The 4-step Planning Process



A Solid Waste Management Plan (SWMP) is the long-term vision for garbage and recycling and presents the programs, services, infrastructure, and policies that guide the design and implementation of solid waste in the CSWM region.

Plans are mandated by the Province through the Environmental Management Act for all regional districts to complete.

A 10-year renewal is recommended to ensure the plan reflects best practices and the evolving realities of solid waste.

1995
First Solid Waste Management Plan for the region.

2003
Solid Waste Management Plan updated.

2012
Solid Waste Management Plan updated.

2022
Solid Waste Management Plan renewal process launched.

1.
Initiate the process

2.
Set the Plan Direction

3.
Evaluate Options

4.
Prepare and Adopt the Plan

Public consultation occurs at every step of the planning process.

Comox Strathcona Waste Management

History of Solid Waste Management in CSWM



How far we have come:



1990s

- Closure of smaller landfills in Sayward, and on Denman and Hornby Islands.
- Focus on backyard composting and recycling at drop-off locations.

2000s

- In 2008, Comox-Strathcona Regional District split into two regions, solid waste maintained as one service for efficiency – Comox Strathcona Waste Management was created.
- Curbside recycling services introduced in four major population centres.





2010s

- EPR for residential printed paper and packaging and many electronic products in effect, introduced in all CSWM communities in some form.
- Landfill Criteria updated further strengthening environmental controls and capital requirements.
- Waste composition audit found food waste was 30% of garbage sent to regional landfill.



- Pidgeon Lake Landfill closed.
- Engineered landfill opened with leachate and landfill gas collection in Cumberland.
- Food waste collection pilot introduced in Comox and Cumberland.

2020s

- Campbell River Landfill closed and transfer of waste to engineered landfill begins.
- Lateral expansion of the engineered landfill.
- Organics facility opened and food waste collection expanded to residents of Courtenay and Campbell River.





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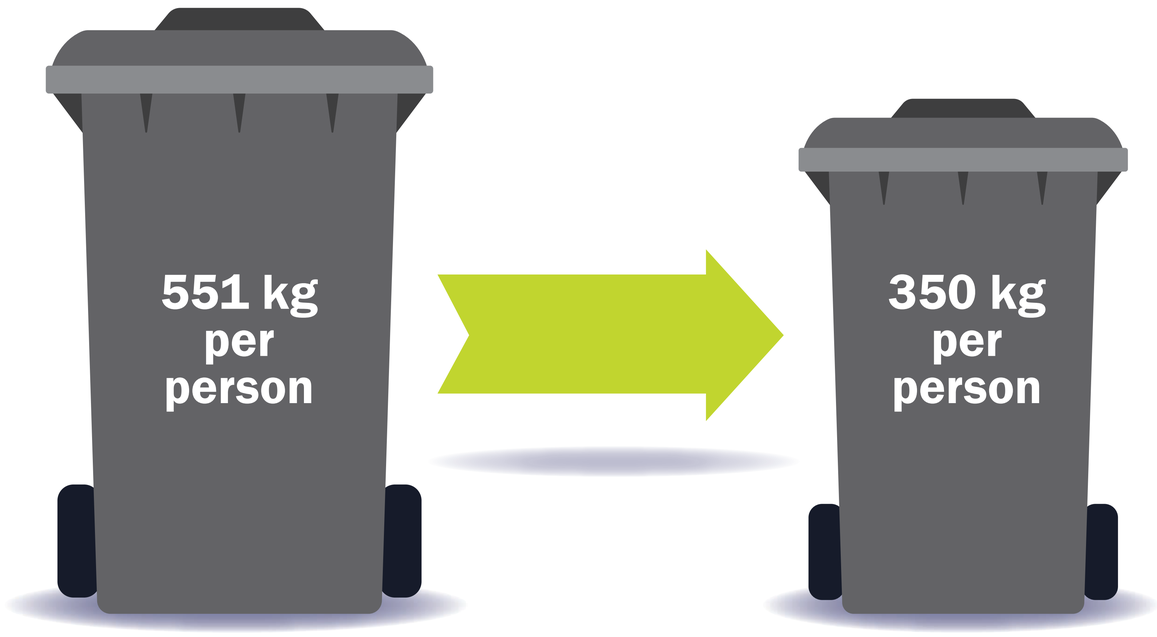
Solid Waste in the CSWM



The goal is to produce less garbage.

