ZERO WASTE VICTORIA

TARGET

50% reduction in landfill disposal by 2040

CITY OF VICTORIA

ZERO WASTE VICTORIA

Contents

Introduction

Zero Waste Victoria guides Victoria's transition to a future where products and materials are avoided, reduced and reused instead of disposed in the landfill. Zero waste as a goal has become a common priority among cities and governments in order to address unsustainable trends in material production, use and disposal. Zero waste programs and circular systems are required to keep materials at their highest and best use for as long as possible, and to better manage materials across their entire life cycle.

The purpose of zero waste goes beyond reducing waste going to landfill. One of the key drivers in a future with zero waste is environmental stewardship. Environmental benefits include reduced greenhouse gas (GHG) emissions and reduced upstream ecological damage from resource extraction, in addition to cleaner shorelines and green spaces. Zero waste initiatives also present new economic opportunities for local innovation and for sharing, reuse and salvage businesses.

Victoria has unique characteristics that have shaped its plan for zero waste. Victoria is the main urban centre in South Vancouver Island and the source of one third of the waste disposed at Hartland Landfill. Victoria is a centre for employment, with a high daytime population. Victoria has many multifamily buildings and is experiencing densification and development. Being a vibrant coastal city, Victoria is a popular tourist destination, with numerous hotels, restaurants and attractions. The City is also home to light and medium industry, has distinct shopping districts, and has many parks and beaches.

Government, businesses, residents and tourists play important roles in the responsible management of waste. This plan builds on the strong foundation of the community's sustainability values. Many local businesses and community members already embrace zero waste practices. This local knowledge and experience will be crucial for developing the pathways to zero waste across the community.

Organizational Alignment

Zero Waste Victoria aligns with overarching goals of the City and existing corporate plans.

Victoria's responsibility and direction for solid waste reduction is established through legislation in the City's **Official Community Plan** (Bylaw No. 12-013), which states that the City is to "support steps for Victoria to move towards a zero net solid waste community in partnership with the Capital Regional District (CRD) and the private sector" and provides the broad objective that "solid waste [is] managed as [a] closed loop system with optimal levels of recovery and re-use" across different stakeholder groups.[1]

Reducing overall waste generation and disposal, while realizing economic and community benefits in the process, is also a key component of the City's **Climate Leadership Plan**[2]. Reducing waste and consumption, changing consumer and business behaviours and creating better design and planning for infrastructure are all goals of the Climate Leadership Plan that directly align with zero waste and circular economy principles.

Victoria's Economic Action Plan, Victoria 3.0[3], emphasises the need to build our economy within the limits of the Earth's capacity to sustain us. Moving towards zero waste is crucial for achieving this goal. Zero Waste Victoria identifies key actions the City can take to reduce our footprint in a way that generates new economic opportunities. Victoria 3.0 also places a high value on innovation, with its vision of the City as an "influencer and innovator". Zero Waste Victoria aligns with this by putting forth a leading plan for waste that highlights the importance of business opportunities and the innovation businesses will achieve as part of the shift towards a circular economy. Additionally, a key action within Victoria 3.0 is to create an Ocean Futures Cluster. Many synergies are possible between this future Cluster, focused on marine science innovation, and zero waste initiatives given that a shared goal is improving environmental sustainability.

1 City of Victoria; 27 February, 2020; *Official Community Plan*; https://www.victoria.ca/EN/main/residents/community-planning/official-community-plan.html
2 City of Victoria; 2018; Climate Leadership Plan; https://www.victoria.ca/EN/main/residents/climate-change/climate-leadership.html
3 City of Victoria; 14 May 2020; Victoria 3.0 – Recovery Reinvention Resilience – 2020-2041; https://www.victoria.ca/EN/main/city/mayor-council-committees/mayor-lisa-helps/victoria-3-0-recovery-reinvention-resilience.html

The History of Waste Management in Victoria

The ocean has historically been used for waste disposal in many places around the world, with the assumption of limitless capacity. From the late 1800s to the mid 1950s the City of Victoria disposed of waste in ocean waters surrounding the city.[4]

Local historian, Janis Ringuette, writes, *"...municipal workers loaded garbage on scows at the city's garbage wharf near the Blue Bridge on Johnson Street. A tug towed the scows past Ogden Point and dumped the garbage into the sea. ... Victoria adopted the scow system ... after years of garbage problems on land. Smelly open dumps burned constantly in five areas of the city, attracting rats, flies, gulls and unending complaints from neighbours."* [5]

Much of the garbage dumped in the ocean ended up floating to local beaches and the community began to take notice.[6] In 1956, the City's Public Works Committee initiated a series of recommendations to City Council that ocean dumping be replaced with a sanitary landfill.[7] The City stopped disposing of waste in the ocean in 1958.[8]

City of Victoria Archives. CoV-CR-0296-M07077 (1957)

City of Victoria Archives. AC1-M07620 (1927)

4 CRD; Background – Our Garbage; https://www.crd.bc.ca/docs/default-source/recycling-waste-pdf/backgrounder-garbage.pdf?sfvrsn=7a4f8fc9_4

5 Ringuette, Janis; City of Gardens was once a City of Garbage; https://beaconhillparkhistory.org/articles/122_garbage.htm

6 City of Victoria Archives; 5 October 1896; *Sanitary Inspector Notebook*; CR-009

7 City of Victoria Archives; 22 November 1956; *City Council Minutes*; CR-13338

8 Daily Colonist; 25 June 1958; Garbage Won't Come Back: http://archive.org/stream/dailycolonist0658uvic_19

Late 1800s – 1950s	**Ocean garbage disposal**
1958	**Stopped disposing of garbage in ocean**
1970	**BC deposit program for cans and bottles**
1985	**CRD acquires dump at Hartland and invests to turn it into an Engineered Sanitary Landfill**
1989	**Bluebox recycling program introduced**
1990s	**Expansion of EPR programs**
2013	**Victoria introduces residential kitchen scraps collection**
2014	**EPR introduced for packaging**
2018	**Victoria introduces Checkout Bag Regulation**

Unregulated dumping at the Hartland Landfill in Saanich began in the 1950s, however the modern engineered sanitary landfill did not take shape until 1985 when the CRD assumed responsibility for the site and invested in infrastructure and environmental controls.[9] The City continued to use the downtown garbage wharf until 1986 to transfer garbage bound for Hartland.[5]

The region's curbside blue box recycling program began in 1989, with the collection of glass bottles, tin and aluminum cans and newspapers. The program operated in Oak Bay, Saanich, Victoria and Esquimalt[10]. The CRD banned cardboard from disposal at the Hartland Landfill in 1993 and continued to ban other recyclable materials in subsequent years. The curbside program added mixed paper in 1995, and corrugated cardboard and rigid plastic containers in 2000.[11]

9 CRD; 2019; Hartland Landfill FAQ; https://www.crd.bc.ca/docs/default-source/recycling-waste-pdf/hartlandfaq.pdf?sfvrsn=66dc01ca_6

10 Times Colonist; 1 October 2015; *CRD directors mull scrapping blue boxes for wheeled totes*; https://www.timescolonist.com/news/local/crd-directors-mull-scrapping-blue-boxes-for-wheeled-totes-1.2074062

11 CRD; 2014; The 3R Hierarchy: A learning resource for K-7 educator's about the 3R's and waste in the capital region; https://www.crd.bc.ca/docs/default-source/Partnerships-PDF/3r-hierarchy-resources/3r-hierarchy-whole-document.pdf?sfvrsn=1cdb53ca_0

Producer Pay

British Columbia first introduced a product stewardship model for recycling in 1970 with the implementation of a deposit program for soft drink cans and bottles – the first in North America.[12] The provincial government made a leap in recycling legislation in the 1990s with the introduction of Extended Producer Responsibility (EPR) requirements for waste paint, beverage containers, medications, and household hazardous waste.[13] The provincial government introduced the Recycling Regulation in 2004 to simplify the regulatory structure for EPR programs and create a results-based approach[14]. Electronic and electrical products were subsequently added to the regulation.

The EPR program for residential packaging and printed paper began in 2014. Under agreement with the product steward for this material, the CRD continues to provide curbside recycling collection to single family homes in the region. Most multifamily residences are served by private waste collectors.

Kitchen scraps collection

In 2013, the City of Victoria added the collection of kitchen scraps to its residential waste service in response to the 2015 ban on food waste disposal at the Hartland Landfill. The CRD's priorities were to save landfill space and meet waste diversion and GHG reduction targets. Prior to the ban, organic waste made up about one third of waste sent to the landfill.[15]

Services today

Today, the City of Victoria provides community solid waste management services including residential garbage and kitchen scraps collection, residential yard and garden waste drop-off and seasonal pickup programs, public realm waste, recycling and food scraps collection, street cleaning and cigarette butt collection and recycling.

Over the years, the City's waste management mandate has evolved from a focus on garbage disposal to avoid litter and open burning, to a more modern and sustainable model involving stewardship and waste reduction. The City's waste management function is enabled by provincial legislation and its responsibility to reduce landfill disposal is guided by the region's Solid Waste Management Plan (SWMP).

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12 Encorp Pacific (Canada); 30 May 2014; Stewardship Plan 2014-2018; https://www2.gov.bc.ca/assets/gov/environment/waste-management/recycling/recycle/beverage-containers/sp/encorp-stew-plan-2014.pdf

13 Return-It; 10 March 2011; BC Product Stewardship Model; https://www.youtube.com/watch?v=RGWNfMfoSjU&feature=player_embedded#!

14 Recycle BC; Extended Producer Responsibility in BC; https://recyclebc.ca/about-recyclebc/epr/

15 CRD; September 2010; CRD Solid Waste Stream Composition Study 2009-2010; https://www.crd.bc.ca/docs/default-source/recycling-waste-pdf/WasteCompositionStudy2010.pdf?sfvrsn=9cd38fc9_2

Zero Waste Victoria Vision

A community where nothing is wasted.

