Capital Regional District

625 Fisgard St.,
Victoria, BC V8W 1R7

Notice of Meeting and Meeting Agenda
Environmental Services Committee

Wednesday, February 17, 2021 | **1:30 PM** | **6th Floor Boardroom, 625 Fisgard St. Victoria, BC V8W 1R7**

B. Desjardins (Chair), N. Taylor (Vice Chair), D. Blackwell, L. Helps, M. Hicks, G. Holman, G. Orr, J. Ranns, K. Williams, R. Windsor, C. Plant (Board Chair, ex-officio)

The Capital Regional District strives to be a place where inclusion is paramount and all people are treated with dignity. We pledge to make our meetings a place where all feel welcome and respected.

1. Territorial Acknowledgement

2. Approval of Agenda

3. Adoption of Minutes

3.1. 21-156 Minutes of the January 20, 2021 Environmental Services Committee Meeting

Recommendation: That the minutes of the Environmental Services Committee meeting of January 20, 2021 be adopted as circulated.

Attachments: Minutes - January 20, 2021

4. Chair's Remarks

5. Presentations/Delegations

In keeping with directives from the Province of BC, this meeting will be held by Live Webcast without the public present.

To participate electronically, complete the online application for "Addressing the Board" on our website. Alternatively, you may email the CRD Board at crdboard@crd.bc.ca.

5.1. 21-154 Presentation: Larry Gardner, Manager of Solid Waste Services, Regional District of Nanaimo re: Rethink Waste - The Road to 90% Waste Diversion

Attachments: Presentation: Regional District of Nanaimo - The Road to 90% Waste Diversion

5.2. **21-163** Delegation - Jon O'Riordan; Resident of Saanich: Re: Agenda Item 5.1.: Presentation: Regional District of Nanaimo: Rethink Waste - The Road to 90% Waste Diversion

Attachments: Delegation - J. O'Riordan

5.3. 21-165 Delegation - Hugh Stephens: Resident of Juan de Fuca Electoral Area:

Re: Agenda Item 5.1. Presentation: Regional District of Nanaimo: Rethink Waste - The Road to 90% Waste Diversion and Agenda Item 6.2. City of Victoria - Zero Waste Victoria Update

Attachments: Delegation - H. Stephens

5.4. 21-166 Delegation - Elaine Klimke; Representing Mount Work Coalition: Re: Agenda Item 5.1.: Presentation: Regional District of Nanaimo: Re: Rethink Waste - The Road to 90% Waste Diversion

Attachments: Delegation - E. Klimike

6. Committee Business

6.1. 21-140 Kitchen Scraps Tipping Fee Rate

Recommendation: The Environmental Services Committee recommends to the Capital Regional District Board:
That Bylaw No. 3881, Hartland Landfill and Tipping Fee Regulation Bylaw No. 6, be amended to set the tipping fee rate for kitchen scraps at $140 per tonne beginning January 1, 2022 to offset kitchen scraps hauling and processing costs.

Attachments: Staff Report: Kitchen Scraps Tipping Fee Rate

6.2. 21-141 City of Victoria - Zero Waste Victoria Update

Recommendation: The Environmental Services Committee recommends to the Capital Regional District Board:
That this report be received for information.

Attachments: Staff Report: City of Victoria - Zero Waste Victoria Update

Appendix A: City of Victoria - Zero Waste Victoria Report

Appendix B: Zero Waste Victoria - Short Term Action Plan

Appendix C: City of Victoria Committee of the Whole Report - Dec 10, 2020

Appendix D: Participants in the Solid Waste Management System

7. Notice(s) of Motion

8. New Business

9. Adjournment

The next meeting is March 17, 2021.

To ensure quorum, please advise Sherri Closson (sclosson@crd.bc.ca) if you or your alternate cannot attend.

Capital Regional District

625 Fisgard St.,
Victoria, BC V8W 1R7

Meeting Minutes

Environmental Services Committee

Wednesday, January 20, 2021 **1:30 PM** **6th Floor Boardroom**
625 Fisgard St.
Victoria, BC V8W 1R7

PRESENT
Directors: B. Desjardins (Chair), N. Taylor (Vice Chair), D. Blackwell, L. Helps (EP), M. Hicks (EP), G. Holman (EP), G. Orr (EP), J. Ranns (1:32 pm), K. Williams (EP), C. Plant (Board Chair, ex-officio) (EP)

Staff: L. Hutcheson, General Manager, Parks and Environmental Services; R. Smith, Senior Manager, Environmental Resource Management; M. Lagoa, Deputy Corporate Officer; S. Closson, Committee Clerk (Recorder)

EP - Electronic Participation

Regrets: R. Windsor

The meeting was called to order at 1:31 pm.

1. Territorial Acknowledgement

Chair Desjardins provided a Territorial Acknowledgement.

2. Approval of Agenda

MOVED by Director Taylor, SECONDED by Director Blackwell,
That the agenda for the January 20, 2021 Environmental Services Committee meeting be approved.
CARRIED

3. Adoption of Minutes

3.1. 21-086 Minutes of the October 21, 2020 Environmental Services Committee Meeting

MOVED by Director Ranns, SECONDED by Director Taylor,
That the minutes of the Environmental Services Committee meeting of October 21, 2020 be adopted as circulated.
CARRIED

4. Chair's Remarks

The Chair noted that it is an exciting time for our region and for environmental initiatives. COVID and our subsequent actions to respond to COVID has shown our human environmental footprint. From 2019 to 2020 we saw a drop in noise

and air pollution from less travel, and an increase in waste as we returned to plastics for safety measures. With the draft Solid Waste Management Plan, we have an opportunity to learn from the impact of COVID in the short term for best management of waste in the long term. The CRD has been a leader in environmental protection in the past and we need to make decisions and move forward on our management for the future.

The Chair also referred to a South Island Prosperity Partnership presentation from earlier in the day called "Confident and Competitive - Canada's Role as an Economic Leader in the 21st Century". One of the speakers was noted as saying that "Canada is great at innovation but not at innovation adoption" and the Chair on the basis of that comment, went on to tell the committee that it is now time.

Chair Desjardins completed her remarks by thanking the Board Chair Plant for the opportunity to chair the committee and is ready to move the committee forward in getting to work.

5. Presentations/Delegations

There were no presentations or delegations.

6. Committee Business

6.1. 21-044 2021 Environmental Services Committee Terms of Reference

L. Hutcheson provided an overview of the Terms of Reference and noted the addition of First Nation committee membership wording in the document.

Discussion ensued on the rationale for not permitting Board members to vote at a committee meeting with a possible future discussion at the Board level.