On average, each person in the service area generates 551 kg of waste annually. The provincial target is 350 kg per person.

The CSWM service manages over 75,000 tonnes of waste and recycled material annually and oversees diversion and education programs for the CVRD and the SRD.



Who contributes to waste?

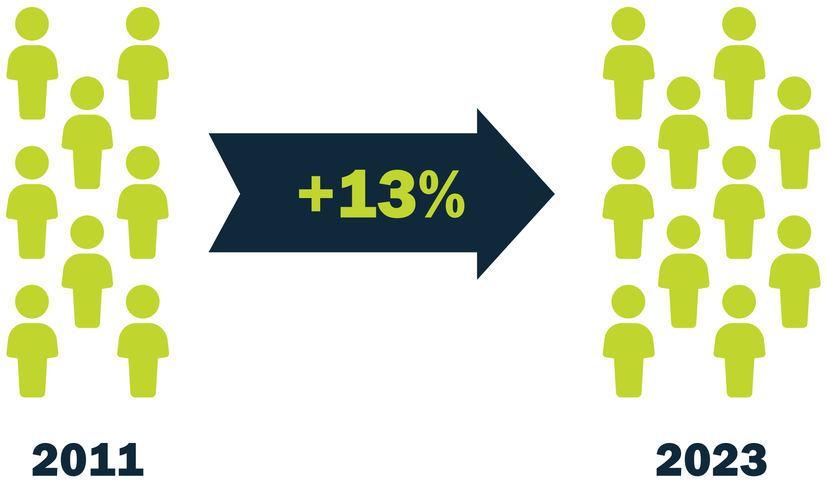
Residential
Houses
Condominiums

Industrial
Aquaculture
Forestry

Institutional
Hospitals
Schools

Business
Retail Stores
Restaurants

Construction and Demolition
Builders, Haulers



More people means more waste.

Since 2011, the population in the region grew by 13% — and is forecast to continue to grow over the next 20 years.

With growth, construction and demolition waste also continues to increase.