The vision for Zero Waste Victoria is a community where nothing is wasted. Where reducing, reusing, and repurposing materials is the norm and helps our community thrive. Where a circular economy allows innovators to succeed and local businesses to flourish. Our community's culture of sharing and repairing helps us to connect with our neighbours. Our homes and places of work are constructed using salvaged and recycled materials, putting less pressure on our valuable natural resources. Our vision is a community where no food goes to waste and any scraps are converted into energy and nutrient rich soil. Where the convenience of take-out doesn't require disposable single-use products. Where celebrations and gifts don't always require stuff, but meaningful experiences that support local businesses. Where "think global, act local" is put into practice every day and future generations are not an afterthought. Where throwing things "away" is not an option or an impulse. Where Victoria leads, innovates, and takes action.

Values

The following set of community values motivate the direction and strategies for advancing zero waste across Victoria. In many cases, these values will converge to inform the design and implementation of policies, programs and services. There will also be times when values are in conflict with each other and decision-making will be challenged to identify a balanced compromise.

1. CLEANLINESS AND SANITATION

The City's waste management operations have a commitment to cleanliness and sanitation. The health and safety of residents and City staff is essential and changes to waste management operations must maintain current sanitation standards. Our City should also be tidy, with roadways and open spaces that are free of litter and debris.

2. CONVENIENCE AND CHOICE

Our current economy designs and supplies products that are convenient to use and dispose while the full costs and impacts of these product choices are often hidden from the consumer. Reusable products and fully recyclable materials should offer a competitive alternative to disposable products.

3. ENVIRONMENTAL SUSTAINABILITY

Eliminating waste is a critical step towards regenerating the natural environment and reducing GHG emissions. The landfill should be used as a last resort. The release of plastic waste to the environment should be eliminated.

4. AFFORDABILITY

Collecting and disposing of waste is currently a significant cost for the City, which is passed on to residents and businesses. Reducing the amount of waste generated has the potential to bring this cost down. Waste reduction efforts must also ensure that vulnerable, underserved populations are not disproportionately impacted.

5. PROSPERITY

Waste reduction and diversion should present new business opportunities, including for innovative entrepreneurs and small businesses. Waste reduction and diversion should contribute to an inclusive high-value economy in our region, as well as to low-carbon prosperity.

6. TIMELY LEADERSHIP

The City should regularly review and amend its policies and programs to incorporate best practices and rapidly respond when faced with evidence of unsustainable practices. The City should lead by example, ensuring that corporate operations and facilities avoid waste and stimulate reuse and recovery systems. The City should also connect people, leverage local expertise and foster innovation.

Waste Reduction Frameworks

Three established frameworks guide Zero Waste Victoria and the sequence of actions taken to reduce waste:

1. **Zero Waste** provides an ambitious goal to guide continual improvements to the waste management system.

2. The **Circular Economy** establishes a paradigm that couples economic wellbeing with environmental sustainability.

3. The **Waste Reduction Hierarchy** provides a decision-making framework for prioritizing actions.

Zero Waste Defined

Zero Waste can be interpreted as both a goal and a concept for setting policy. The Zero Waste International Alliance specifically defines Zero Waste as:

"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."[16]

The *Zero Waste International Alliance* encourages communities to reduce disposal, either to landfill or by incineration, by 90%.[17]

16 Zero Waste International Alliance; 2018; Zero Waste Definition; http://zwia.org/zero-waste-definition/
17 Zero Waste International Alliance; May 2014; Zero Waste Community Certification; http://zwia.org/zero-waste-community-certification/

Circular Economy

The Circular Economy is an alternative to a traditional linear economy in which society extracts natural resources to make short-lived products that are then disposed. A Circular Economy also goes beyond the current Recycling Economy, in which products are typically downcycled and eventually disposed. In a Circular Economy products and materials are reused, repurposed and recycled in such a way that nothing is sent to landfill.

The Circular Economy framework is based on three principles:

- **Design out waste and pollution**
- **Keep products and materials in use**
- **Regenerate natural systems**[18]

A Circular Economy defines and prioritizes the processes that fully capture the value of our products and materials. The Ellen MacArthur Foundation describes policy levers that municipal governments can use to align with and support a Circular Economy. These levers span the breadth of municipal government functions, including urban planning, public engagement, asset management and procurement.[19] Many of these levers also support the objective of zero waste by preventing waste and encouraging the recovery of materials. While the Circular Economy is considered more broadly as a model for the entire economy, it is complementary to the goal of zero waste and the two frameworks can be applied in parallel.

18 Ellen MacArthur Foundation; 2017; Concept: What is a circular economy? A framework for an economy that is restorative and regenerative by design; https://www.ellenmacarthurfoundation.org/circular-economy/concept

19 Ellen MacArthur Foundation; March 2019; City Governments and their Role in Enabling a Circular Economy Transition; https://www.ellenmacarthurfoundation.org/assets downloads/CE-in-Cities_Policy-Levers_Mar19.pdf

LINEAR ECONOMY	RECYCLING ECONOMY	CIRCULAR ECONOMY
Resource Extraction	Resource Extraction	Resource Extraction
Use	Use - Recycle	Use - Reuse - Repair
Disposal	Disposal	

Waste Reduction Hierarchy

The waste reduction hierarchy emphasizes reduction and reuse over recycling and disposal. This framework provides guidance for prioritizing waste management actions. Reduction is at the top of the hierarchy, indicating that effort and resources should first be allocated towards avoiding waste or reducing the amount generated. Reuse, repair and repurpose follow in descending order of priority. Recycling and disposal are at the bottom of the hierarchy, indicating that they should be used only after the higher levels of the hierarchy have been applied. This framework also often includes energy recovery in between recycle and dispose.

1. **Avoid**
2. **Reduce**
3. **Reuse**
4. **Repair**
5. **Refurbish**
6. **Recycle**
7. **Recover (energy, nutrients)**
8. **Disposal**

Our Waste Management System

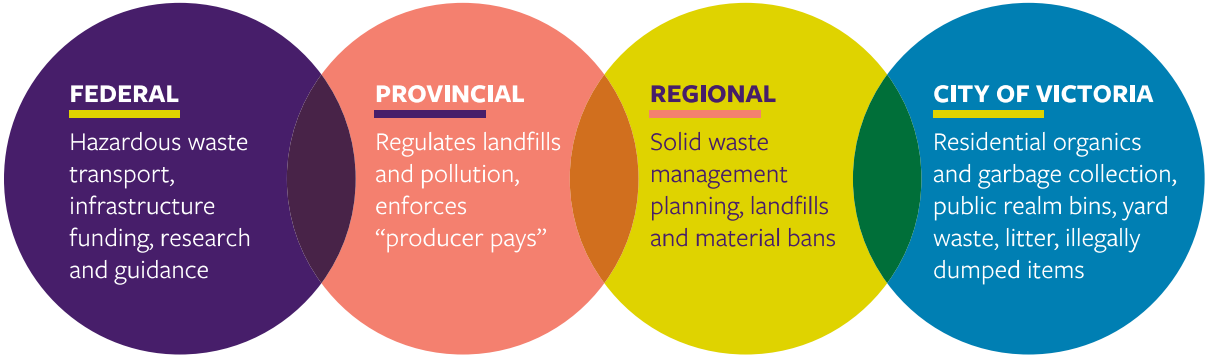
The regional waste management system involves multiple, interconnected participants, activities and processes.
The City provides a range of waste services including residential garbage and organics collection. Private haulers collect waste, recyclable and compostable material from multifamily residential buildings and from the industrial, commercial and institutional (ICI) sector. The CRD manages the curbside blue box program on behalf of Recycle BC, the provincial stewardship agency responsiblefor residential packaging and paper products.

Depots serve as drop-off locations and transfer points for numerous types of ICI and residential material, including construction waste, recyclable packaging and end-of-life vehicles.

Material recovery facilities separate recyclables and group them for shipment outside the region. Hartland Landfill is the primary landfill in the region and has collection facilities for organics, recyclable material and household hazardous waste. Several facilities in the region, including municipally-owned facilities, compost yard and garden waste.

The regional waste management system is connected to broader networks outside the region. Industrial compost facilities in Southern Vancouver Island process kitchen scraps and yard waste. Given limited recycling processing on Vancouver Island, recyclable material is often sent to processors in the Lower Mainland (e.g., for drywall and plastic packaging). Further afield, the region is connected to recycling end markets in Canada and in other countries. As well, a portion of the City's construction and demolition material is sent to landfills in the United States.

Government Roles and Responsibilities



FEDERAL GOVERNMENT

The federal government contributes to waste reduction by conducting national studies on waste and pollution, providing guidance on best practices and broad scale strategic direction, and by funding research and major infrastructure projects. The federal government also contributes as a member of the Canadian Council of Ministers of the Environment (CCME), which enables intergovernmental targets and policy coordination on waste.

The federal government can mitigate the upstream generation of toxic substances that have the potential to harm the environment under the *Canadian Environmental Protection Act*. The federal government also regulates the international and interprovincial transportation of hazardous waste and recyclable material.

The federal government establishes national mandates that align with international efforts on waste reduction and pollution prevention. For example, the federal government is a signatory to the Ocean Plastics Charter, which supports the design of plastics for reuse and recycling and aims to reduce plastic pollution.[20]

PROVINCIAL GOVERNMENT

The Province of British Columbia sets requirements for municipal solid waste management in the *Environmental Management Act* (EMA). The EMA and associated regulations include requirements for regional district solid waste management planning, landfill operation, composting and hazardous waste management. The Recycling Regulation under the EMA establishes British Columbia's EPR program.