MOVED by Director Blackwell, SECONDED by Director Taylor,
That the Environmental Services Committee receive the 2021 Terms of Reference, attached as Appendix A.
CARRIED

6.2. 21-080 2021 Solid Waste Advisory Committee Terms of Reference

L. Hutcheson provided an overview of the Terms of Reference for the Solid Waste Advisory Committee (SWAC).

Discussion ensued on the following:
- definition of "major" solid waste management matters
- clarification to the scope of SWAC
- SWAC's role in measuring the success and progress on the draft Solid Waste Management Plan goals and targets

Discussion ensued on the amendment regarding representation:
- membership growth and composition numbers
- skill and experience of members
- Highlands representation

MOVED by Director Taylor, SECONDED by Director Ranns,
That the Solid Waste Advisory Committee Terms of Reference be amended to include a Solid Waste Technology Representative.
CARRIED

MOVED by Director Taylor, SECONDED by Director Blackwell,
That the Environmental Services Committee approve the 2021 Terms of Reference for the Solid Waste Advisory Committee as amended.
CARRIED

6.3. 21-058 Results from Solid Waste Advisory Committee Self-Evaluation Surveys

R. Smith provided an overview of the Solid Waste Advisory Committee Self - Evaluation Survey results.
Director Taylor spoke further to this item.

Discussion ensued on the level of work completed by the committee on the survey in relation to the amount of staff time.

MOVED by Director Blackwell, SECONDED by Director Ranns,
The Environmental Services Committee recommends to the Capital Regional District Board:
That this report be received for information and that no changes be made to the Solid Waste Advisory Committee Terms of Reference.
CARRIED

6.4. 21-053 Solid Waste Advisory Committee Motion of November 6, 2020

R. Smith provided an overview of the Solid Waste Advisory Committee Motion of November 6, 2020 regarding waste reduction targets.

Discussion ensued on the following:
- options for future targets
- anticipated costs
- thermal and emerging technologies
- Enerkem consultation
- timeline for provincial submission
- waste target initiatives
- current staff direction

MOVED by Director Taylor, SECONDED by Director Helps,
That staff be directed to continue work on updating the Solid Waste Management Plan and that staff be directed to report back as soon as reasonably practical after the approval of the Solid Waste Management Plan on measures that can be taken to achieve more aggressive waste reduction targets.
CARRIED
OPPOSED: Blackwell, Holman, Plant, Ranns

6.5. 21-081 Solid Waste Management Plan Consultation - Phase 2 - Verbal Update

R. Smith provided a verbal update on the Solid Waste Management Plan Consultation - Phase 2.

Discussion ensued on the following:

- composting of food waste
- future discussions at Board
- consultation with Highlands and other communities

MOVED by Director Blackwell, SECONDED by Director Ranns,
That the verbal update be received for information.
CARRIED

7. Notice(s) of Motion

There were no Notice(s) of Motion.

8. New Business

There was no new business.

9. Adjournment

MOVED by Director Blackwell, SECONDED by Director Taylor,
That the January 20, 2021 Environmental Services Committee meeting be adjourned at 2:33 pm.
CARRIED

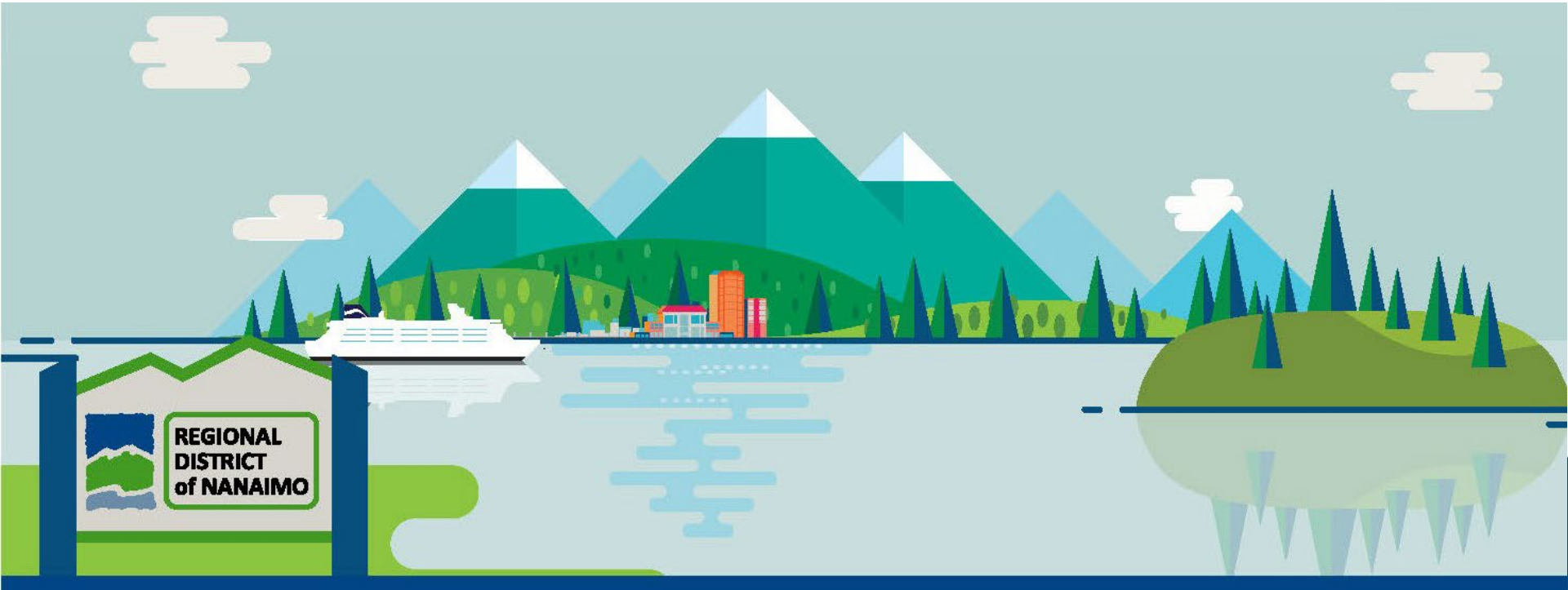
_____
CHAIR

_____
RECORDER

RETHINK WASTE

The Road to 90% Waste Diversion

Larry Gardner, AscT, Eng.L
Manager, Solid Waste Services
Regional District of Nanaimo