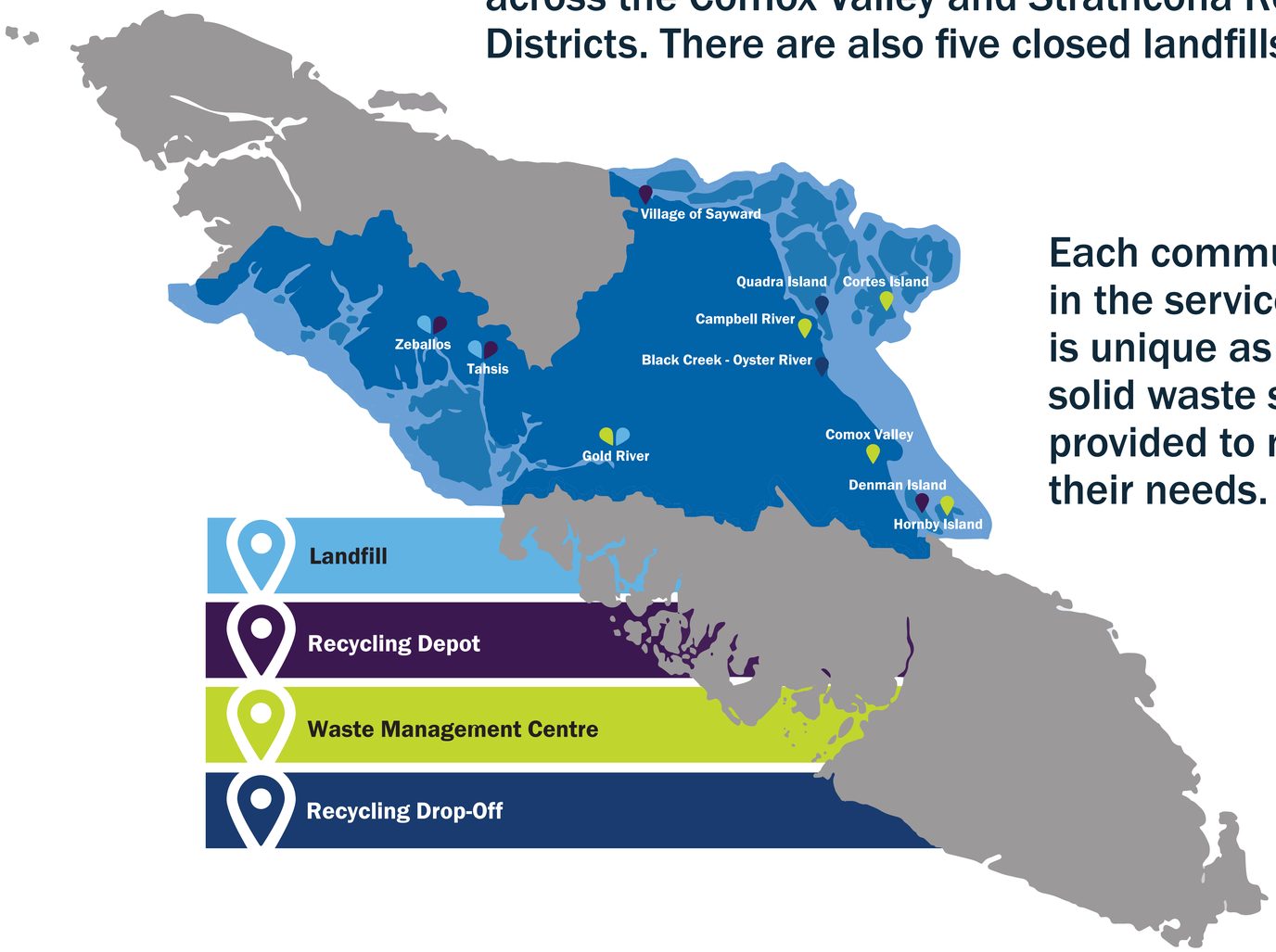
Comox Strathcona Waste Management

How We Manage Waste

The CSWM service area is in the Coast Salish, Kwakwaka'wakw, and Nuu-chah-nulth territories.



CSWM operates waste management centres, recycling depots, transfer stations and landfills across the Comox Valley and Strathcona Regional Districts. There are also five closed landfills.



Each community in the service area is unique as are the solid waste services provided to meet their needs.

Beyond landfills and recycling, solid waste management also includes:

- Education and Promotion
- Organics Diversion
- Construction, Renovation and Demolition Diversion
- Disaster Debris Management
- Household Hazardous Waste
- Illegal Dumping

Many private and non-private partners also operate facilities and deliver solid waste services:

- Bottle depots
- Food banks
- Yard and garden waste composting
- Reuse organizations
- Repair cafes
- Haulers
- Recycling processing facilities

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Greenhouse Gas Emissions

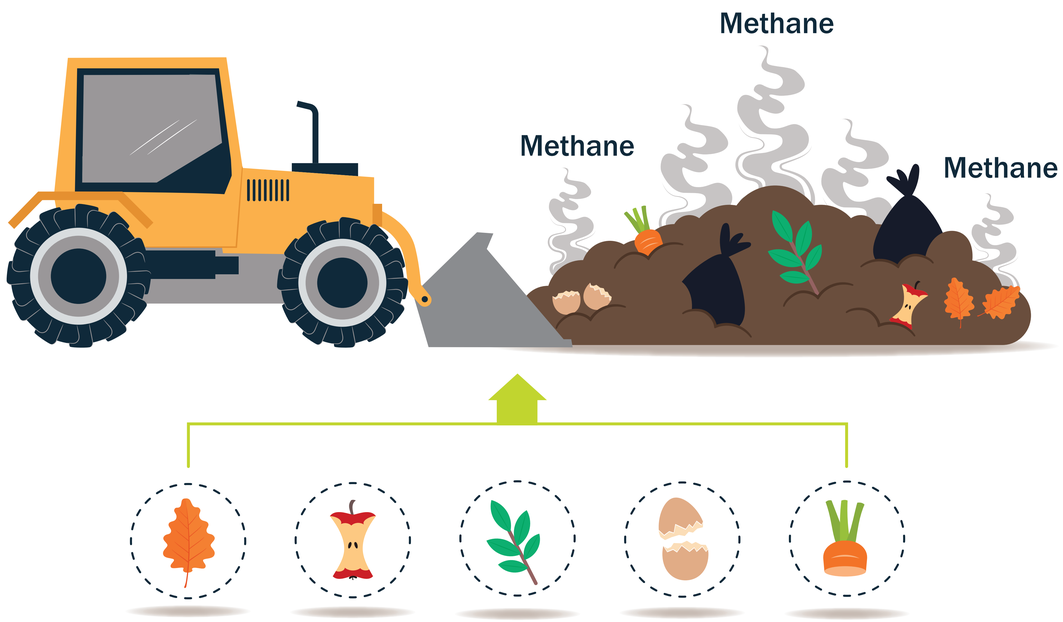


When organic materials – such as food, yard waste, and paper – are disposed in landfills, they produce methane – a powerful greenhouse gas.