20 Government of Canada; 31 July 2020;Ocean Plastics Charter; https://www.canada.ca/en/environment-climate-change/services/managing-reducing-waste/international-commitments/ocean-plastics-charter.html

British Columbia's EPR framework, a regulated model and the most comprehensive in Canada, has been very successful at increasing access to recycling for a wide range of products, and at establishing an industry-funded model for recycling in the province. However, the framework does have some shortcomings. Most significantly, EPR emphasises recycling rather than the higher levels of the pollution prevention hierarchy; reduction and reuse. Also, certain product categories have low recovery rates, and access to depots is inadequate in some communities.

Local government can develop policy that complements the EPR framework. Given that EPR is intended to shift the financial burden of managing end-of-life products from the taxpayer to producers, municipalities should look to producers to offset the financial burden of managing these materials in the community. Local government can also advocate to the province for continual improvement of the EPR framework, including expanded product categories, stronger enforcement and improved outcomes.

REGIONAL GOVERNMENT

As noted above, the EMA requires that Regional Districts develop plans for the management of municipal solid waste and recyclable materials and grants them authority to regulate these materials using a number of mechanisms including, but not limited to, landfill material bans, material-specific disposal fees and site/facility licensing.

The CRD's SWMP includes a target to significantly reduce landfill disposal, with the intention of extending the life of the Hartland Landfill beyond 2100. The SWMP follows the pollution prevention hierarchy and includes strategies for reduction and reuse that align with Zero Waste Victoria. The SWMP relies on municipalities to use regulatory powers and authorities not available to the Regional District, to enhance or provide new services, and to amplify regional advocacy, education and outreach activities.

The CRD owns and operates the Hartland Landfill, a multi-purpose site which, in addition to landfill services for general refuse and controlled waste, provides drop-off for recycling, compostable organics and household hazardous waste. Landfill capacity is limited and impacted greatly by increasing volumes of municipal solid waste.

The CRD manages the curbside single-family blue box collection service on behalf of Recycle BC (stewardship agency for packaging and printed paper).

MUNICIPAL GOVERNMENT

Municipalities in British Columbia provide services related to solid waste, such as collection of residential garbage and kitchen scraps, public realm collection through waste bins, street cleaning and pickup of illegally dumped items. Some municipalities also operate recycling collection programs with support from Recycle BC. Municipalities have bylaws and run communication programs to support service delivery. The Community Charter provides statutory authority for these services and programs.

The City of Victoria provides the following services:

- Collection of garbage and organics from single family homes, duplexes, triplexes and some ground oriented multifamily buildings
- Public realm waste, recycling and organics collection, yard waste program, including drop-off and seasonal collection
- Street cleaning/litter collection including cigarette butt recycling
- Collection of illegally dumped items

Municipalities have authorities under the *Community Charter and Local Government Act* that influence the generation of waste including zoning, permitting, business regulation and nuisance regulation. Local governments also have authority, subject to provincial approval, to make regulations for the protection of the natural environment. Since solid waste can have direct impact on the natural environment, local governments can further influence the generation of solid waste in the community by exercising this power.

Waste Generation in Victoria

Baseline

Analysis using best available data was completed to provide an estimate of the source and destination of materials generated across the community. Analysis included assessment of Victoria's portion of regional landfilled waste, by accounting for the share of regional economic activity and multifamily homes, as well as the portion of waste disposed outside the region. The baseline establishes an understanding of waste in Victoria to identify priority materials and sectors. The baseline also provides a reference point for setting targets and monitoring the performance of waste reduction measures.

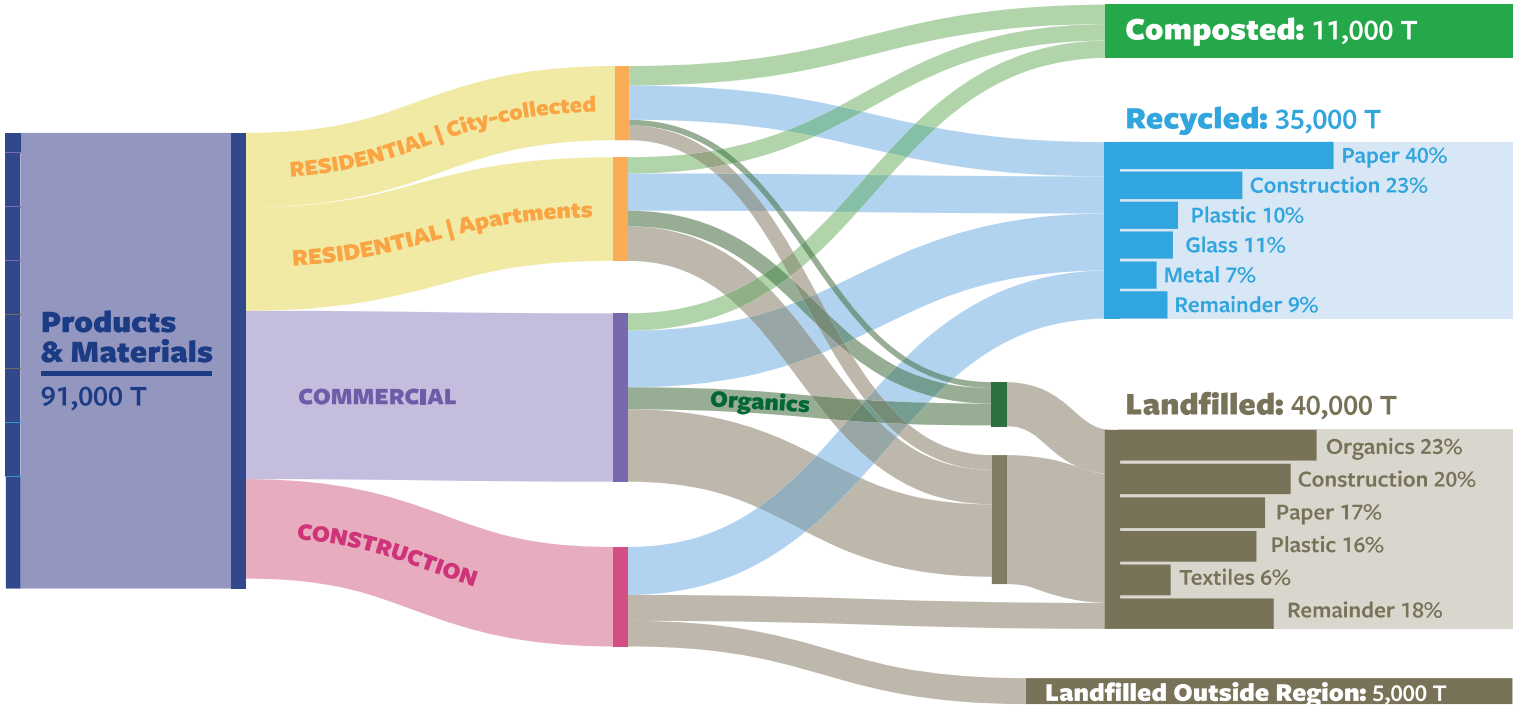


Figure 1. Average annual flow of materials in Victoria

Projections

Materials sent to landfill from Victoria are projected to increase by up to 40% by 2040 without meaningful intervention.

Analysis of the strategies proposed in Zero Waste Victoria was completed to assess their impacts on waste disposal. Based on this analysis Zero Waste Victoria established a target of a 50% reduction in landfill disposal by 2040. This target reflects the opportunity for waste reduction using existing tools available to the City of Victoria assuming ambitious implementation of the strategies. Further reductions are possible through supportive actions at higher levels of government and industry-led initiatives.

It is important to note that variables outside the scope of Zero Waste Victoria, such as economy activity, consumption behaviours and population and jobs growth will influence waste generation.

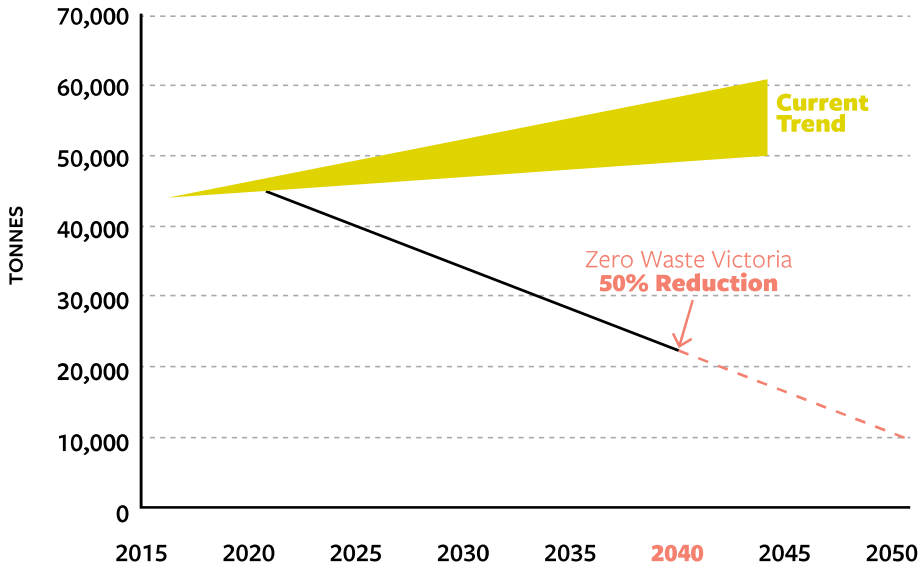


Figure 2. Landfill disposal targets

The Approach

Zero Waste Victoria draws on the frameworks of Zero Waste, the Circular Economy and the Waste Reduction Hierarchy. Specifically, Zero Waste Victoria incorporates the waste reduction hierarchy to prioritize strategies and actions. The hierarchy follows a preferential order of action from reduce, reuse, repair, repurpose, to recycle while avoiding disposal. Moreover, Zero Waste Victoria establishes three guiding initiatives to categorize waste reduction strategies based on the City's authority and influence to support the long-term vision for Zero Waste in the community as follows:

1. **Eliminate the unnecessary**
   This initiative includes strategies that address products and materials where the negative impacts to the environment and community outweigh the consumer benefits or where viable sustainable alternatives exist.

