waste Management Plan
Independent Consultation and Engagement Panel

Dec 1, 2023

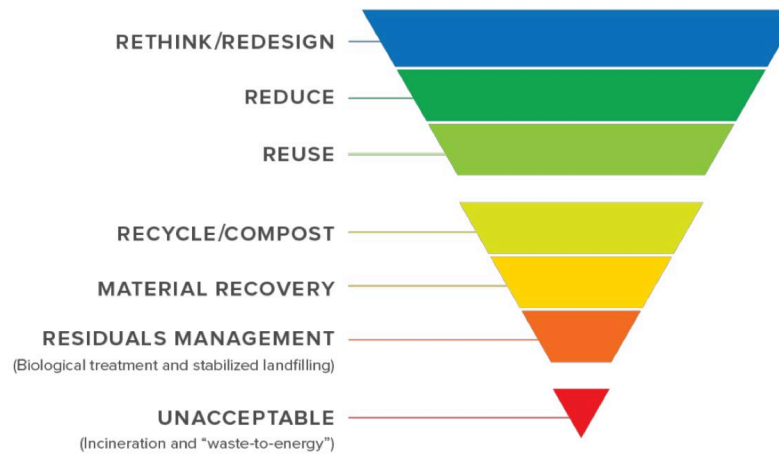


Zero Waste

The conservation of all resources by means of responsible production, consumption, reuse, and recovery of products, packaging, and materials without burning and with no discharges to land, water, or air that threaten the environment or human health.