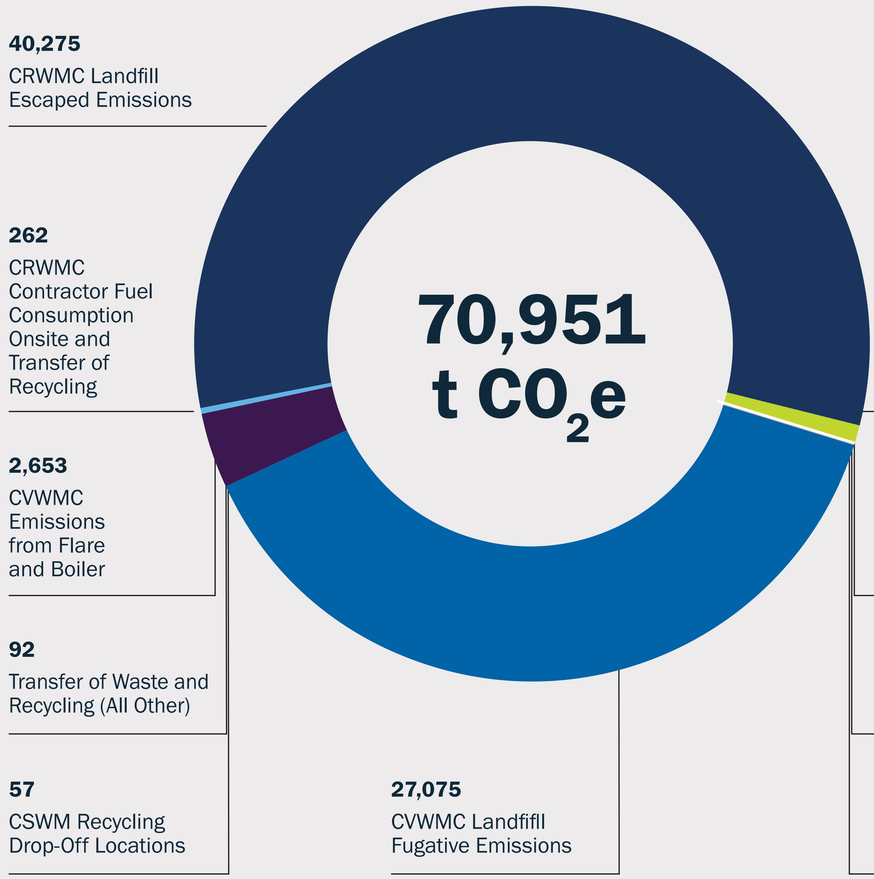
Municipal landfills account for about 23% of Canada's methane emissions. 95% of CSWM GHG's are generated from Comox Valley and Campbell River Waste landfills.

Since 2016, the collection and destruction of landfill gas has prevented the release of nearly 170,000 tonnes of CO_2 equivalent into the atmosphere.

Less organic waste in landfills = less methane



Estimate of 2021 Greenhouse Gases from CSWM Service (Tonnes of CO_2 Equivalent)