Rethink Waste: New Programs

Expanded Programs

ICI / C&D Waste Strategy

Zero Waste Education

New Programs

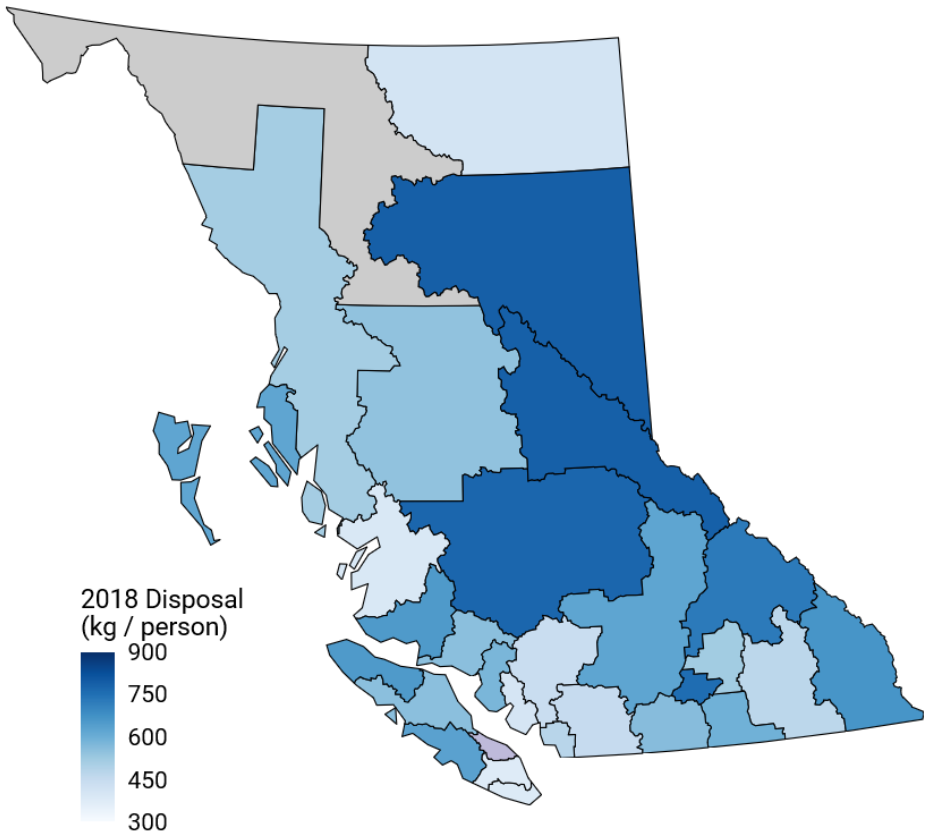
Household Hazardous Waste

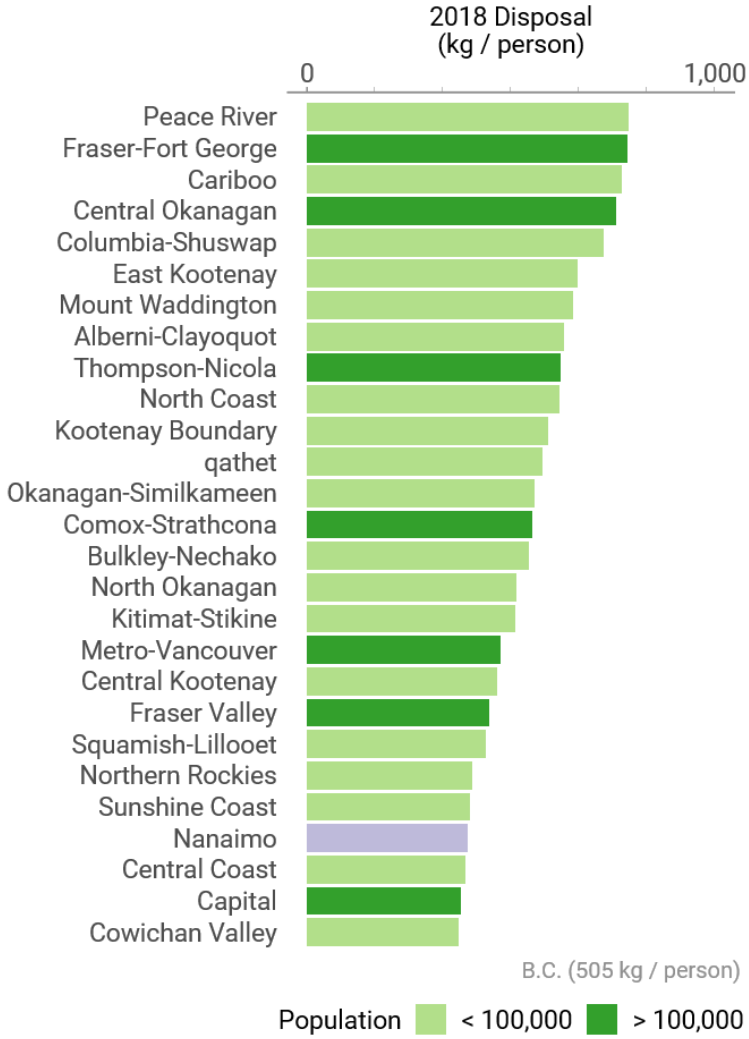
Waste Hauler Licensing

Mandatory Waste Source Separation

Solid Waste Management Plan

Watch RDN Solid Waste Management Plan Consultation video here:
https://www.youtube.com/watch?v=rIAZtFeTXoM


2018 Disposal
(kg / person)
900
750
600
450
300


2018 Disposal
(kg / person)
0
1,000
Peace River
Fraser-Fort George
Cariboo
Central Okanagan
Columbia-Shuswap
East Kootenay
Mount Waddington
Alberni-Clayoquot
Thompson-Nicola
North Coast
Kootenay Boundary
qathet
Okanagan-Similkameen
Comox-Strathcona
Bulkley-Nechako
North Okanagan
Kitimat-Stikine
Metro-Vancouver
Central Kootenay
Fraser Valley
Squamish-Lillooet
Northern Rockies
Sunshine Coast
Nanaimo
Central Coast
Capital
Cowichan Valley
B.C. (505 kg / person)
Population
< 100,000
> 100,000

How have we achieved success to date?

Watch video here:
https://cloud.rdn.bc.ca/s/tiXPYYbooScnRtJ?dir=undefined&openfile=348892

How have we achieved success to date?

Watch video here:
https://cloud.rdn.bc.ca/s/tiXPYYbooScnRtJ?dir=undefined&openfile=348882

How have we achieved success to date?

Watch video here:
https://cloud.rdn.bc.ca/s/tiXPYYbooScnRtJ?dir=undefined&openfile=348840

How do we leverage past success for the future?