2018, Zero Waste International Alliance

THE ZERO WASTE HIERARCHY



Zero Waste Hierarchy 8.0

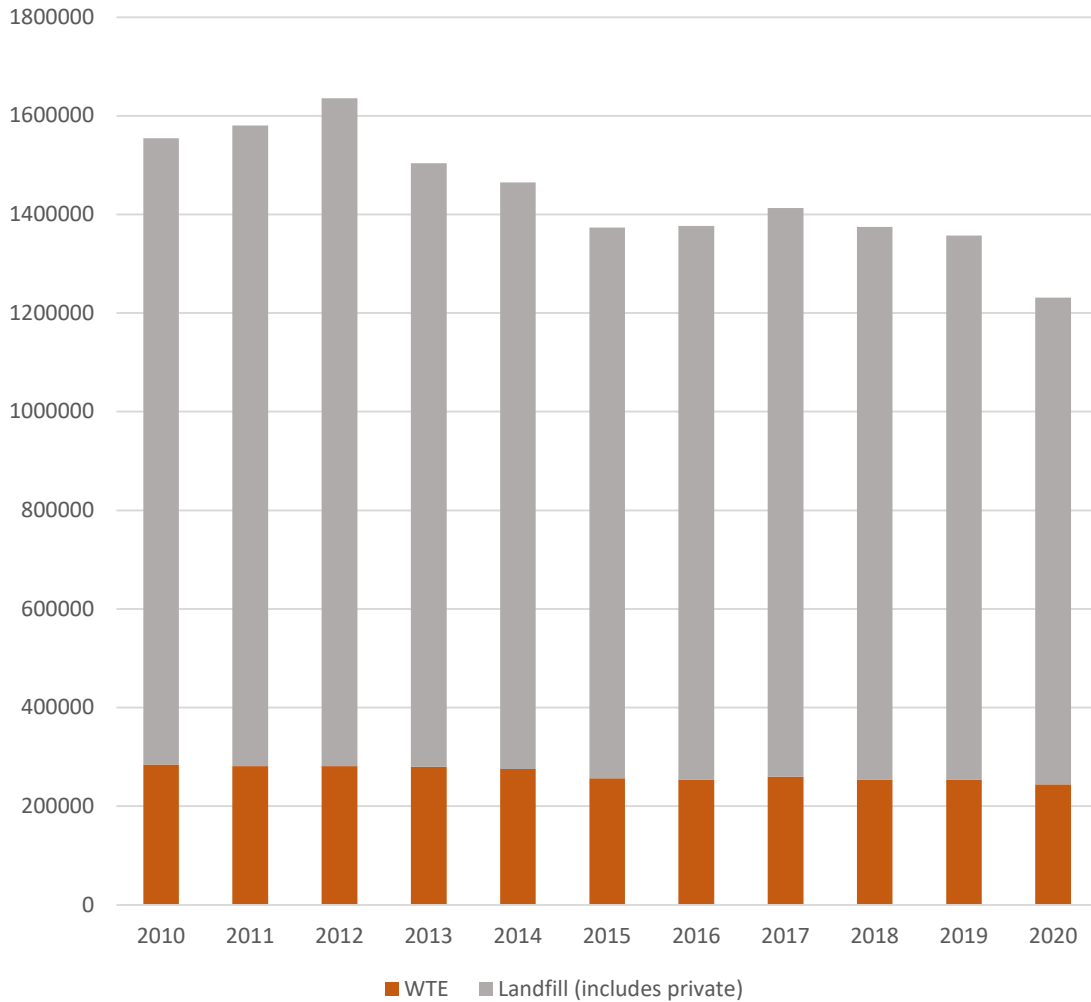
RETHINK/REDESIGN	
Systemic change to move towards a closed loop** model; redesign of systems to avoid needless and/or wasteful consumption. Actions that address the root causes of the narrowest level use of resources.	
1	Consider if a purchase is necessary and reject unnecessary, unneeded items.
2	Design and purchase products from reused, recycled or sustainably-harvested renewable, non-toxic materials to be durable, repairable, reusable, fully recyclable or compostable, and easily disassembled.
3	Shift funds and financial incentives to support a Circular Economy** over the harvesting and use of virgin natural resources.
4	Incentivize reuse of materials, and disincentivize for wasting.
5	Facilitate change in how and users' needs are met from "ownership" of goods to "shared" goods and provision of services.
6	Support and expand systems where product manufacturing considers the full life-cycle of their product in a way that follows the Zero Waste Hierarchy and moves towards more sustainable products and processes. Producers take back their products and packaging in a system that follows the Zero Waste Hierarchy.
7	Identify and phase out materials that cause problems for Closed Loop Systems*
8	Facilitate and implement policies and systems to encourage and support local Economies*
9	Re-consider purchasing needs and look for alternatives to product ownership.
10	Provide information to allow for informed decision-making.
11	Eliminate or avoid systems that drive needless consumption.
REDUCE	
Measures taken to reduce the quantity and toxicity of resources, products, packaging and materials as well as the adverse impacts on the environment and human health. Higher reductions in total level of environmental impacts than recycling and reuse (materials used to be reduced).	
12	Plan consumption and purchase of perishables to eliminate or avoid discards due to spoilage and non-consumption.
13	Implement Sustainable Purchasing** that supports social and environmental objectives as well as local markets.
14	Minimize quantity and toxicity of materials used.
15	Minimize ecological footprint required for product, product use, and service provision.
16	Choose products that maximize the usable lifespan and opportunities for continuous reuse.
17	Choose products that are made from materials that are easily and continuously recycled.
18	Prioritize the use of edible food for people.
19	Prioritize the use of edible food for animals.
REUSE	
Actions by which products or components are used again for the same or similar purpose for which they were conceived. Actions that support the continued use of products in ways that retain the value, usefulness and function.	
20	Maximize reuse of materials and products.
21	Maintain, repair or refurbish to retain value**, usefulness and function.
22	Remanufacture with disassembled parts; disassemble and conserve "spare" parts for repairing and maintaining products still in use.
Page 3 of 6	
RECYCLE/COMPOST	
Actions by which discards are mechanically reprocessed into products or materials or biologically processed to return to the soil.	
23	Repurpose products for alternative uses.
24	Support and expand systems to keep materials in their original product loop and to protect the full usefulness of the materials.
25	Maintain diversion systems that allow for the highest and best use of materials, including organics.
26	Recycle and use materials for as high a purpose as possible.
27	Develop resilient local markets and uses for collected materials wherever possible.
28	Provide incentives to create clean flows of compost and recycling feedback.
29	Support and expand composting as close to the generator as possible (composting home, on site or local composting).
30	Consider industrial composting whenever home/decentralized composting is not possible, or if local conditions require/allow anaerobic digestion.
MATERIAL RECOVERY	
Any operation to salvage additional materials after the actions above. Does not include energy recovery and the reprocessing into materials that are to be used as fuels or other means to generate energy, which are unacceptable practices.	
31	Maximize materials recovery from mixed discards after extensive source separation.
32	Consider chemical processing in the form of repolymerization (i.e. Plastic-to-Plastic or P3F) only for materials which are not suitable for mechanical recycling.
33	Backfilling**.
RESIDUALS MANAGEMENT	
Handling of discards that were wasted in a way that does not threaten the environment or human health. Analyse what was wasted and why.	
34	Conserve materials that remain and use the information to refine the systems to rethink, reduce, reuse, and recycle in order to prevent further discards.
35	Ensure minimization of impacts by means of biological stabilization of fermentable materials. Recover energy using only systems that operate at Biological Temperature and Pressure**.
36	Encourage the preservation of resources and discourage their dispersal and Destructive Dispose**.
37	Plan systems and infrastructure to be adjusted as discards are reduced and its composition changes.
38	Minimize Gas Production and Release** and maximize gas collection.
39	Use existing landfill capacity and maximize its lifespan. Ensure it is Responsibly Managed. **.
40	Contain and control, for responsible management, discards that threaten the environment or human health.
UNACCEPTABLE	
Systems and policies which encourage avoidance of discards, the environment and human health.	
41	Don't allow policies and systems that encourage the Destructive Dispose and/or the destruction of discards.
42	Don't allow energy and Destructive Dispose systems that are dependent upon the continued production of discards.
43	Don't allow the Incineration** of discards.
44	Don't allow discards to be used in products or materials that risk or cause adverse environmental or human health impacts.
45	Don't allow chemical processing of discards into fuel** (i.e., Chemical Processing of Plastics to Fuel).
46	Don't allow the use of discards in cement kilns.