40,275
CRWMC Landfill Escaped Emissions

262
CRWMC Contractor Fuel Consumption Onsite and Transfer of Recycling

2,653
CVWMC Emissions from Flare and Boiler

92
Transfer of Waste and Recycling (All Other)

57
CSWM Recycling Drop-Off Locations

27,075
CVWMC Landfifll Fugative Emissions

406
CVRD Equipment Fuel Use and Building Heating

125
Waste Transfer CRWMC to CVWMC

4.1
Hornby Island

1.5
Cortes Island

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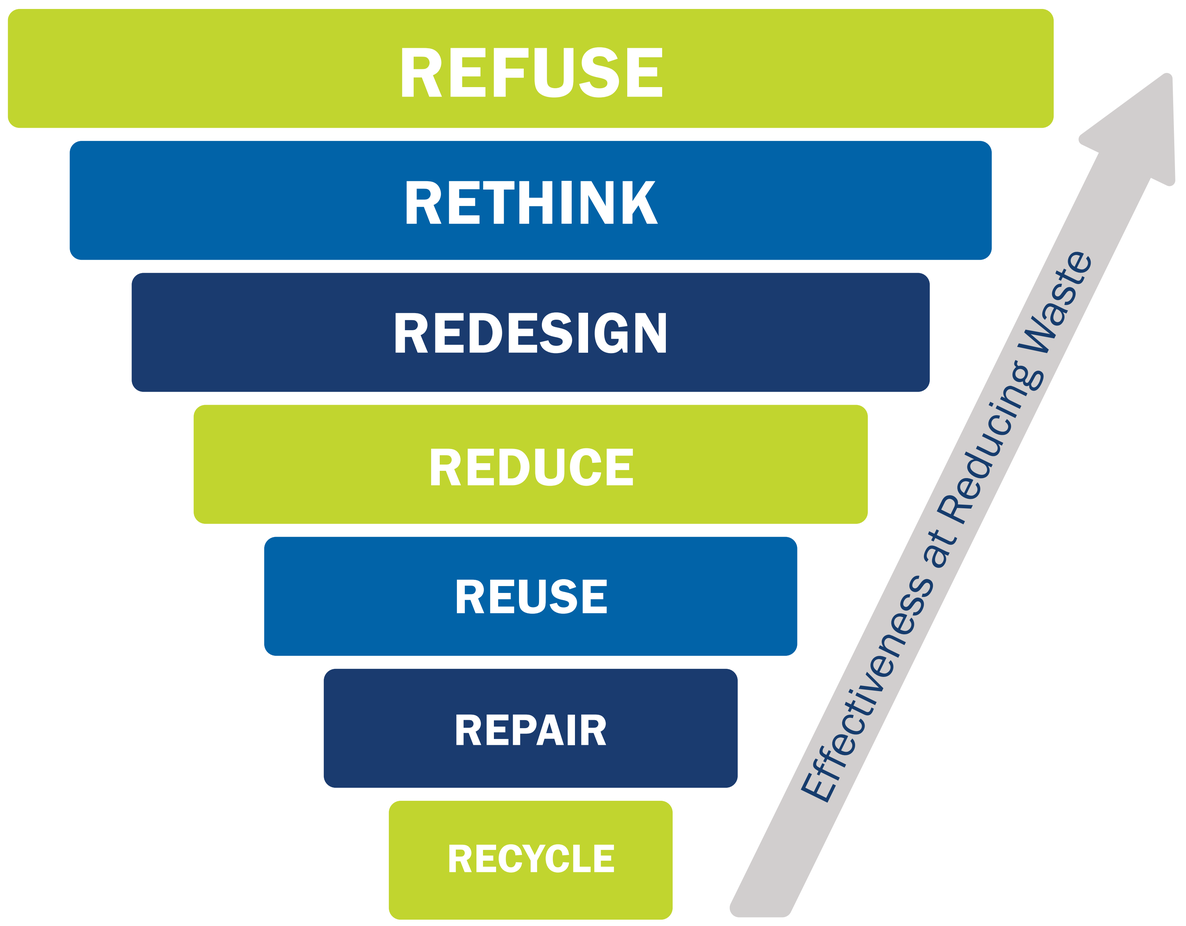
How We Can Reduce Waste