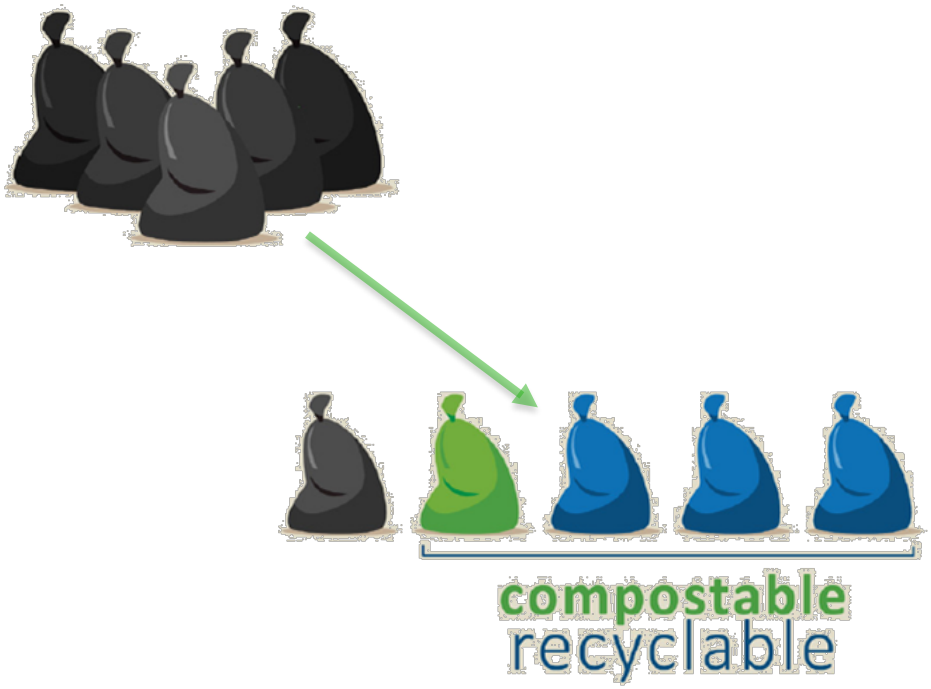
- Grow the waste industry on more and better service?
- Encourage diversion over disposal?
- Provide more convenience to residents?

Develop an economic model that encourages these behaviors.

Mandatory Waste Source Separation

Waste Hauler Licensing

Mandatory Waste Source Separation



- Commercial
- Multi-Unit Homes
- Institutions

Waste Hauler Licensing

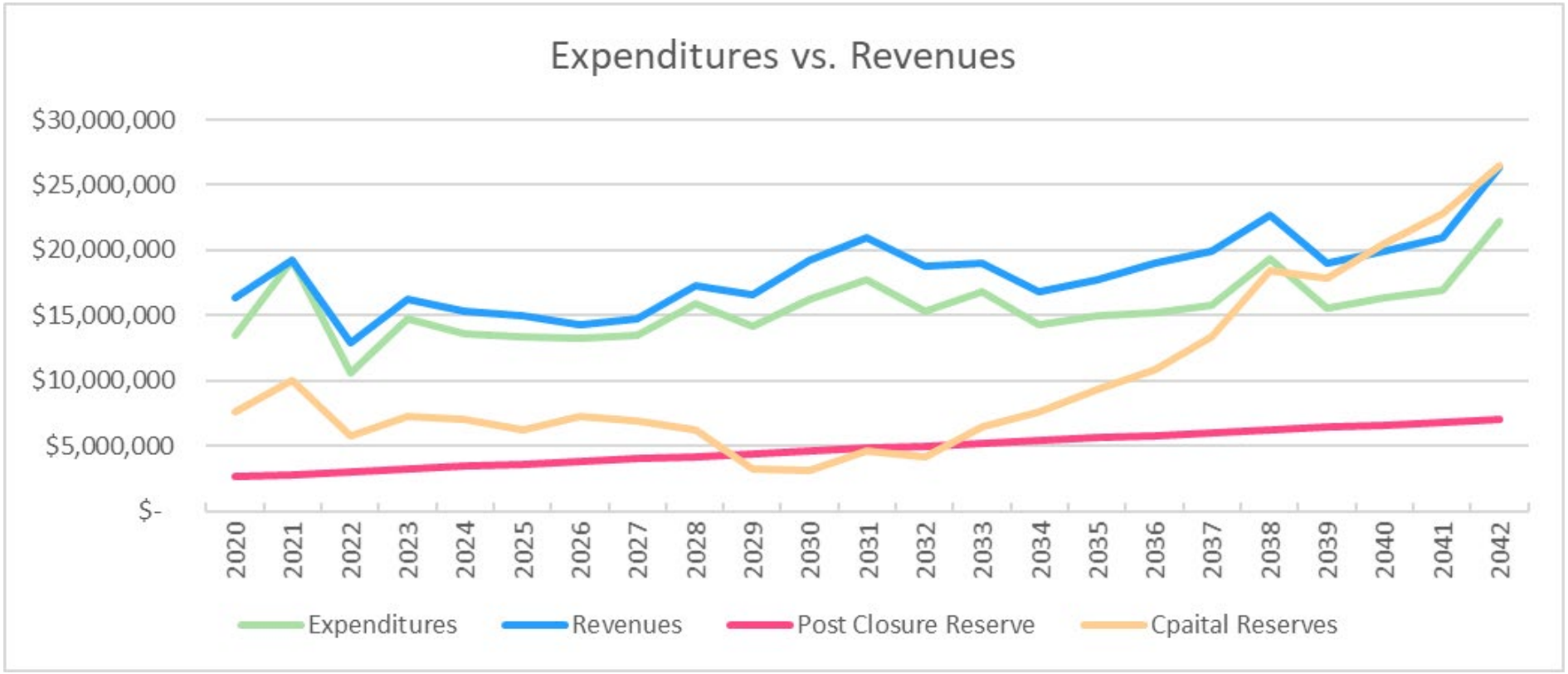
Disposal levy

Reduced tip fee

Rethink Waste Diversion

New Zero Waste Programs	Implementation Year	Estimated Diversion
Expanded Zero Waste Education	2019	**Not Quantifiable**
Household Hazardous Waste	2019	**<1%**
Expanded Industrial, Commercial and Institutional Waste Management Diversion	2019	**3 %**
Expanded Construction and Demolition Waste Diversion	2019	**3%**
Waste Haulers Licensing	2020-21	**10%**
Mandatory Waste Source Separation	2020-22	
Solid Waste Emergency/Disaster Response Plan	2023	**N/A**
Zero Waste Recycling	2020	**1%**
	New Program Diversion	**17%**
	Existing Diversion	**68%**
	Anticipated Diversion Through Federal/Provincial Programs	**5%**
	Total	**90%**

How do we pay for it?



Questions?