2. **Make reuse the norm**
   This initiative includes strategies that help to establish reusable products and reuse practices (including repair and refurbishment) as the default option throughout the community.

3. **Recycle the rest**
   This initiative includes strategies aimed at improving recycling for products that can no longer be used.

Underpinning each of these guiding initiatives is the recognition that the City of Victoria plays an important role in facilitating the transition to zero waste by leveraging knowledge and partners across the community and demonstrating leading waste reduction practices through its corporate operations. This includes empowering community leaders and facilitating local zero waste networking, strengthening local reuse markets, and identifying opportunities to remove barriers within the City's jurisdiction. Also crucial to Zero Waste Victoria will be collaboration and alignment with other levels of government and other municipalities.

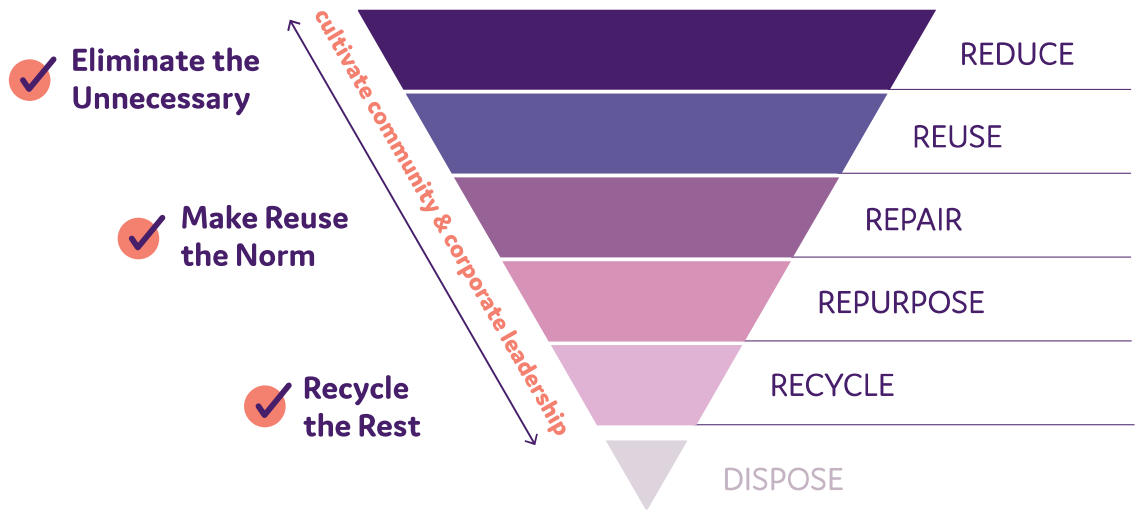


Figure 3. Waste reduction hierarchy

Tools

The strategies in Zero Waste Victoria may be implemented using a range of tools. Broadly, the tools available to the City of Victoria to reduce waste include:

- Municipal solid waste services and operations (e.g. garbage and kitchen scraps collection, public realm waste collection, litter pickup)
- Regulation, restrictions, prohibitions (e.g. material bans, fees, permits)
- Corporate procurement
- Education and outreach programs
- Advocacy to other levels of government

The actions the City takes to fulfill the strategies in Zero Waste Victoria will evolve over time, as conditions change and as we move closer to zero waste. The strategies are designed to be flexible over the duration of Zero Waste Victoria, so that the City can revisit them on a regular basis and revise the time-specific actions as needed. Where appropriate, time-specific actions could reflect a phased approach, with regulation following and supported by market approaches and voluntary measures. In other situations, the appropriateness of regulatory tools will be evaluated based on other considerations, including the existence of sustainable alternatives, community or business readiness, local capacity and understanding, and precedents in other jurisdictions.


Nutri Facts
Valeur nutritive

Focus Areas

Zero Waste Victoria focuses on four categories of waste:

- Single-Use Items & Packaging
- Built Environment (construction, renovation, and demolition products and materials)
- Food & Organics
- Durable Goods

These material categories were chosen because they comprise the largest quantity of material being sent to landfill across the community, there are significant environmental and economic benefits from reducing the disposal of these materials, and there are proven tools the City can use to make an impact.

Details, goals and strategies to reduce waste in each of the focus areas are provided in the following sections.

Single - Use Items & Packaging

Built Environment

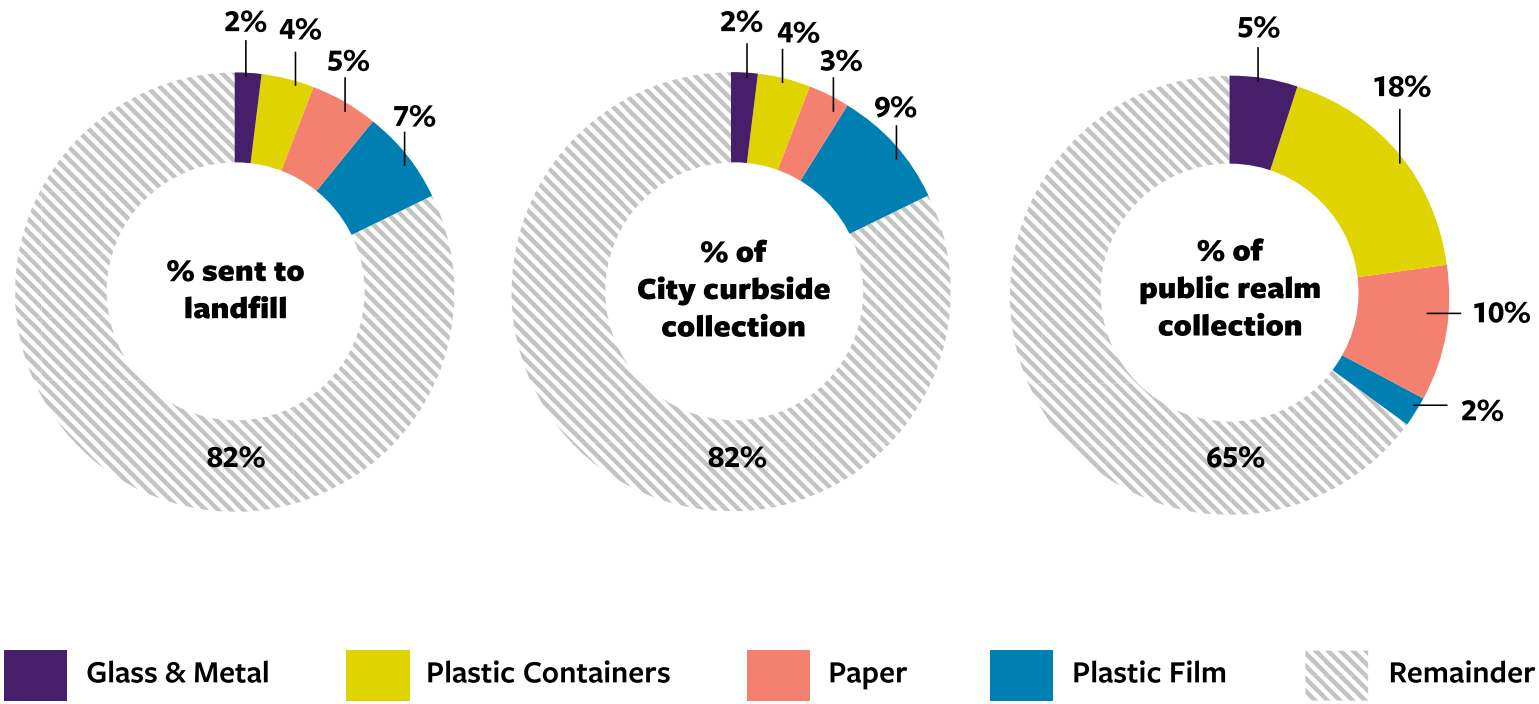
Food & Organics

Durable Goods

Single-Use Items & Packaging

DESCRIPTION

Single-Use Items (SUIs) include a range of product types that are designed for a single use and typically disposed of after one or a few uses. SUIs are heavily used in the food service sector for the purpose of convenience and in some cases to address health and safety or accessibility requirements. Commonly distributed SUIs include checkout bags, cups, containers and food service accessory items such as straws, stir sticks and cutlery. This focus area also includes other types of consumer product packaging such as boxes, plastic film and paper wrapping.


2%
4%
5%
7%
% sent to landfill
82%
2%
4%
3%
9%
% of City curbside collection
82%
5%
18%
10%
2%
% of public realm collection
65%
Glass & Metal
Plastic Containers
Paper
Plastic Film
Remainder

ISSUES

The CCME reports that global plastic pollution causes over $13 billion in environmental damages annually, while $100 to $150 billion worth of material value in plastic packaging is lost to the global economy[21]. Globally, only 14% of plastics are collected for recycling and only a portion of these are turned into products with equivalent properties.

There are numerous challenges to plastics recycling including a volatile market for recycled materials, contamination, processing technology limitations, designs that prohibit disassembly, unfavorable economics and inexpensive disposal alternatives such as landfilling and incineration[22].

While paper, glass and metal SUIs and packaging do not pose the same threats to natural areas as plastic materials when littered, their production and consumption presents other environmental impacts. The manufacture and transportation of paper bags and other packaging, even with recycled content, consumes raw materials, emits greenhouse gases, and has the potential to pollute water and air. Also, paper packaging sent to the landfill in wet climates generates methane as it breaks down.

There are also emerging issues with the increased production and use of compostable plastic SUIs and packaging. Compostable plastics and other bioplastics are made from renewable natural resources such as corn or sugarcane. Bio-based plastics are intended to reduce reliance on fossil fuels for plastic production and mitigate plastic pollution in the environment, however these products still carry a significant environmental impact during production and disposal. Compostable plastics are often screened out during the pre-processing stage at composting facilities because they are indistinguishable from conventional plastics. In addition, existing industrial composting facilities do not provide the conditions required to completely decompose these materials leading to contamination and persistence in the environment.[23] Compostable plastics also compromise the recycling of conventional plastics.