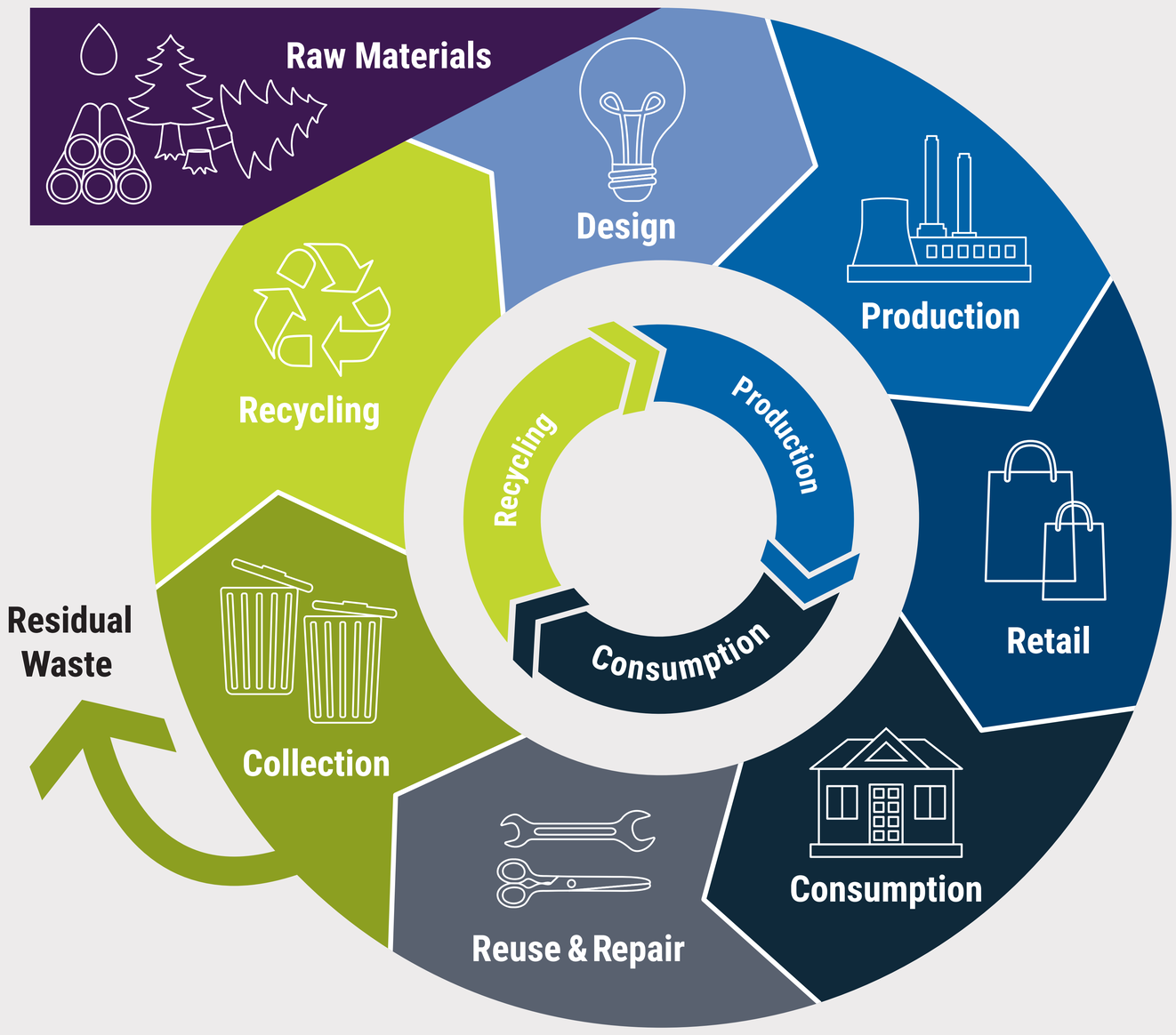


What is Zero Waste?

Zero waste approaches aim to reduce and ultimately eliminate garbage.

The first step is reducing the waste we generate and then taking further steps to find more beneficial ways of managing our resources.





Benefits of a “Circular Economy”

In a circular economy resources are never tossed. Instead, they are reused, recycled, and reintroduced as new products.

All with a focus on clean technology and energy efficiency.