Thank you

Sherri Closson

From: Legserv
Subject: FW: Addressing the Board - Submission

Your name::
Jon O'Riordan

Municipality/Electoral Area in which you reside::
Saanich

I wish to address::
Environmental Services Committee

Meeting Date::
Feb 17, 2021, 1:30pm

Agenda Item::
Solid Waste Management Plan

My reason(s) for appearing (is/are) and the substance of my presentation is as follows::
Comment on tipping Fee presentation by Regional District of Nanaimo

I will have a PowerPoint or video presentation and will submit it at least 24 hours in advance of the meeting.:
No (one slide)

The meeting and my presentation will be webstreamed live via the CRD website and recorded.:
I understand

Sherri Closson

From: Legserv
Subject: FW: Addressing the Board - Submission

Your name::
HUGH STEPHENS

Municipality/Electoral Area in which you reside::
Juan de Fuca E.A.

I wish to address::
Environmental Services Committee

Meeting Date::
February 17

Agenda Item::
5.1 21-154 and 6.2 21-141

My reason(s) for appearing (is/are) and the substance of my presentation is as follows::
I am encouraged that the ESC is hearing from other jurisdictions that are pursuing zero waste more energetically than the CRD's current SWMP because I am opposed to the current plan's goals which will lead directly to expansion of Hartland Landfill by removing 73 acres of forest, beginning in 2030. It is essential that the CRD adopt more aggressive waste reduction targets and plans, with funding behind them. to avoid an expansion scenario. I would like to comment on aspects of Nanaimo's strategy and Victoria's zero waste strategy that are relevant to the CRD's current SWMP, a Plan that is presently open for public consultation and which will be presented to the ESC and CRD Board this spring or summer.

I will have a PowerPoint or video presentation and will submit it at least 24 hours in advance of the meeting.:
No

The meeting and my presentation will be webstreamed live via the CRD website and recorded.:
I understand

Sherri Closson

From: Legserv
Subject: FW: Addressing the Board - Submission

Your name::
Elaine Klimke

I represent::
Mount Work Coalition

Municipality/Electoral Area in which you reside::
Juan de Fuca E.A.

I wish to address::
Environmental Services Committee

Meeting Date::
February 17, 2021

Agenda Item::
5.1. 21-154 Presentation: Larry Gardner, Manager of Solid Waste Services, Regional District of Nanaimo re: Rethink Waste - The Road to 90% Waste Diversion

My reason(s) for appearing (is/are) and the substance of my presentation is as follows::
Mount Work Coalition is a group of and consists of concerned and engaged citizens who have come together to create a registered not-for-profit (The Society for the Protection of the Mount Work Region) with the vision that the Mount Work region can be a generational legacy of green space that supports biodiversity, addresses climate change and reduces the impact of human activity on the environment.

We are opposed to a landfill expansion at Hartland because it will have a negative impact on the Mount Work Park. I speak in favour of the Regional District of Nanaimo's Rethink Waste initiatives that reduce waste going to landfills which create methane gases released into the environment and support all other forward thinking measures and technologies to overall reduce the size of landfills.

I will have a PowerPoint or video presentation and will submit it at least 24 hours in advance of the meeting.:
No

The meeting and my presentation will be webstreamed live via the CRD website and recorded.:
I understand

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ERM 21-08

REPORT TO ENVIRONMENTAL SERVICES COMMITTEE
MEETING OF WEDNESDAY, FEBRUARY 17, 2021

SUBJECT **Kitchen Scraps Tipping Fee Rate**

ISSUE SUMMARY

To seek direction regarding the tipping fee charged at the Hartland Landfill transfer station for source-separated kitchen scraps.

BACKGROUND

At its November 18, 2020 meeting, the Capital Regional District (CRD) Board approved a new Kitchen Scraps Hauling and Processing contract and directed staff to bring back a report to the Environmental Services Committee on aligning tipping fees with actual costs. Under the new contract, the cost to haul and process kitchen scraps to create compost and energy for beneficial use in compliance with regulatory requirements will result in a projected subsidy over the term of the contract of approximately $972,000. The tipping fee at the Hartland transfer station for source-separated kitchen scraps is currently $120 per tonne. The kitchen scraps tipping fee was increased from $110 to $120 per tonne in 2016. Since 2017, the cost to haul and process kitchen scraps has exceeded the tipping fee charge set by the Board, resulting in the subsidization of the Hartland kitchen scraps transfer station.

Any proposed change to kitchen scraps tipping fee will need to occur no earlier than 2022, to account for the municipal budget cycle.

ALTERNATIVES

Alternative 1

The Environmental Services Committee recommends to the Capital Regional District Board:

That Bylaw No. 3881, Hartland Landfill and Tipping Fee Regulation Bylaw No. 6, be amended to set the tipping fee rate for kitchen scraps at $140 per tonne beginning January 1, 2022 to offset kitchen scraps hauling and processing costs.

Alternative 2

That the Hartland tipping fee rate for kitchen scraps be maintained at $120 per tonne.

FINANCIAL IMPLICATIONS

The cost to haul and process kitchen scraps under Contract 30.20.16-1 (March 1, 2021-February 28, 2025) will be $138.60 per tonne, meaning the CRD will incur a net loss of $18.60 per tonne of kitchen scraps it receives at Hartland for a total annual net subsidy of about $223,000 in the first year of the contract. Since the contract contains a 1.5% inflation adjustment that will come into effect January 1, 2022, this loss will grow to $20.68 per tonne for the remainder of the contract, assuming the tipping fee remains unchanged, for a total project subsidy over the term of the contract of approximately $972,000, as follows:

Year	Annual Tonnage	Tipping Fee	Processing Fee	Difference	Total Annual Loss
2021	10,000	$120.00	$138.60	-$18.60	-$186,000.00
2022	12,000	$120.00	$140.68	-$20.68	-$248,148.00
2023	12,000	$120.00	$140.68	-$20.68	-$248,148.00
2024	12,000	$120.00	$140.68	-$20.68	-$248,148.00
2025	2,000	$120.00	$140.68	-$20.68	-$41,358.00
				Total Subsidy	**-$971,802.00**

This subsidy can be curtailed by adjusting the fee levied at Hartland for the receipt of kitchen scraps, as follows:

Year	Estimated Tonnage	Tipping Fee	Processing Fee	Difference	Total Annual Loss
2021	10,000	$120.00	$138.60	-$18.60	-$186,000.00
2022	12,000	$140.00	$140.68	-$0.68	-$8,148.00
2023	12,000	$140.00	$140.68	-$0.68	-$8,148.00
2024	12,000	$140.00	$140.68	-$0.68	-$8,148.00
2025	2,000	$140.00	$140.68	-$0.68	-$1,358.00
				Total Subsidy	**-$211,802.00**

Bylaw No. 3881, Hartland Landfill and Tipping Fee Regulation Bylaw No. 6, could be amended to increase the tipping fee for kitchen scraps to offset processing costs. This would necessitate a rate of $140 per tonne, which represents an increase of about 17%. In order to provide time for both municipalities to adjust their budgets, and for businesses to adjust rates charged to their customers, should the Board wish to implement an increased tipping fee, it is recommended that it be put into effect January 1, 2022.

