

RCBC Zero Waste Hierarchy

Purpose

The Recycling Council of British Columbia (RCBC) has adopted Zero Waste as a policy and vision, and has developed the RCBC Zero Waste Hierarchy to support this goal. The Zero Waste Hierarchy describes a progression of policies and strategies that support a Zero Waste system, from highest and best to lowest use of materials. It is designed to be applicable to all audiences, from policy-makers to industry and the individual. This document exists to: (1) provide additional depth to the established 3R's (Reduce, Reuse, Recycle), (2) to encourage policy, activity and investment at the top of the hierarchy, (3) to provide a guide for those who wish to develop systems or products that move us closer to Zero Waste, and (4) to support RCBC's commitment to education for continued progress towards Zero Waste and sustainability.

Zero Waste Definition

"Zero Waste is a goal that is both pragmatic and visionary, to guide people to emulate sustainable natural cycles, where all discarded materials are resources for others to use. Zero Waste means designing and managing products and processes to reduce the volume and toxicity of waste and materials, conserve and recover all resources, and not burn or bury them. Implementing Zero Waste will eliminate all discharges to land, water or air that may be a threat to planetary, human, animal or plant health." (Zero Waste International Alliance 2008 definition, as adopted by RCBC)

Guiding Questions

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| Re-consider | What has lead us to our present linear use of materials and thus, what needs to evolve to move towards a closed loop model? How do we re-design systems to avoid needless and/or wasteful consumption? |
| Reduce | What supports the use of less material and less toxic material? |
| Reuse | What supports the better use of those products we already have in ways that retain the value, usefulness and function? |
| Recycle | How do we ensure materials are put back in the materials cycle? |
| Recover | What can still be salvaged from mixed waste? |
| Retain | What is still left and why? How do we manage what is left in a flexible manner that continues to encourage movement towards zero waste? |

Guiding Principles

Precautionary Principle - Ensure that a substance or activity which poses a threat to the environment is prevented from adversely affecting the environment, even if there is no conclusive scientific proof linking that particular substance or activity to environmental damage

Materials Are Resources – Preserve and value materials for continued use and use existing materials before harvesting virgin natural resources

Closed Loop Systems - Design systems to be closed loop rather than linear in their use of resources

Highest and Best Use – Create materials and products for highest and best uses and strive to maintain the highest and best use of existing materials

Opportunity Costs – Consider opportunity costs of investments and encourage investments that occur as high as possible on the Zero Waste Hierarchy

Minimize Discharges - Minimize all discharges to land, water or air that may be a threat to planetary, human, animal or plant health

Sustainable Systems - Develop systems to be adaptable, flexible, scalable, and resilient

Close to Source - Cycle materials as close to the source as practical

Do Not Export Harm – Use the highest standard systems for materials recycling regardless of where they occur

Local Economy – Support the growth and expansion of local economies (production, repair, and processing) in order to reduce greenhouse gases from transportation, improve accountability, increase repair opportunities, and increase control

Engage the Community – Promote changes and systems that work with communities to facilitate meaningful and sustained participation, increase understanding, and influence behaviour change and perceptions

Polluter Pays - Whoever causes environmental degradation or resource depletion should bear the “full cost” to encourage industries to internalize environmental cost and reflect them in the prices of the products

Knowledge & Feedback- Collect information on systems and use as feedback for continuous improvement

RCBC Zero Waste Hierarchy

Re-consider	Design products from reused, recycled or sustainably-harvested renewable materials to be durable, repairable, reusable, fully recyclable, and easily disassembled
	Shift funds and financial incentives to support a circular economy over the harvesting and use of virgin natural resources
	Enact new incentives for cyclical use of materials, and disincentives for wasting
	Facilitate change in how end users' needs are met from "ownership" of goods to "shared" goods and provision of services
	Support and expand systems where product manufacturing considers the full life-cycle of their product in a way that follows the RCBC Zero Waste Hierarchy and moves towards more sustainable products and processes
	Identify and phase out materials that are difficult to manage in a closed loop system
	Facilitate and implement policies and systems to encourage and support local economies (production, repair, processing) in order to reduce greenhouse gases from transportation, improve accountability, increase repair and parts opportunities, and increase control
	Re-consider purchasing needs and consider alternatives to product ownership
	Provide information to allow for informed decision-making
	Be aware of and discourage systems that drive needless consumption
Reduce	Plan consumption and purchase of perishables to minimize waste due to spoilage and non-consumption
	Implement sustainable purchasing that supports environmental objectives, as well as local markets where possible
	Minimize quantity and toxicity of materials used
	Minimize ecological footprint required for product, product use, and service provision
	Choose products that maximize the usable lifespan and opportunities for continuous reuse
	Choose products that are made from materials that can be easily and continuously recycled
	Prioritize the use of edible food for humans, and prioritize food no longer suitable for human consumption for animals
Reuse	Maximize reuse of materials and products
	Maintain, repair or refurbish to retain value, usefulness and function
	Remanufacture with disassembled parts; dismantle and conserve "spare" parts for repairing and maintaining products still in use
	Repurpose products for alternative uses
Recycle/ Compost	Support and expand systems to keep materials in their original product loop and to protect the full usefulness of the materials

	Maintain diversion systems that allow for the highest and best use of materials, including organics
	Recycle and use materials for as high a purpose as possible
	Develop resilient local markets and uses for collected materials where possible
	Provide incentives to create clean flows of compost and recycling feedstock
	Support and expand composting as close to the generator as possible
Recover	Maximize materials recovery from mixed waste for recyclables and research purposes
	Recover energy using systems that operate at biological temperature and pressure
Retain	Examine materials that remain and use this information to refine the systems to re-consider, reduce, reuse, and recycle in order to prevent further waste
	Encourage the preservation of resources and discourage their disposal, dispersal, or destruction
	Plan systems and infrastructure to be adjusted as waste is reduced and its composition changes
	Minimize methane release and maximize beneficial use of captured methane
	Use existing landfill capacity and maximize its lifespan
	Contain and control toxic residuals for responsible management

Definitions

EPR Definition – An environmental policy approach in which a producer’s responsibility for a product is extended to the post-consumer state of its lifecycle.

Waste - Waste includes (a) air contaminants, (b) litter, (c) effluent, (d) refuse, (e) biomedical waste, (f) hazardous waste, and (g) any other substance prescribed by the Lieutenant Governor in Council, or the minister under section 22 [minister's regulations — codes of practice], or, if either of them prescribes circumstances in which a substance is a waste, a substance that is present in those circumstances, whether or not the type of waste referred to in paragraphs (a) to (f) or prescribed under paragraph (g) has any commercial value or is capable of being used for a useful purpose.

Diversion – An activity that removes a material from disposal in a landfill or use in a waste-to-energy facility.

Sustainable Purchasing - The purchase of goods and services that take into account the economic value (price, quality, availability and functionality) and the related environmental and social impacts of those goods and services at local, regional, and global levels.

Value – The importance, worth, or usefulness of something that may be economic, social, environmental, or sentimental.

Highest and Best use – The use of materials as high on the RCBC Zero Waste Hierarchy as possible in ways that keep them in the useful loop as long as possible.

Circular Economy – An industrial economy that is, by design or intention, restorative and in which material flows are of two types, biological nutrients, designed to re-enter the biosphere safely, and technical nutrients, which are designed to circulate at high quality without entering the biosphere. Materials are consistently reused rather than discharged as waste.

Closed Loop System – A system not relying on matter exchange outside of the system, as opposed to open loop.

Biological Temperature and Pressure: The ambient temperature and pressure that occurs naturally without the use of added energy to change it.