21 CCME; 2018; *Strategy on Zero Plastic Waste*; PN 1583

22 Organization for Economic Co-operation and Development; 2018; *Improving Plastics Management: Trends, Policy Responses, and the Role of International Co-operation and Trade*

23 Oregon DEQ.; Fact Sheet: Packaging Material Attributes Report; https://www.oregon.gov/deq/FilterDocs/packagingFS.pdf

The Ellen MacArthur Foundation's New Plastics Economy Initiative acknowledges "while improving recycling is crucial, we cannot recycle our way out of the plastics issues we currently face. Elimination of problematic or unnecessary plastic packaging through redesign, innovation, and new delivery models is a priority. Reuse models need to be applied where relevant, reducing the need for single-use packaging"[24].

24 Ellen MacArthur Foundation; 11 October 2019; The New Plastics Economy Global Commitment – 2019 Progress Report; https://www.newplasticseconomy.org/assets/doc/Global-Commitment-2019-Progress-Report.pdf

SINGLE-USE ITEMS AND PACKAGING IN OUR COMMUNITY

In 2019, the provincial recovery rate for overall residential packaging was 78%, while the specific recovery rate for plastic packaging was 46% and film packaging 22%.[25] Despite strong program performance relative to recycling programs in other jurisdictions, SUIs and packaging continue to be found in material sent to the Hartland Landfill. In 2016, film packaging made up 7% of the waste by weight sent to Hartland. This is a significant quantity of products considering the light weight nature of this material. Other types of packaging, such as paper packaging, corrugated cardboard, and glass, plastic and metal food and beverage containers comprised 11% of the waste sent to Hartland.[26]

An audit of waste from the City of Victoria's residential collection service in 2020 found that both plastic containers and paper packaging each comprised about 4% of the sampled weight. By item count, takeout containers and plastic bags were the most disposed SUI, followed by utensils and cups. It is estimated that the City of Victoria collects a total of 5.4 million disposed SUIs a year through its curbside collection service.

SUI and packaging waste and litter in Victoria's public spaces is a further challenge. A 2019 audit of the City's waste bins located on sidewalks and in parks indicated that cups were the most disposed SUI, followed by takeout containers and utensils (by item count). It is estimated that 25,000 SUIs are collected across the public realm by City crews every day. Plastic items are also littered on Victoria's streets, parks and beaches and the City's stormwater and sanitary infrastructure is susceptible to fouling and contamination from these plastics. Community members and businesses also contribute substantial time and funds towards initiatives such as beach cleanups and business-sponsored litter collection programs.

25 Recycle BC; 2019; Recycle BC – 2019 Annual Report; http://recyclebc.ca/wp-content/uploads/2020/06/RecycleBC2019-Final.pdf

26 CRD; December 2016; 2016 Solid Waste Stream Composition Study; https://www.crd.bc.ca/docs/default-source/recycling-waste-pdf/WasteCompositionStudy2016.pdf?sfvrsn=baab36ca_4

SHARED RESPONSIBILITY

Complementary action needs to be taken at all levels of government to reduce the waste associated with SUIs and packaging and to mitigate the impacts of plastic pollution. While the provincial EPR program for residential packaging and paper products diverts a significant quantity of recyclable material from the landfill, improvements to EPR to include commercial packaging and stronger requirements to adhere to the top of the pollution prevention hierarchy is important at the provincial level.

At a local level, the National Zero Waste Council recommends that municipalities employ the following regulatory tools to mitigate the impact of SUIs[27]:

- Controlled usage such as bans or restrictions
- Economic incentives or disincentives such as mandatory fees at point-of-sale
- Increased littering fines
- Supports for reusable packaging

CITY OF VICTORIA ACTION

The City of Victoria is well positioned to reduce unnecessary SUI and packaging waste, in concert with action by the federal and provincial governments. In keeping with the values of the community, the City can work with businesses to regulate SUIs and support viable reusable alternatives. For example, the City of Victoria took early action to mitigate plastic waste through the introduction of the Checkout Bag Regulation Bylaw. This City initiative has been embraced by the community and businesses, and helped to normalize the shift to reusable bags. The City can also work to ensure that unavoidable SUI and packaging waste is recycled, building on the existing provincial EPR program.

The City can have an additional impact by further reducing and diverting SUIs and packaging from its internal operations.

When addressing SUIs and packaging, the City must consider equity impacts. These considerations include accessibility (e.g., straws) and the affordability of reusable alternatives. It is also important to consider those members of the community who collect refundable beverage containers throughout the city and rely on redeemed deposits as a source of income.

27 National Zero Waste Council; 6 December 2019; National Zero Waste Council, Plastics Advisory Panel: Regulatory Approaches for Priority Plastic Wastes; http://www.nzwc.ca/Documents/RegulatoryApproachesforPriorityPlasticWastes.pdf

GOALS

1. **Unnecessary and problematic single-use items and packaging are eliminated**
2. **Reusable products are the default**

GUIDING INITIATIVES	STRATEGIES
Eliminate the Unnecessary	Introduce bans and/or fees for single-use items with proven sustainable alternatives
	Expand access to public drinking water fountains
Make Reuse the Norm	Facilitate the establishment of reusable container services
Recycle the Rest	Require the source separation of recyclable materials across the community
	Improve access to recycling depots
	Support consumer awareness and improved standards for compostable food and beverage packaging
	Support programs that reduce waste disposal and litter in public spaces
	Work with the tourism industry to promote local zero waste initiatives[28]
Cultivate Corporate and Community Leadership	Ensure the corporation leads the community in packaging and paper reduction and diversion
	Reduce and divert waste at special events[28]

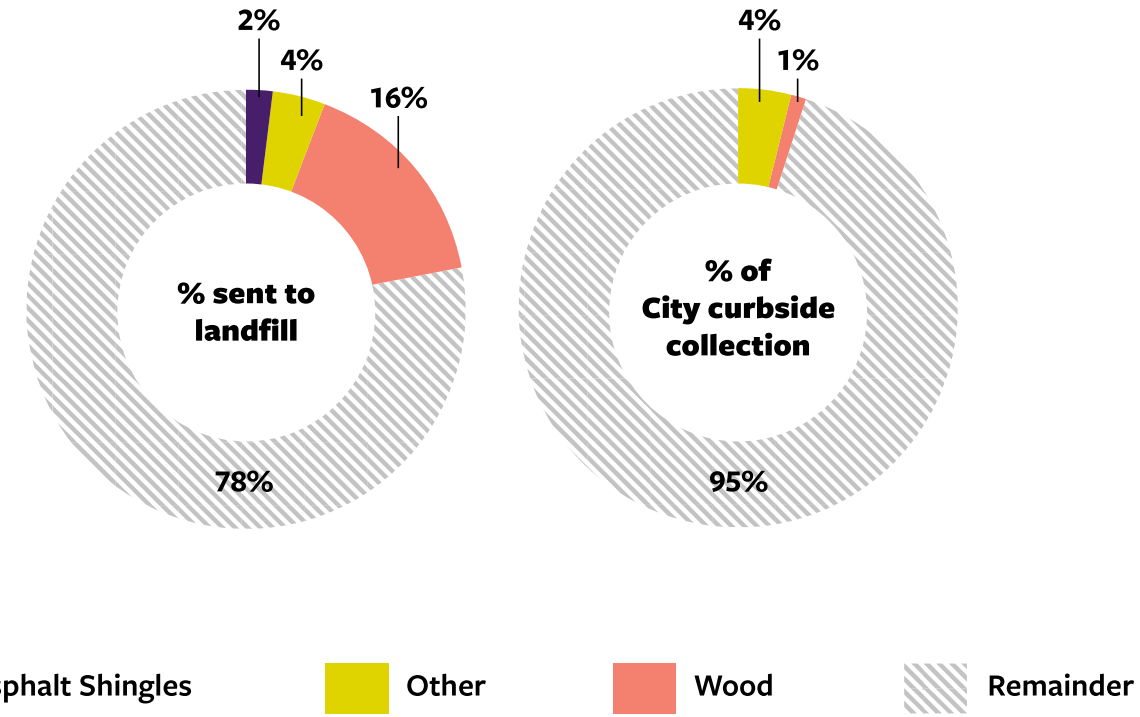
28 This strategy appears in both the Single Use Items & Packaging and Food & Organics focus areas

Built Environment

DESCRIPTION

Construction, renovation and demolition material (construction waste) includes treated wood, drywall, asphalt shingles, pallets/skids, painted wood, plywood/particle board, roofing felt, insulation, clean wood, film packaging and durable plastic products.

Construction, renovation and demolition waste streams include similar materials, however the composition of each will vary based on the activity generating the waste.


2%
4%
16%
% sent to landfill
78%
4%
1%
% of City curbside collection
95%
Asphalt Shingles
Other
Wood
Remainder

ISSUES

Construction waste makes up a significant quantity of waste sent to landfill in Canada. The construction of new buildings consumes large quantities of raw materials, such as wood, metals and minerals, which become waste when a building is demolished. Wood (clean, engineered, painted, treated), asphalt roofing and drywall are the construction materials most commonly disposed in Canada.[29]

Wood sent to landfill in a wet climate generates methane, a strong GHG, as it decomposes. Also, there is significant economic value in construction materials that could be recovered through more effective waste reduction and diversion policies.

Globally, cities are applying a range of measures to reduce construction waste streams. Efforts are also being made to apply circular economy principles to the built environment. Key initiatives include a combination of land use zoning requirements, deconstruction and recycling bylaws, encouraging design-for-disassembly practices, and providing business incentives and support to improve the market for recycled products (e.g., through procurement).