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What's in our Waste

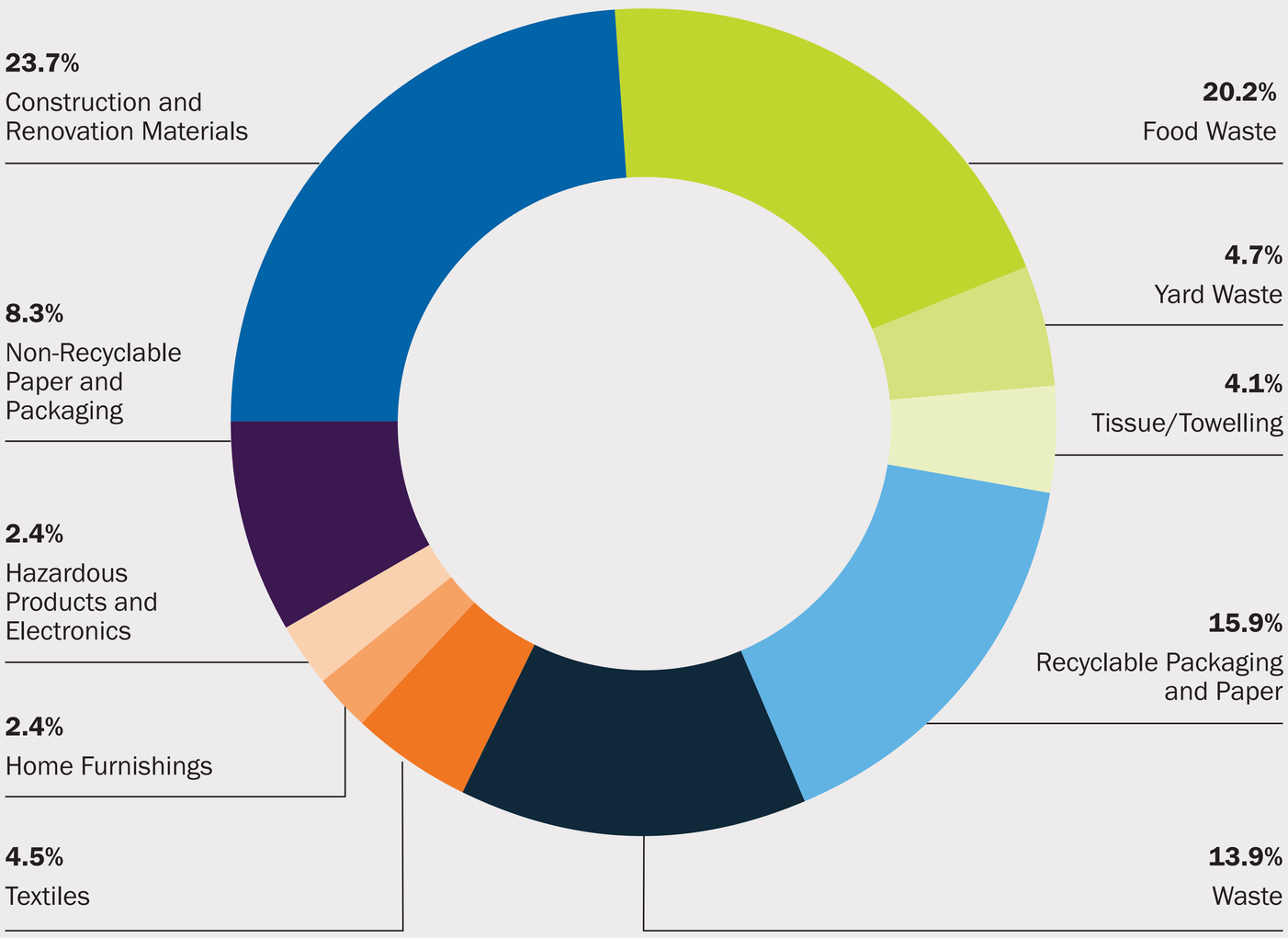


51% of waste going into the landfill could be diverted through recycling or composting.

The more we divert from the landfill, the longer it will be an asset to the community, protecting the environment, and saving money.



2017 Waste Composition Study Results



This data was gathered by opening up garbage bags and sorting through trash that came to CSWM facilities, not recycling bins.

Compostables	29.0%
Construction and Renovation Materials	23.7%
Recyclable Packaging and Paper	15.9%
Waste	13.9%
Miscellaneous	9.3%
Non-Recyclable Paper and Packaging	8.3%
	100%

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What Goes Where?







Recycling

Recyclables are sorted by and turned into new products like newspaper, packaging, or cans. They are not landfilled.







Organics

Food waste and yard waste is turned into nutrient-rich compost that can be used in agriculture and landscaping. By keeping organics out of the landfill, we reduce methane and greenhouse gas emissions.







Extended Producer Responsibility (EPR)

CSWM residents divert over 12,000 tonnes of waste a year through participation in Extended Producer Responsibility programs.

The growing list of EPR programs includes beverage containers, tires, and pharmaceuticals. The fees for these programs are collected at time of purchase.

Other EPR products such as chemicals, batteries, and electronics are collected and disposed of appropriately.





Landfill

What isn’t recycled or composted goes into the landfill. Over 50% of what currently goes into the landfill could have been recycled or composted.