Outline

- Review of data **to learn** for next plan
 - Waste amount
 - Waste disposal methods
 - Costs
 - GHGs
 - Energy
 - Risk
- Recommendations



Metro Vancouver Waste 2010-2020



What is working

- Generation per capita decreased by 112 kg/person since 2010, disposal decreased by 216 kg/person
- That is almost 600,000 tonnes per year
- More than twice the total amount going to the incinerator
- ZW implementation cost effective and accomplished with a fraction of the budget
- Total generation increased by 261,712 t or 8%

Costs

Costs	Incinerator	Landfills	Zero Waste -Not wasting
Operating Costs /t (2020)	\$96.64	\$47.97	\$6.84
Operating costs total (2020)	\$24M	\$33M	\$4M
Capital (2010-2027)	\$244M	\$58M	0
Proportion of Waste	1/5	4/5	Negative
Tonnes	244,362	987,163	597,896 avoided
Savings as waste not created			\$54 M if incinerated \$25 M if landfilled



Note: operating costs for landfill include capital costs, capital costs for LF are for maintaining closed Coquitlam site



Costs for WTE do not include the \$2.5 M spent trying to pursue new WTE

Capital costs driven by WTE

+ \$92.9M since July

SOLID WASTE

2024 - 2028 CAPITAL PLAN EXPENDITURES

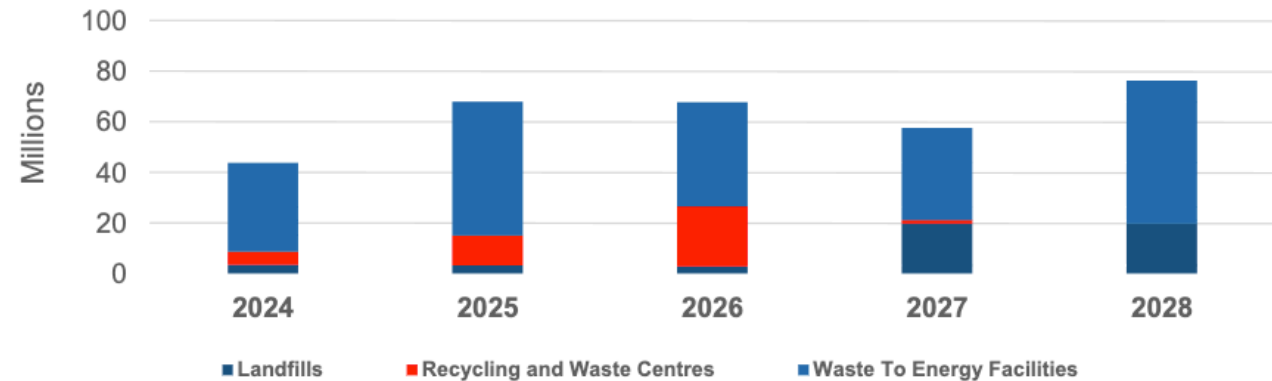
Overview:

- 2024 - 2028 Capital Plan: \$314.7M
- 2024 cash flow: \$44.1M

Drivers:

- Waste-to-Energy Facility
 - Capital replacement
 - District Energy
 - Biosolids Processing
- North Surrey and Langley Recycling Depots

2024 – 2028 Solid Waste Services Capital Plan



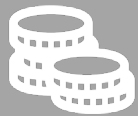
Costs over time



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



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



Increasing central costs in budget means less in solid waste budget for reduction work

Energy added



Energy needs to be added in the form of electricity and gas to make the incinerator work well. That amount of energy has increased by 54%.



It took over 144,000 GJ in 2020 -enough to power 2600 houses

Energy Out

Incinerator sold 544,558 GJ of energy (2020)

Vancouver Landfill sold 350,280 GJ (lower than in past)

Vancouver Landfill flared (did not sell) 920,123 GJ

This is more than the unsold steam energy from the incinerator (624,000 GJ in 2011 when Norampac last ran)

GHG Emissions by disposal

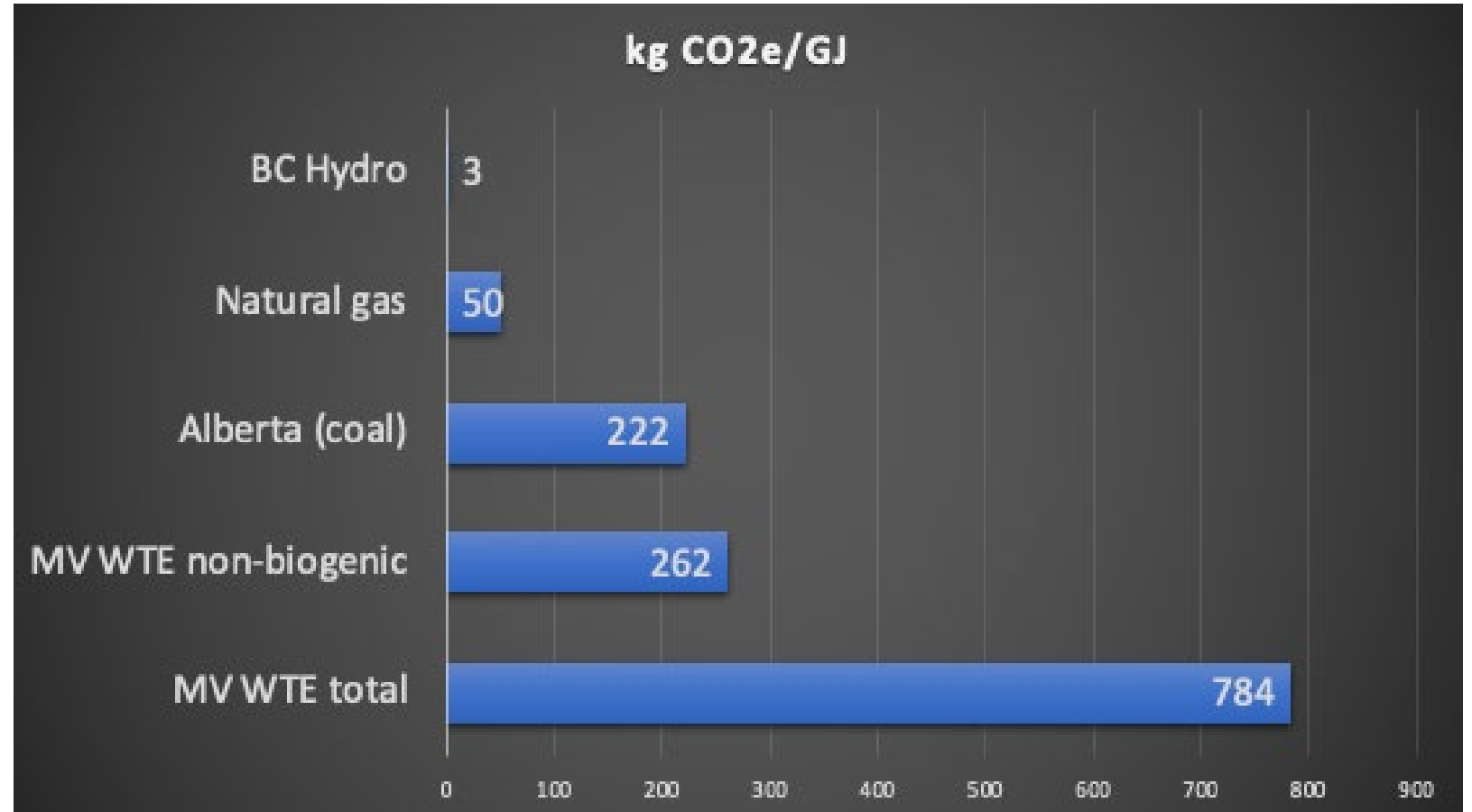
- Declining from LF as decreasing organics and better landfill gas capture -75% less than 2010
- Increasing for incinerator as requiring more input energy to run - 101% more than 2010 and less efficient