WASTE FROM THE BUILT ENVIRONMENT IN OUR COMMUNITY

Material from the construction sector makes up between 23 to 37% of Victoria's landfilled waste. Regionally, wood and wood products comprise 64% of waste from the construction and demolition sector disposed at Hartland Landfill.

Additional construction materials landfilled in the region include asphalt shingles, roofing felt, insulation, and plastics[26]. Some materials, such as metals, heritage or architectural features and structural wood have value and are already being diverted. However, there are several challenges to reducing and diverting other types of construction waste including:[28]

- Limited markets for used building materials such as wood, especially if painted or treated
- Commingled waste (lack of separation at source)
- Presence of hazardous materials, such as paint, wood coatings and asbestos
- Unknown composition of demolition waste; unknown presence of hazardous materials
- Time and labour required to separate materials or sort different types of waste
- Limited space at construction sites for bins to store separated waste

There are additional challenges for reducing construction waste in Victoria. First, the quantity and characteristics of construction waste generated in Victoria are not known with certainty. Loads of construction waste arriving at Hartland can include material from multiple municipalities, with waste haulers self-reporting a single point of origin. There is also limited public information about the amount of salvageable construction materials, the current local market demand, and the value placed on these materials. Second, a significant quantity of construction waste destined for disposal is transported off Vancouver Island to landfills in the United States or elsewhere in BC. Landfill bans and higher tipping fees can

Construction waste is generated from the process of building new structures.

Renovation waste is generated when improvements and repairs are made to existing structures. Renovation waste is a mixture of construction and demolition waste.

Demolition waste is generated when existing structures are demolished. Demolition waste is often difficult to separate for the purpose of reusing or recycling its constituent materials[29].

Deconstruction is the systematic dismantling of a structure so that building materials can be salvaged and reused. Deconstruction minimizes waste and is an alternative to demolition.

House moving is the relocation of a whole house by lifting it onto a truck or barge and transporting it to a new location. Other structures can also be moved. Moving a building enables the entire structure to be reused and avoids generating waste.

29 CCME; 2019; Guide for Identifying, Evaluating and Selecting Policies for influencing Construction, Renovation and Demolition Waste Management; https://www.ccme.ca/files/Resources/waste/wst_mgmt/CRD%20Guidance%20-%20secured.pdf

contribute to out-of-region migration but can be mitigated through supporting policy that encourages diversion. Such supporting policy could include mandatory salvage or recycling requirements, source separation bylaws or incentives.

SHARED RESPONSIBILITY

The provincial government has committed to creating EPR programs for construction materials, as part of its target to implement the CCME Canada-Wide Action Plan for EPR. However, EPR might not be the best policy approach for all building materials, given the lifespan of a building and the longevity of materials. Instead, EPR might be suitable for specific materials. For example, an assessment of EPR as a policy tool in Metro Vancouver recommends that asphalt shingles, carpet, sheet plastic, and wood are strong candidates for EPR.[30]

The CRD has taken steps to reduce construction waste disposal. Hartland Landfill has bans in place for aggregate, asbestos-containing materials, concrete, and drywall, as well as tipping fee disincentives. However, as noted above, this leads to out-of-region migration of construction waste and can lead to illegal dumping of these items. The CRD is also considering a ban on clean wood waste at Hartland Landfill.[31]

The CRD's SWMP includes a strategy focused on increasing construction materials diversion, with plans to develop a comprehensive regional strategy, as well as educational tools and resources to help drive demand for diverted materials.[30]

CITY OF VICTORIA ACTION

The Built Environment represents a significant opportunity for waste reduction in Victoria. A large quantity of construction waste is generated in Victoria. Much of this waste could be diverted, with recovery of its economic value. The City has the authority to regulate land use, with existing permitting processes in place for development and construction. The City can also influence the local market for reused and recycled construction materials, as a significant land holder/purchaser, and through major expenditures for capital projects.

The strategies below contemplate new requirements for contractors, property owners and developers to recover waste materials during construction, renovation and demolition. The strategies also include measures to strengthen the market for salvaged and recycled materials, including City procurement practices intended to increase demand for these materials.

The City is home to an innovative design and build community, with architects, developers and contractors who have demonstrated a commitment to green construction practices. There is also demand for residential and commercial development that meets a higher standard of environmental performance. The City can leverage these community assets to support implementation of the strategies below.

30 Balba, Andrea; Montauban, Cecilia; Kim, Jenny (Yeon Mi); Yeh, Debbie; 07 May 2013; Assessing the potential for extended producer responsibility in construction, renovation and demolition waste in Metro Vancouver; https://open.library.ubc.ca/cIRcle/collections/undergraduateresearch/52966/items/1.0074565

31 CRD; SWMP: Proposed Strategies and Actions; https://www.crd.bc.ca/docs/default-source/solid-waste-management-plan-2019/strategies.pdf?sfvrsn=8af064cb_2

GOALS

1. **All reusable and recyclable demolition materials are diverted from landfill**
2. **Reuse and deconstruction practices are common**
3. **Buildings are constructed to facilitate longevity and reuse, as well as deconstruction and recovery of materials at end of life**
4. **New construction minimizes waste and maximizes use of reused and recycled materials**

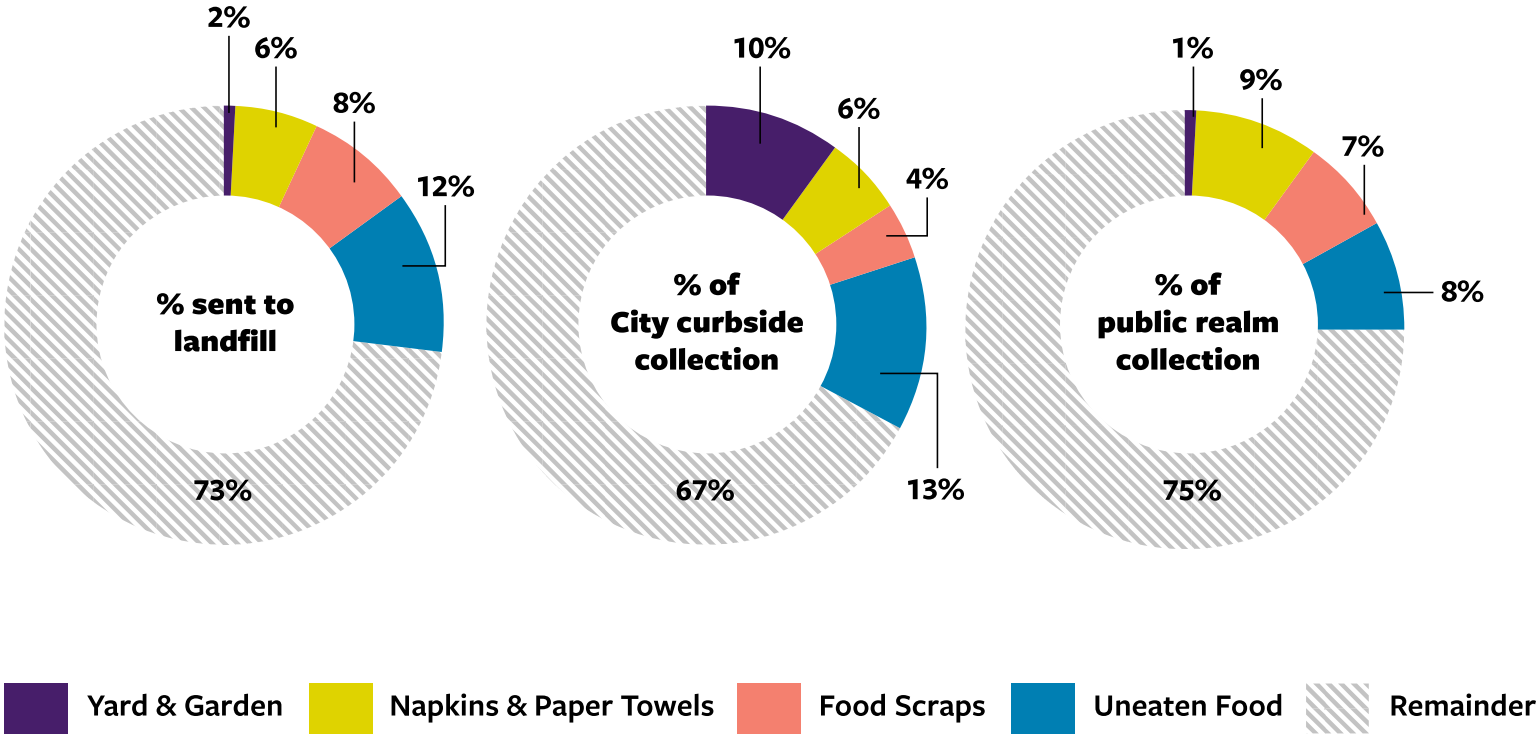
GUIDING INITIATIVES	STRATEGIES
Eliminate the Unnecessary	Regulate problematic construction products or practices that compromise material reuse and recycling
	Encourage design standards and practices that minimize waste
	Fully use and optimize existing buildings through shared and mixed use
Make Reuse the Norm	Encourage circular and adaptable design, and design for disassembly
	Support and enable house moving
	Require the salvage of reusable materials from building demolitions
Recycle the Rest	Require the recycling of materials from demolition, renovation and construction
	Work with regional partners to plan for the mitigation of waste from disasters
Cultivate Corporate and Community Leadership	Strengthen reuse markets for building materials
	Ensure City operations, roadwork and construction do not produce litter
	Improve regional waste flow data disclosure

Food & Organics

DESCRIPTION

Food waste includes unavoidable kitchen scraps such as bones, eggshells, banana peels and other trimmings created through meal preparation, and avoidable or donatable food wasted as a result of over-purchasing, not finishing meals and/or misinterpretation of best before and expiry labelling. Other organic waste includes yard and garden materials such as lawn clippings, woody debris, leaves, plant trimmings and cut flowers.