Comox Strathcona
Waste Management

Responsible Waste Management



Responsible landfill management includes managing the leachate and landfill gas generated. CSWM has robust programs in place to capture and treat leachate and landfill gas.

How we protect groundwater

- Leachate is the water that drains from the landfill. It is captured from the engineered landfill, stored in lined ponds, and treated in an onsite wastewater treatment plant.
- Treated water is then returned to the ground.
- Surface water is kept away from the waste and directed to ponds to infiltrate.
- Monitoring wells are sampled.

How we reduce our climate impact

- Landfill gas is captured and destroyed through a landfill gas collection system.
- Removing organic materials like grass clippings, food scraps, and yard waste from the garbage reduces the amount of methane gas that is released from our landfills.
- Consolidating waste and reducing the number of trips.











Comox Strathcona Waste Management

How CSWM is Funded



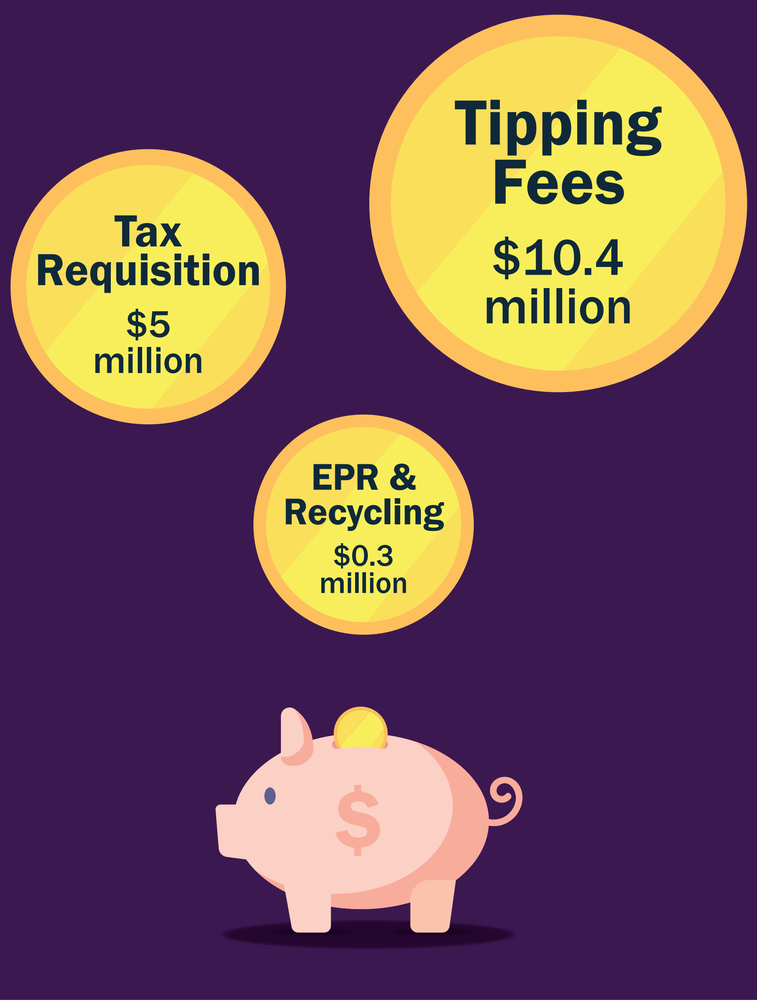
Solid waste management used to be simpler, but didn't always prioritize protecting the environment.

Stricter environmental regulations, and emphasis on waste as a resource has changed how we fund the service and how much it costs.

The amount of garbage, recycling, and organics per person has increased, and so has the tipping fee per tonne to dispose of waste.

	2000		2020
Cost of CSWM Service	$4 million/year		$17 million/year
Waste Tipping Fee	$45 per tonne		$140 per tonne
Volume of Materials Managed			

Tipping fees still cover landfill operations, but the cost of constructing, expanding, and closing landfills is now mainly covered by taxation.



Annual tax contributions for landfills, recycling depots, and organics processing (excluding curbside pick-up) based on assessed value:

Assessed Value
$250,000
→ **Contribution to CSWM**
$25.90

Assessed Value
$750,000
→ **Contribution to CSWM**
$77.69

As we divert more waste from landfills, we will need to keep adapting our revenue sources, between taxation and tipping fees, to provide a stable funding source.

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