GHGs - 2020	Incinerator	Vancouver Landfill	External Landfill	Waste prevented
Non-biogenic GHG (tCO ₂ e/t waste)	0.58	0.26	0.08	negative
Including biogenic GHG (tCO ₂ e/t waste)	1.28	0.32	0.14	negative
Percentage of GHGs (total)	64%	36%	<1%	negative
Percentage of waste	20%	54%	3%	-33%

- **Conclusion:** To reduce GHGs, reduce the waste as much as possible but if it must be disposed, use existing landfill capacity.

GHG Emissions by energy

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

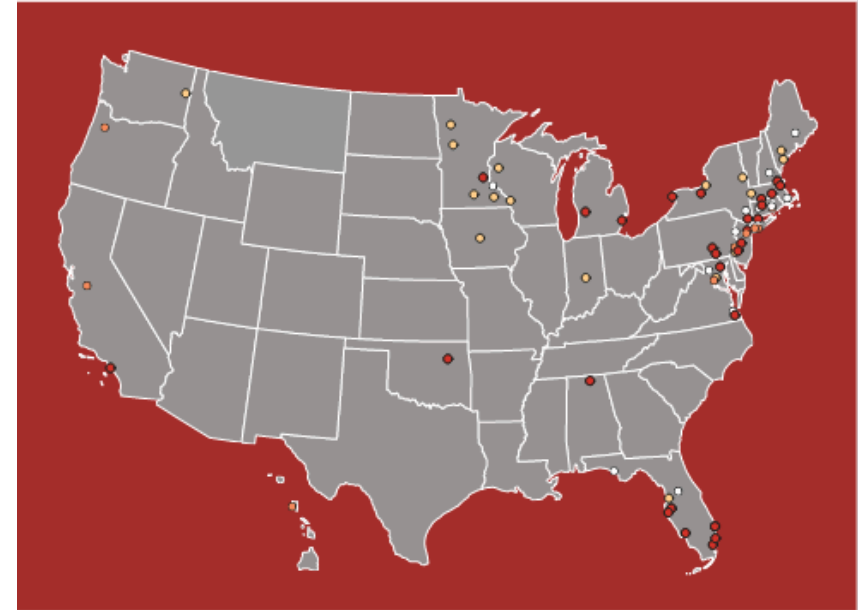


Time to retire

- 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)
- OR continuous monitoring –dioxin/furans, SO₂,NO_x, toxic metals
- Budget report (July 13, 2023)–predicting WTE operating costs to go up by 35% in 5 yrs + capital