FOCUS AREA | Food & Organics



ISSUES

Approximately one third of the food produced around the world is wasted, a significant loss considering the number of people who are hungry or malnourished. This wasted food represents US$940 billion in annual economic losses, uses one quarter of the water used for agriculture globally, occupies more land than the size of China, and produces about 8% of annual global GHG emissions.[32]

Love Food Hate Waste Canada reports that 63% of household food waste in Canada is avoidable. An average household throws away $1,100 of edible food per year. That adds up to almost 2.2 million tonnes of edible food wasted each year in Canada, at a cost of more than $17 billion while contributing to Canada's GHG emissions.[33]

Sending organic waste to the landfill also has environmental impacts. The material contributes to leachate and generates methane, a strong GHG, as it decomposes in the landfill. Separating organic waste from other waste streams and treating it through composting or anaerobic digestion keeps this material out of the landfill and enables nutrient and energy recovery. Similar to the waste reduction hierarchy, the food waste hierarchy provides guidance for prioritizing actions.

32 Food Loss and Waste Protocol; About the Food Loss and Waste Accounting and Reporting Standard; https://flwprotocol.org/wp-content/uploads/2019/04/About-The-FLW-Standard.pdf

33 Love Food Hate Waste Canada; Food Waste in the Home; https://lovefoodhatewaste.ca/about/food-waste/

FOOD AND ORGANIC WASTE IN OUR COMMUNITY

Victoria collects kitchen scraps as part of its curbside residential service and runs a yard waste program. However, this does not capture all food and organic waste generated in Victoria.

Compostable organics comprised the largest share of waste disposed at Hartland by weight in 2016, amounting to 27%. Just under half of this organic waste was avoidable food waste. Waste from multifamily residences consisted of 31% compostable organics, significantly higher than the overall waste stream, while waste from the ICI sector consisted of 23% compostable organics. Landfilled organic waste from the City of Victoria produces the equivalent of about 21,000 tonnes of CO_2 annually, contributing approximately 6% of our community's GHG emissions, based on 2019 estimates.

By weight, organics are the largest share of material collected through the City's residential curbside garbage service. Almost one third of the waste sampled was made up of compostable organics, with avoidable food waste accounting for 13% of the waste sampled, yard and garden waste 10%, and unavoidable food waste 4%. The City's kitchen scraps collection service provides a system to divert this material. The quantity of organics in the Ciyt's residential collection points to ongoing opportunities to enhance the service, change behaviour and improve compliance.

Larger multifamily buildings and the ICI sector together are responsible for approximately 85% of landfilled organics from Victoria. There are several challenges with diverting this material, including limited space on residential and commercial properties for material diversion and storage, contamination of streams, and an absence of source separation requirements or standards. Low accountability is also a challenge inherent with numerous users of common waste storage bins and facilities.

There is limited capacity in the region for industrial composting of kitchen scraps. While current demand is being met, increased organics diversion and population growth will require additional capacity. Increasing the demand for compost products is an important consideration to help support the economics for additional capacity. Challenges to overcome for finding new markets for finished compost include variable compost quality, potential contamination from plastic, and limited awareness about municipal compost characteristics and production. Landscape operations form the largest market for municipal compost given fewer requirements for consistent quality.[34]

34 McIlfaterick, M; 2017; Identifying Sustainable Markets for Compost Products: An Evaluation of the Market for Compost Produced from Municipal Organic Waste and Factors Affecting Compost Utilization in Metro Vancouver; https://sustain.ubc.ca/sites/default/files/2017-17_Identifying%20Sustainable%20Markets%20for%20Compost%20Products_McIlfaterick.pdf

SHARED RESPONSIBILITY

The provincial government has set a target of 95% organic waste diverion from landfills by 2030 and continue to develop programs to support achieving this objective.

The *Food Donor Encouragement Act* also enables food rescue by limiting the liability of the donor.[35]

The CRD has a landfill ban in place for yard and garden materials, food scraps, and soiled paper products. Increased enforcement of landfill bans can substantially improve organice material diversion. Moreover, the CRD's SWMP includes a strategy focused on reducing avoidable food waste through efforts that include:

- Outreach to support residential food waste reduction,
- Working with food retailers to encourage more edible food donations and supporting food recovery organizations, and
- Advocating for regulatory clarity for 'best before' dates.[31]

The SWMP includes strategies to increase organics diversion and processing capacity.

CITY OF VICTORIA ACTION

The organics stream presents a significant opportunity to reduce waste while providing benefits in terms of food security and GHG emissions reductions. The City plays a direct role in diverting organic material from the landfill through its residential kitchen scraps collection program. The City was also a founding partner of Love Food Hate Waste Canada, an outreach campaign aimed at reducing avoidable household food waste.

Victoria and the region have several advantages that will support the City's efforts to reduce food and organic waste, such as:

- Curbside residential organics collection services
- Food rescue and distribution systems
- Industrial composting facilities
- Backyard composting
- Local food production

The City of Victoria can encourage the reduction of avoidable food waste from residents and businesses and support food rescue systems. The City can also require improvements to the source separation of organic waste and strengthen local organics processing capacity to ensure that unavoidable food waste can be composted.

35 Food Donor Encouragement Act, SBC 1997; http://www.bclaws.ca/civix/document/id/complete/statreg/00_97008_01


CITY OF VICTORIA
ZERO WASTE VICTORIA
FOOD AND PAPER
EMPTY CONTAINERS
GARBAGE
FOOD AND PAPER
EMPTY CONTAINERS
GARBAGE

GOALS

1 **All edible food is eaten**

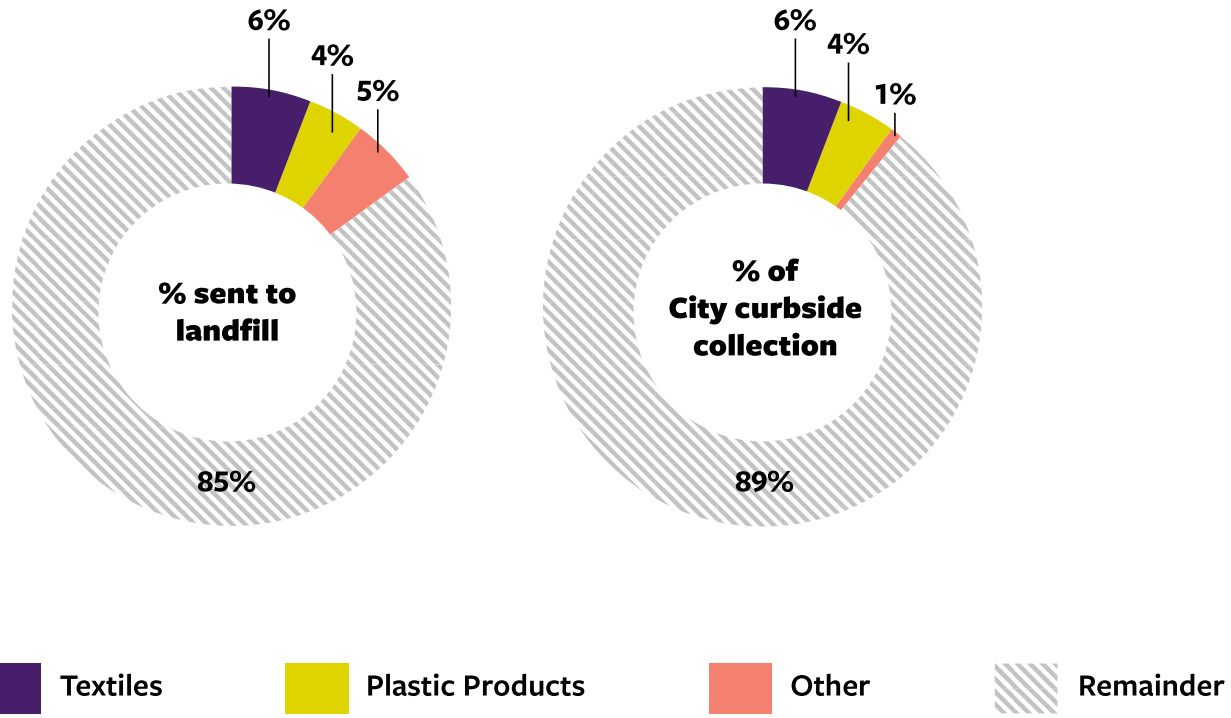
2 **All unavoidable food and organic waste is recovered**

GUIDING INITIATIVES	STRATEGIES
Eliminate the Unnecessary	Encourage reduction of avoidable food waste
Make Reuse the Norm	Strengthen food redistribution throughout the community
Recycle the Rest	Require the source separation of organic materials across the community
	Enhance or introduce municipal services to improve organics diversion
	Support regional organics processing capacity
	Work with the tourism industry to promote local zero waste initiatives[28]
Cultivate Corporate and Community Leadership	Ensure the corporation leads the community in organics reduction, redistribution and diversion
	Reduce and divert waste at special events[28]

Durable Goods

DESCRIPTION

A durable good is a consumer product that can be used regularly for long periods of time. Many consumer products fall under this category including clothing, toys, sporting goods, electronics, lawn and garden equipment and household tools, as well as bulky items such as appliances, furniture and mattresses.


6%
4%
5%
% sent to landfill
85%
6%
4%
1%
% of City curbside collection
89%
Textiles
Plastic Products
Other
Remainder

ISSUES

Durable goods include a broad range of products and materials, which are associated with numerous end-of-life management approaches, environmental considerations, and potential waste reduction solutions. Some durable goods, such as furniture, tools and textiles (e.g., clothing), have value and can be reused (perhaps with some repair) for many years, avoiding the need for disposal and conserving the natural resources needed to manufacture new products. Other durable goods, such as large appliances, are made from high value materials and can be recycled at their end of life. For many goods, quality is poor, reuse or recycling options are not available, and the inexpensive cost of new products encourages disposal and replacement. Waste reduction resulting from repair and reuse is also difficult to measure.