It should also be noted that a tipping fee of $140 per tonne may result in a decrease in the quantity of kitchen scraps received at the transfer station, as private haulers may seek to find other less costly alternatives.

INTERGOVERNMENTAL IMPLICATIONS

Kitchen scraps collected by the municipalities of Esquimalt, Sidney and View Royal have historically been managed through CRD kitchen scraps hauling and processing contracts. Increasing the tipping fee for kitchen scraps under Alternative 1 will require these municipalities to increase the budgets for their programs.

Victoria, Oak Bay and Saanich have made separate arrangements for the processing of their kitchen scraps which, in the case of the latter municipality, are co-collected with yard and garden material.

ENVIRONMENTAL IMPLICATIONS

The diversion of kitchen scraps saves landfill air space and reduces greenhouse gas emissions by avoiding methane generation at Hartland Landfill. The finished compost produced from kitchen scraps can also help reduce the use of fossil-fuel based fertilizers when used in agriculture. The higher tipping fee posed under Alternative 1 may serve as a disincentive to divert kitchen scraps. Alternative 2 will help to facilitate the diversion of kitchen scraps by maintaining a subsidized kitchen scraps diversion option to both public and private haulers using the Hartland transfer station.

CONCLUSION

The current Hartland kitchen scraps tipping fee is $120 per tonne; however, the rate the CRD will pay to manage these materials under the four-year hauling and processing contract that is scheduled to begin March 1, 2021 is $138.60 and will rise to $140.68 by January 1, 2022. This represents a net average cost to the CRD of approximately $20.16 per tonne over the four years of that contract. Amending Bylaw 3881 to increase the tipping fee for kitchen scraps to $140 per tonne beginning January 1, 2022 would significantly reduce the subsidy over the term of the contract.

RECOMMENDATION

The Environmental Services Committee recommends to the Capital Regional District Board:

That Bylaw No. 3881, Hartland Landfill and Tipping Fee Regulation Bylaw No. 6, be amended to set the tipping fee rate for kitchen scraps at $140 per tonne beginning January 1, 2022 to offset kitchen scraps hauling and processing costs.

Submitted by:	Russ Smith, Senior Manager, Environmental Resource Management
Concurrence:	Larisa Hutcheson, P. Eng., General Manager, Parks & Environmental Services
Concurrence:	Robert Lapham, MCIP, RPP, Chief Administrative Officer

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ERM 21-09

REPORT TO ENVIRONMENTAL SERVICES COMMITTEE
MEETING OF WEDNESDAY, FEBRUARY 17, 2021

SUBJECT **City of Victoria – Zero Waste Victoria Update**

ISSUE SUMMARY

To provide an update on waste reduction and material diversion initiatives being pursued by the Zero Waste Victoria strategy and to provide an update on synergies with the Solid Waste Management Plan (SWMP) being prepared for Capital Regional District (CRD) Board consideration, anticipated this spring.

BACKGROUND

Approved in December 2020, Zero Waste Victoria (Appendix A) is a City of Victoria (City) strategy document aimed at a 50% reduction in the amount of material being sent to the landfill by 2040 – from Victoria residents, businesses, institutions and visitors. As described in the report to Council (Appendix B), Zero Waste Victoria is a result of the City's role as a service provider, evolving beyond managing just garbage and litter to one that supports waste reduction and diversion, builds on current programs for the collection of organic material and recyclables and aligns with climate leadership and environmental stewardship objectives set out by the City.

To establish key areas of focus, the City conducted a comprehensive analysis of waste generation across all sectors of the community. It was estimated that up to 1/3 of the material being sent to Hartland Landfill originates from within the City. The results of the City's waste composition audit align with findings in the 2016 CRD Waste Composition Study, with organic material representing approximately 23% of the material being landfilled followed by construction material, including wood waste at 20%, paper at 17% and plastic at 16%.

Zero Waste Victoria – key actions to achieve a 50% reduction in landfilled waste by 2040:

- development of new single-use item regulations
- changes to building permits to reuse and recycle materials from building demolitions
- new requirements for organics and recycling at multi-family and commercial properties
- enhancements to the City's solid waste services

The City's short-term action plan, which identifies strategies for implementation from 2021-2023, is included as Appendix C.

IMPLICATIONS

Alignment with Existing Plans & Strategies

The CRD's draft SWMP outlines ways the community will work to reduce, reuse, recycle and recover materials and energy from the solid waste stream as much as possible over the next ten years. By moving waste materials up the 5R hierarchy, the SWMP will keep materials circulating in the economy, conserve landfill space and efficiently use the Hartland site for future community

needs while continuing to investigate emerging technologies for managing residual waste materials.

The SWMP includes an ambitious target of reducing the per capita disposal rate from 380 kg to 250 kg per capita within the next ten years and includes an aspirational goal to achieve 125 kg per capita should the community achieve the target quickly. This translates to a 33% reduction in landfilled waste by 2030.

To achieve the target set out in the SWMP, participants in the solid waste systems, such as municipalities, will play an important role. Strategies in the SWMP include collaboration with municipalities in the following areas:

- reduce and reuse education campaigns
- zero waste and circular economy initiatives
- solid waste facilities and residential recycling depots
- waste management plan requirements (multi-family and business sectors)
- organic material diversion
- construction, renovation and demolition material diversion
- illegal dumping prevention
- procurement policies

Zero Waste Victoria sets a reduction target of 50% by 2040, which aligns with the overarching reduction target for the region outlined in the SWMP of 33% by 2030. Strategies such as those identified in Zero Waste Victoria will contribute to our community achieving its solid waste goals.

It is anticipated that with the adoption of the SWMP, work conducted in collaboration with member municipalities will increase as resources required for implementation of the Plan's strategies and actions progress.

Intergovernmental Implications

The regional model for waste management is built on separation at the source—on residents and businesses keeping banned and recyclable materials out of their garbage from their households and through operational practices. This work will require continued collaboration with other levels of government that have jurisdiction on items such as mandating source separation, obligating producers and regulating production of products. Appendix D provides a detailed description of participants' roles in the solid waste management system.

Environmental & Climate Implications

In 2019, the CRD Board identified Climate Action & Environmental Stewardship as a priority for the region and approved a motion to declare a climate emergency. The CRD's regional climate action strategy sets a climate action goal to minimize waste generation and transform remaining waste into a resource.