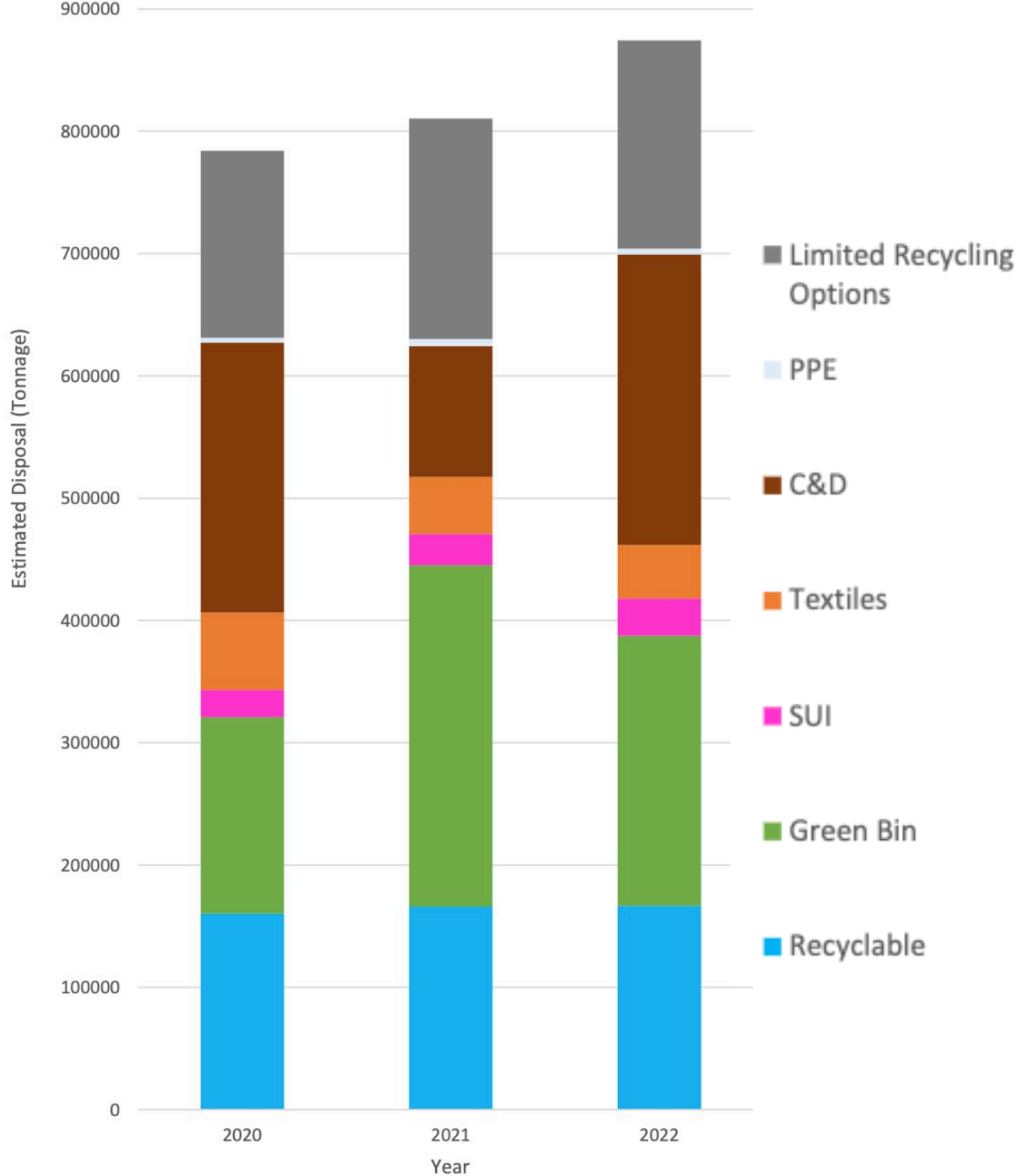
THE
NEW
SCHOOL

TISHMAN ENVIRONMENT
AND DESIGN CENTER



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

May 2019



What is in the waste and does it have to be there?

Material	Energy (GJ/t)
Plastics	36.8
Paper	16.5
Organics	8.9
Metals	0.7
Glass	0.2

How is that
waste still
there?