The reduction of durable goods waste through reuse and recycling has the potential for high economic value in terms of local job creation. Repairing and refurbishing durable goods can be labour-intensive, often requiring specialized skills. Examples of this are shoe repair, furniture refinishing and reupholstering and household appliance repair. Recycling durable goods can also require dismantling and segregating materials by hand.

DURABLE GOODS WASTE IN OUR COMMUNITY

The 2016 CRD waste composition study found that durable goods made up 15% of the waste sent to Hartland Landfill. This material was made up of small quantities of a range of different items, except for textiles, which represented 6% of the waste disposed at Hartland Landfill. The 2020 audit of waste collected through the City's residential curbside service found clothing and accessories comprised 6% of the waste sampled, and composite plastic products comprised 4%.

Durable goods, such as furniture, electronics and appliances, make up most of the illegally dumped items collected by City crews. The City of Victoria receives over 1000 service calls annually for illegally dumped items, and requests are steadily increasing year-over-year.

A 2016 report published by the Community Social Planning Council of Greater Victoria analyzed and identified priority waste streams that have the greatest potential for low-barrier job creation. Among the priority materials are textiles, carpets, and bulky items such as mattresses and furniture. The report recommends creating a recycling social enterprise for mattresses and furniture to help resolve a common waste diversion challenge while creating training and jobs for those facing barriers to employment in the community.[36]

36 Community Social Planning Council; 2020; Local Waste into Local Jobs: Labour Market Strategies for the Capital Region Resource Recovery Sector; https://communitycouncil.ca/wp-content/uploads/2020/01/Local-Waste-into-Local-Jobs-press-release-2016.pdf

SHARED RESPONSIBILITY

There are provincial EPR programs for several types of durable goods, including electronics, lighting and large and small appliances. There are currently no EPR programs for other bulky objects such as mattresses, carpets, flooring, furniture, or textiles. There are multiple barriers to recycling these materials, primarily the high cost and energy intensity of separating the composite materials. Additionally, there often aren't viable markets for the material components. Nylon and polyester carpet, which if successfully separated from the foam matting can be pelletized and sold in the plastics commodity market, is an exception.

The CRD's SWMP includes strategies to encourage waste prevention and support reuse activities in the region.

CITY OF VICTORIA ACTION

City strategies to reduce the waste from durable goods can include alternatives to purchasing durable goods and facilitating repair and reuse to extend the life of products in use. The City can leverage existing communication channels and its position as a community resource to provide guidance and promote sharing and repair initiatives. The City's recreational programming could be used to deliver educational workshops or other events that encourage durable goods waste reduction. The City can also play a leadership role by ensuring that procurement policies reduce durable goods waste generated by the City for products such as furnishings, equipment and clothing.

Measures to reduce and mitigate illegal dumping are also important for improving the management of durable goods. The City already provides street cleaning and collection for illegally dumped items, many of which are durable goods. The City can build on these services and take advantage of the associated corporate knowledge and experience. For example, the City could improve access to reuse and recycling alternatives for durable goods as a way of preventing illegal dumping and reducing waste sent to landfill. The City could also discourage illegal dumping through outreach, bylaw enforcement or by providing other disposal options.

GOALS

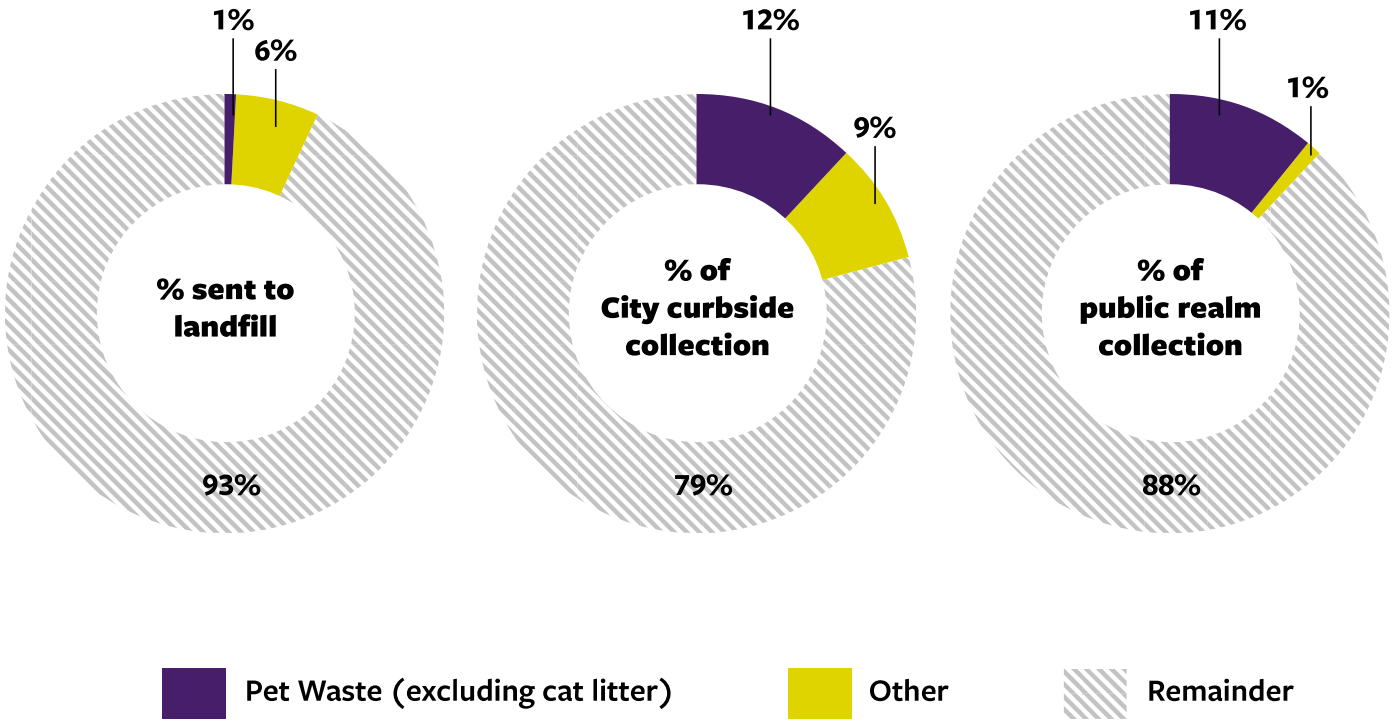
1. **All textiles are repaired or donated for reuse, repurposing or recycling**
2. **Appliance, furniture and electronic goods repair is common and accessible**
3. **All reusable and recyclable appliances and furniture are repurposed or recycled at end of life**
4. **The local sharing economy is robust and valued**

GUIDING INITIATIVES	STRATEGIES
Eliminate the Unnecessary	Encourage the purchase of experiences instead of things
	Encourage and facilitate the sharing economy
Make Reuse the Norm	Support reuse and repair to increase the longevity of durable goods
	Improve access to textile donation and collection services
Recycle the Rest	Improve access to bulky item recycling
Cultivate Corporate and Community Leadership	Establish corporate circular procurement policies
	Foster reuse and sharing culture in the workplace

Additional Wastes

DESCRIPTION

There are several other types of waste that do not fit into the categories above. While present in smaller quantities, or associated with fewer waste reduction options, these materials present challenges for the community and impacts to the environment.


1%
6%
% sent to landfill
93%
12%
9%
% of City curbside collection
79%
11%
1%
% of public realm collection
88%
Pet Waste (excluding cat litter)
Other
Remainder

ISSUES

In 2016, animal waste, cat litter, disposable diapers, and other hygiene products made up 7% of the total material sent to the Hartland Landfill.

Pet waste

Pet waste release methane when landfilled and present health and safety concerns for municipal workers handling this waste. Pet waste (excluding cat litter) comprised 12% of municipally collected residential waste during the 2020 audit. Pet waste comprised 11% of waste collected from the public realm and contributed one third of the waste collected from City parks.

Pet waste is challenging to reduce and divert. It may be possible to separate dog waste collected from public bins in City parks, however recovery or recycling of this material requires specialized facilities.

Disposable diapers and other sanitary products

Diaper contents release methane when landfilled. Disposable diapers and household hygiene products comprise 9% of municipally collected residential waste. Reusable diapers and services can support waste reduction, but disposable diapers will continue to be required for some people with disabilities.

Cigarette butts

Cigarette butts make up a large share of litter on City streets and are repeatedly the most common waste collected during beach clean ups[37]. Littered cigarette butts can be flushed into the stormwater system and end up on the shoreline. In addition, the toxins in cigarettes leach out when wet and pose a threat to marine life.

CITY OF VICTORIA ACTION

The City runs a program to collect and recycle cigarette butts discarded in public areas. There are more than 100 canisters across the community, which enable the collection and recycling of over 150,000 cigarette butts per year, helping to reduce a significant source of litter.

The actions below represent initial steps the City can take to address pet waste, disposable diapers and hygiene products. New infrastructure, technology and treatment approaches may present additional opportunities in the future.

37 Surfrider Foundation Vancouver Island; 2020; Hold On To Your Butt; https://vancouverisland.surfrider.org/hold-on-to-your-butt/

GOALS

1. **Pet waste is diverted from landfill and processed safely**
2. **Disposable diaper waste sent to landfill is minimized**
3. **Cigarette litter is eliminated**

GUIDING INITIATIVES	STRATEGIES
Eliminate the Unnecessary	
Make Reuse the Norm	Promote reusable diapers as an alternative to disposables
Recycle the Rest	Promote source separation and recycling options for pet waste
	Continue and enhance cigarette butt recycling
Cultivate Corporate and Community Leadership	


DO NOT ENTER
CAUTION DO NOT ENTER


Gravel Guard
00384
1-866-SEE-TRUX
pepsi

CITY OF VICTORIA

ZERO WASTE VICTORIA