Strategies and actions identified in the SWMP targeted at waste avoidance, reduction and reuse shifts products away from being managed in a linear economy (take, make, throw) to a recycling and ultimately circular economy, thereby reducing climate impacts associated with extracting raw materials. When the community, such as the City, decreases their generation of waste and material directed to landfill, greenhouse gas production is also reduced.

CONCLUSION

Zero Waste Victoria sets a waste reduction target of 50% by 2040, which aligns with the overarching reduction target for the region outlined in the Solid Waste Management Plan of 33% by 2030. Strategies such as those identified in Zero Waste Victoria will contribute to our community achieving its solid waste goals.

RECOMMENDATION

The Environmental Services Committee recommends to the Capital Regional District Board:

That this report be received for information.

Submitted by:	Russ Smith, Senior Manager, Environmental Resource Management
Concurrence:	Larisa Hutcheson, P. Eng., General Manager, Parks & Environmental Services
Concurrence:	Robert Lapham, MCIP, RPP, Chief Administrative Officer

ATTACHMENTS

Appendix A: City of Victoria - Zero Waste Victoria
Appendix B: Zero Waste Victoria – Short Term Action Plan
Appendix C: City of Victoria, Committee of the Whole Report – December 10, 2020
Appendix D: Participants in the Solid Waste Management System

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

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).

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**

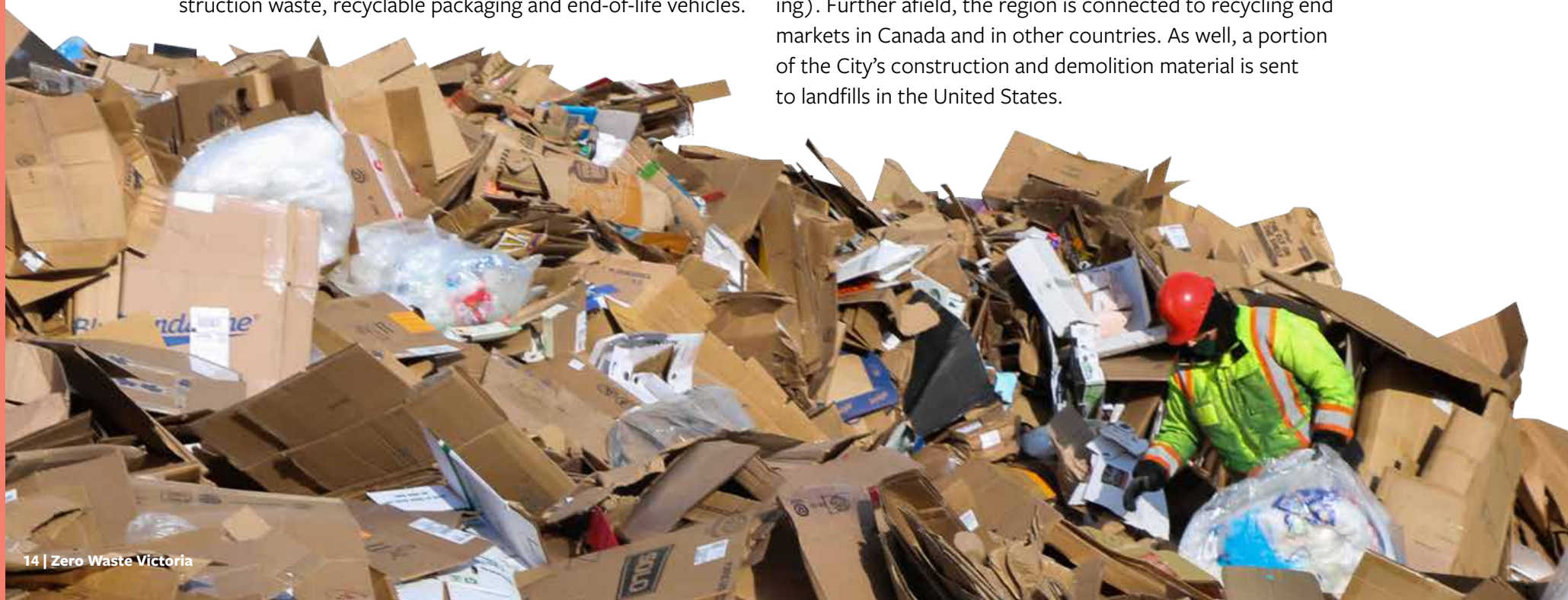
Our Waste Management System

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 responsible for residential packaging and paper products.

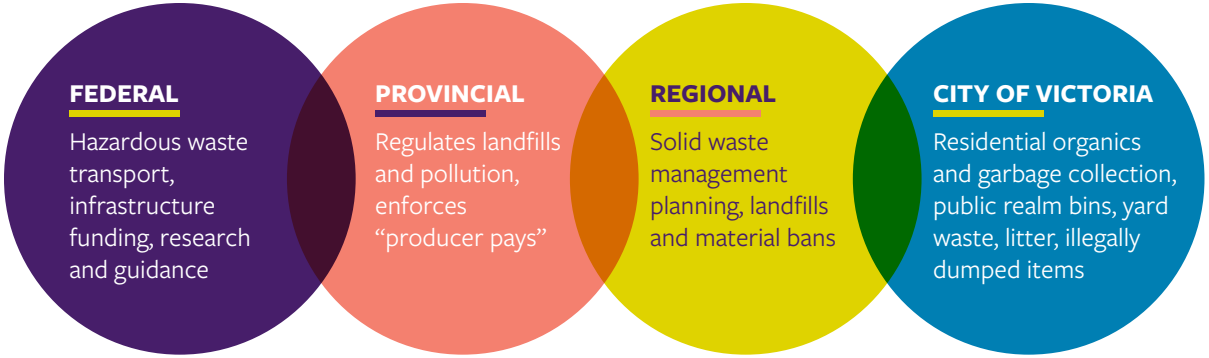
Depots serve as drop-off locations and transfer points for numerous types of ICI and residential material, including construction waste, recyclable packaging and end-of-life vehicles.

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.