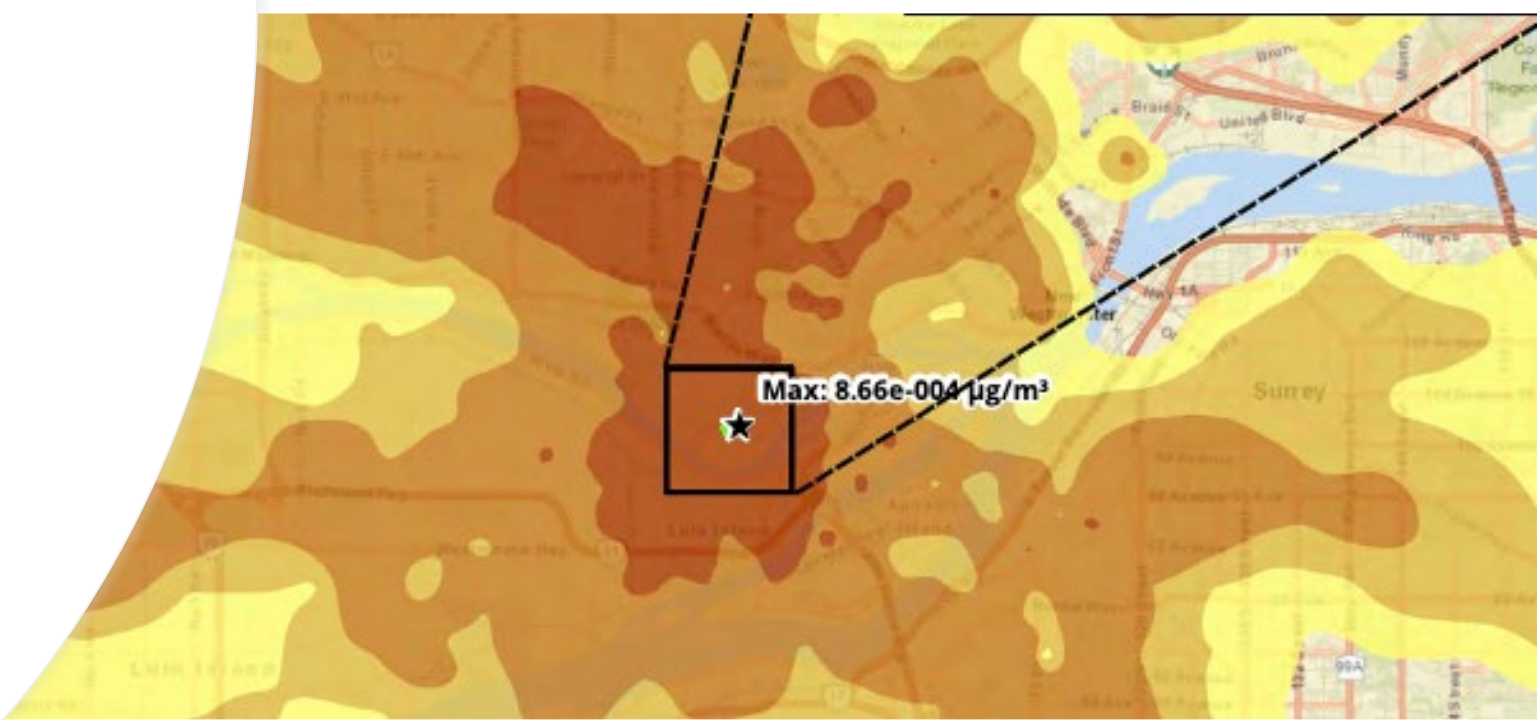
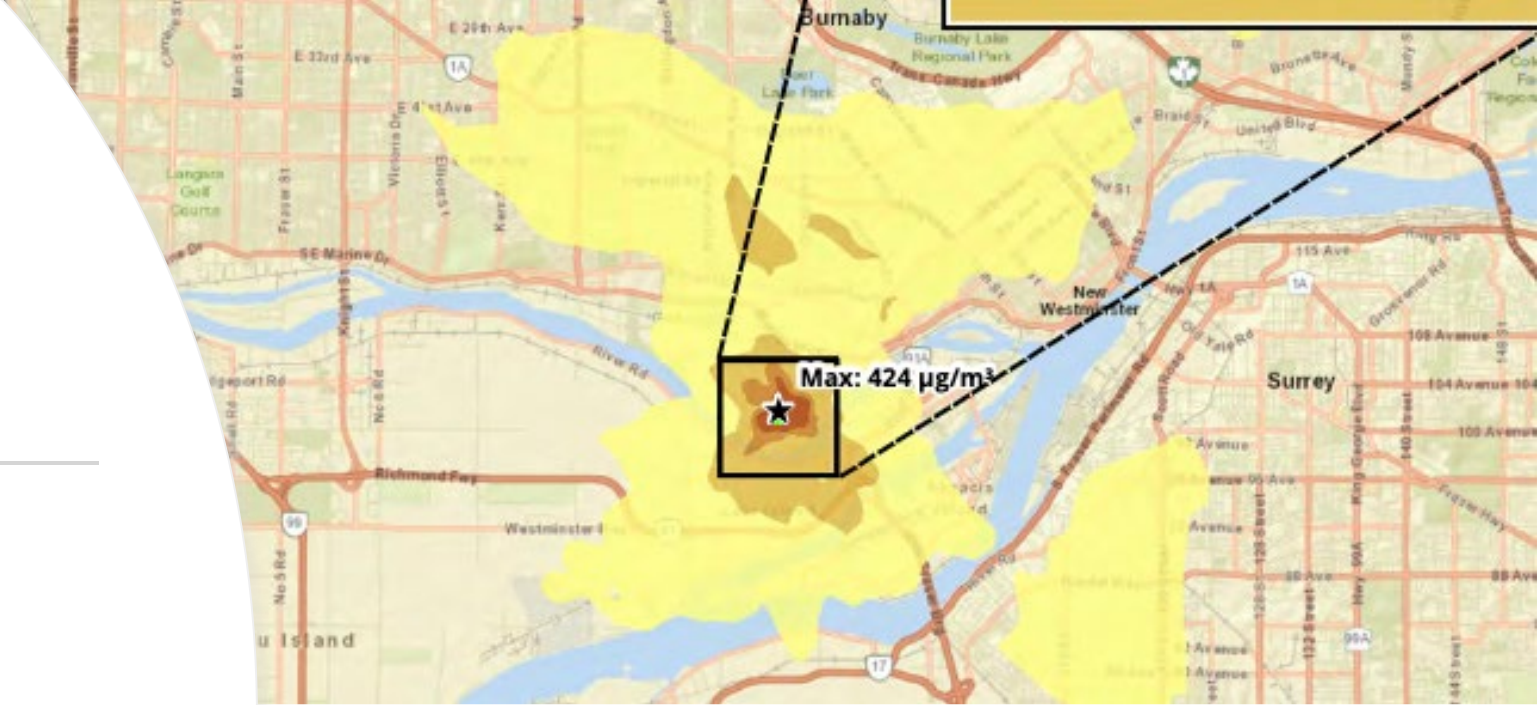
Year	Garbage Loads	Loads Inspected	Inspection Rate
2020	782,333	221,875	28%
2021	822,060	194,329	24%
2022	800,855	194,588	24%

+ Estimated 103,600 t of
EPR materials still going
to waste



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



- Costs -escalating
- Regulation -GHG and other environmental
- Lock in
- Ash –still needs to go somewhere, environmental and safety risks as well as a cost
- Opportunity costs -Metro Vancouver’s use of waste incineration has delayed progress on Zero Waste by diverting funds to disposal, has cost the region much more than Zero Waste or even landfilling and has created more GHGs emissions than Zero Waste or even landfills.

Risks

Potential savings if shut down incinerator



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



Decreased health and environmental risks



GHG savings



Air quality benefits

Helping Metro Vancouver to meet its goals



Societal improvement



Affordability



Circular economy



Climate change



Environmental stewardship
(air emissions, ash disposal,
diversion options, upstream)

Recommendations

- Adopt ZW definition and hierarchy
- Shut down WTE
- Use savings to work on ZW –especially rethink, reuse, reduce
 - 3Rs Study
 - Conference findings
 - NZWC work
- Collaboration & partnerships
- Enforcement
- Use existing LF while waste is decreased
- Ensure existing landfills manage methane well



Thank you



Sue Maxwell
Zero Waste BC
smaxwell@zerowastebc.ca

2 ZERO HUNGER



4 QUALITY EDUCATION



12 RESPONSIBLE CONSUMPTION AND PRODUCTION



13 CLIMATE ACTION



17 PARTNERSHIPS FOR THE GOALS



Metro Vancouver - Solid Waste Management Plan Independent Consultation and Engagement Panel

2023-12-01



The opportunity of food waste prevention



\$14 billion

Average cost of wasted food
in the Canadian hospitality industry



7% food revenues

Average cost of wasted food
for a restaurant in BC



8-10% GHG

Source: United Nations

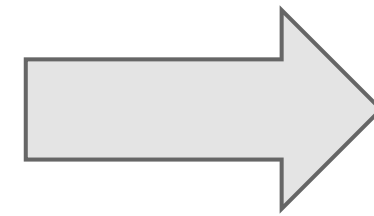
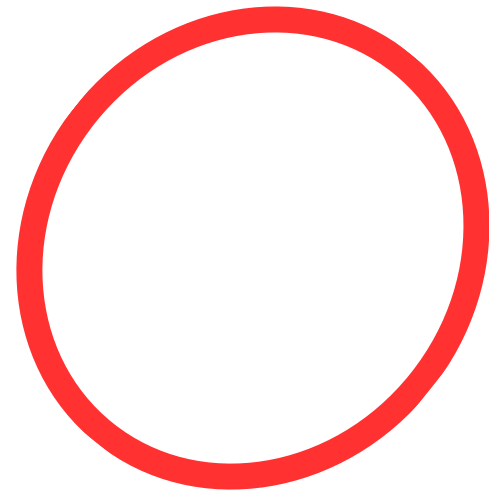


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Suggestion: ensure 100% restaurants compost

Observation

50% organic waste still in landfills despite organics ban



Suggestion

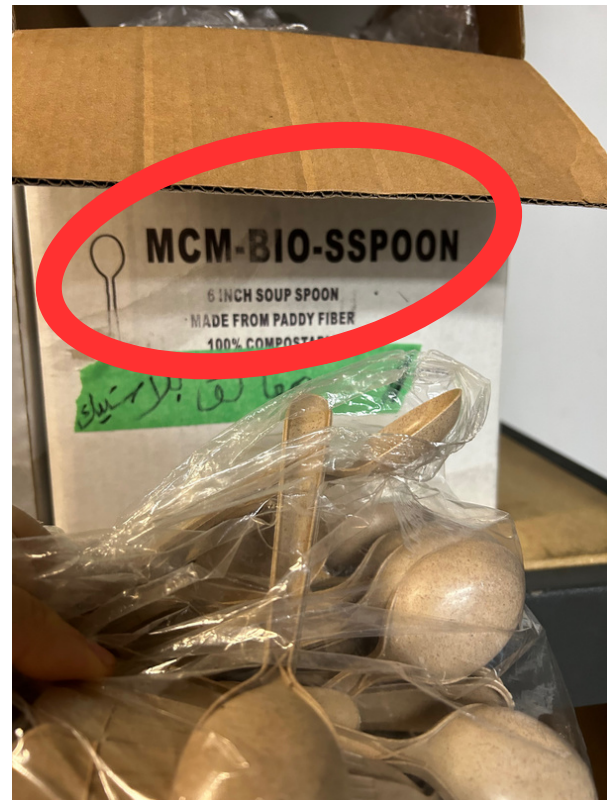
Have fines if compost is not done



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Suggestion: communicate on compostable plastics

Compostable cutlery



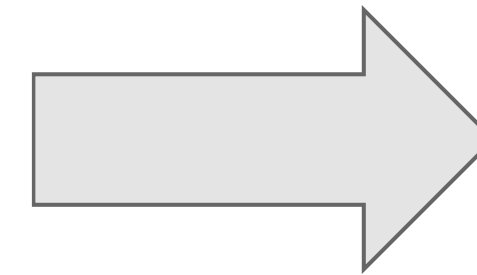
Compostable plastic ban



Cutlery

Cutlery includes forks, knives, spoons, chopsticks, and splash plugs.

Type of cutlery	Regulation <i>Effective December 2023</i>
Plastic (including plastic labelled "compostable" or "biodegradable")	Banned
All other materials	By-request



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Suggestion: share Food Waste Motions updates



2022-09-29

Food Waste Reporting Motion
(passed by the Vancouver
Food Policy Council)

THEREFORE BE IT RESOLVED THAT:

- A. The Vancouver Food Policy Council recommends that the City of Vancouver implement policy or regulations to require private waste haulers to track and publicly report on the quantity of food waste that they pickup on a monthly basis;
- B. The Vancouver Food Policy Council recommends that the City of Vancouver share publicly an estimation of the total food waste generated in Vancouver and of the annual savings potential in dollars, CO2, water, and land (what would be saved if this waste were eliminated);
- C. The Vancouver Food Policy Council recommends that the City of Vancouver set a food waste reduction target for food waste generated, to go beyond targets for food waste diversion;
- D. The Vancouver Food Policy Council recommends that the City of Vancouver amend the Climate Emergency Action Plan to add food waste policy.



2023-06-28

**Decreasing Food Waste,
Increasing Food Security Motion**
(submitted by Councillor Carr)

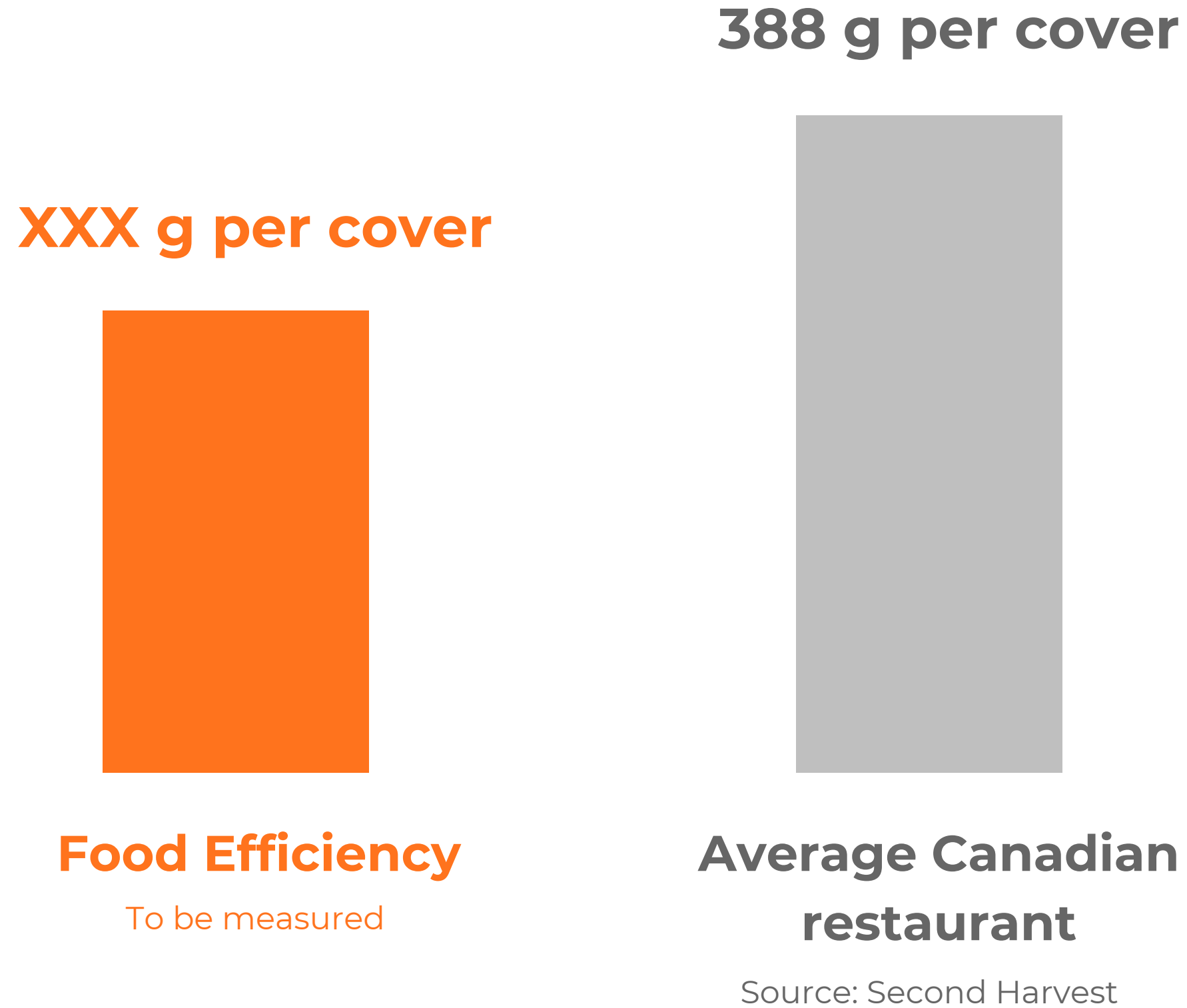
THEREFORE BE IT RESOLVED THAT UBCM urge the BC Government to:

- Measure, monitor and make publicly available data on food waste in BC in order to inform and develop policies, guidelines and practices to reduce food waste; and
- Support the non-profit sector involved in rescuing and distributing food as an essential interim measure to address food insecurity for vulnerable and equity-seeking populations until more sustainable public interventions address poverty and income insecurity, the primary drivers of food insecurity in BC.

<https://council.vancouver.ca/20230628/documents/a6.pdf>

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Suggestion: provide incentives to report food waste



Suggestion: share the BetterTable Academy



FREE food waste prevention training

<https://BetterTable.ca/academy>

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