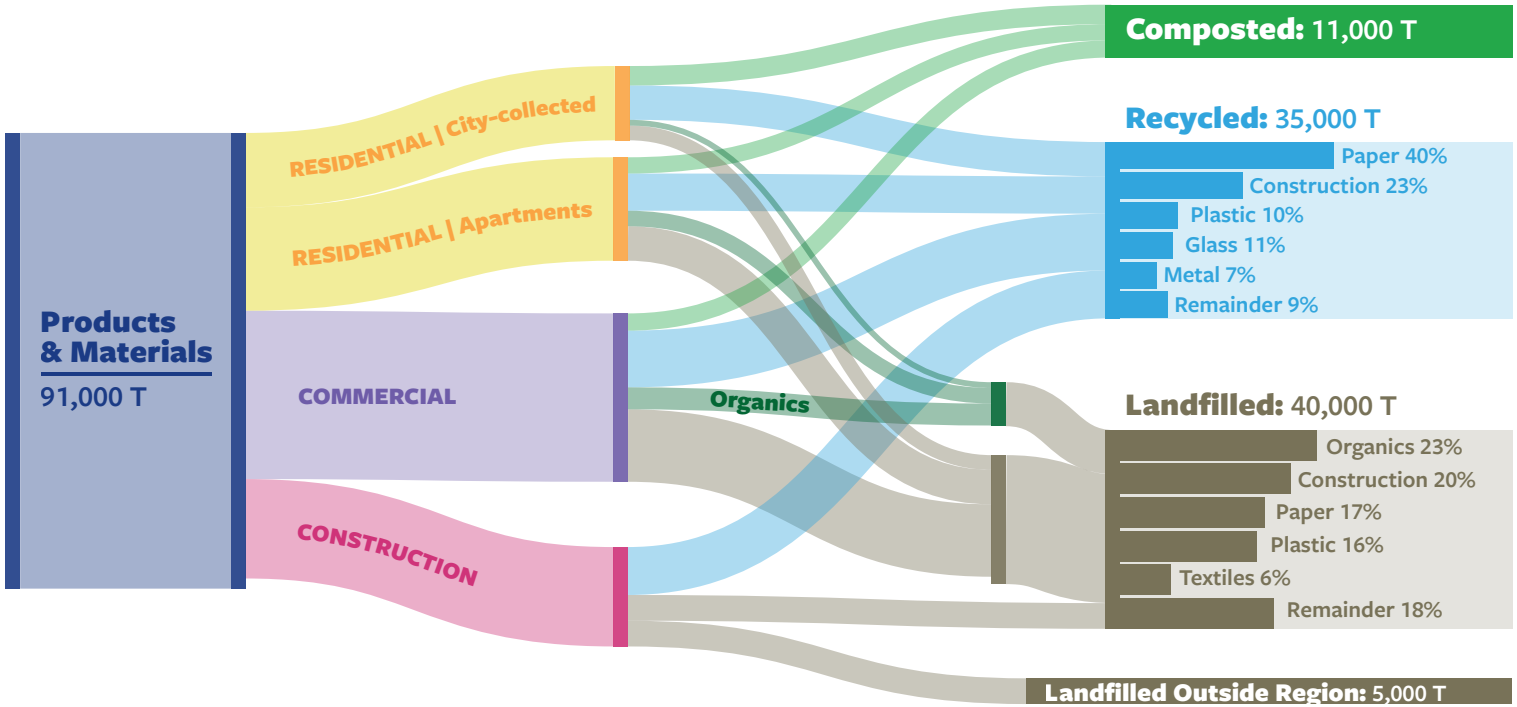


Figure 1. Average annual flow of materials in Victoria

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 economic activity, consumption behaviours and population and jobs growth will influence waste generation.

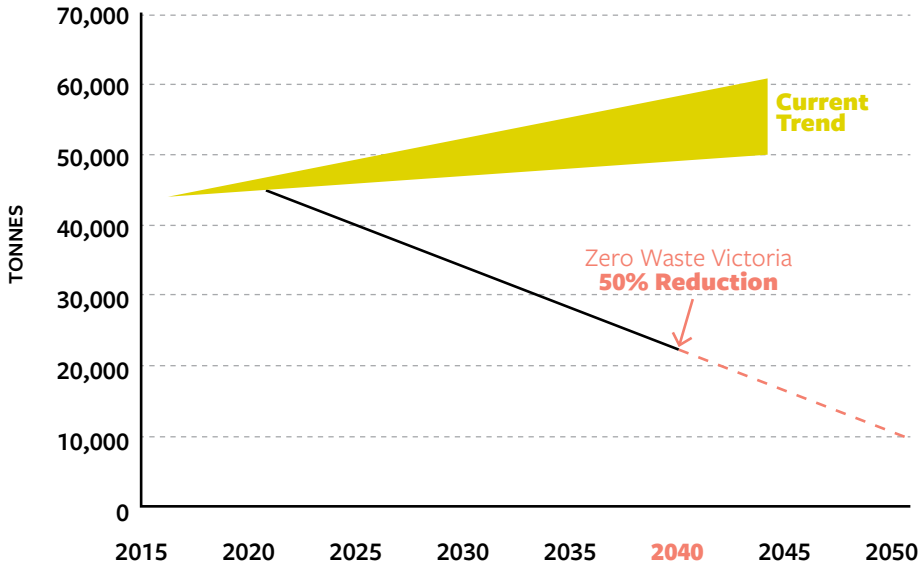


Figure 2. Landfill disposal targets

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.

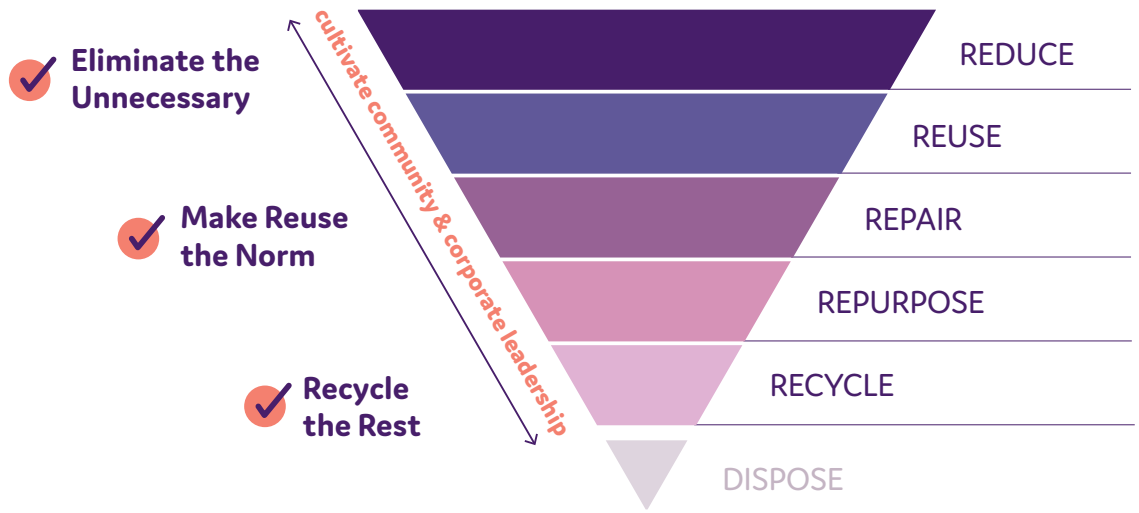


Figure 3. Waste reduction hierarchy

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
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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

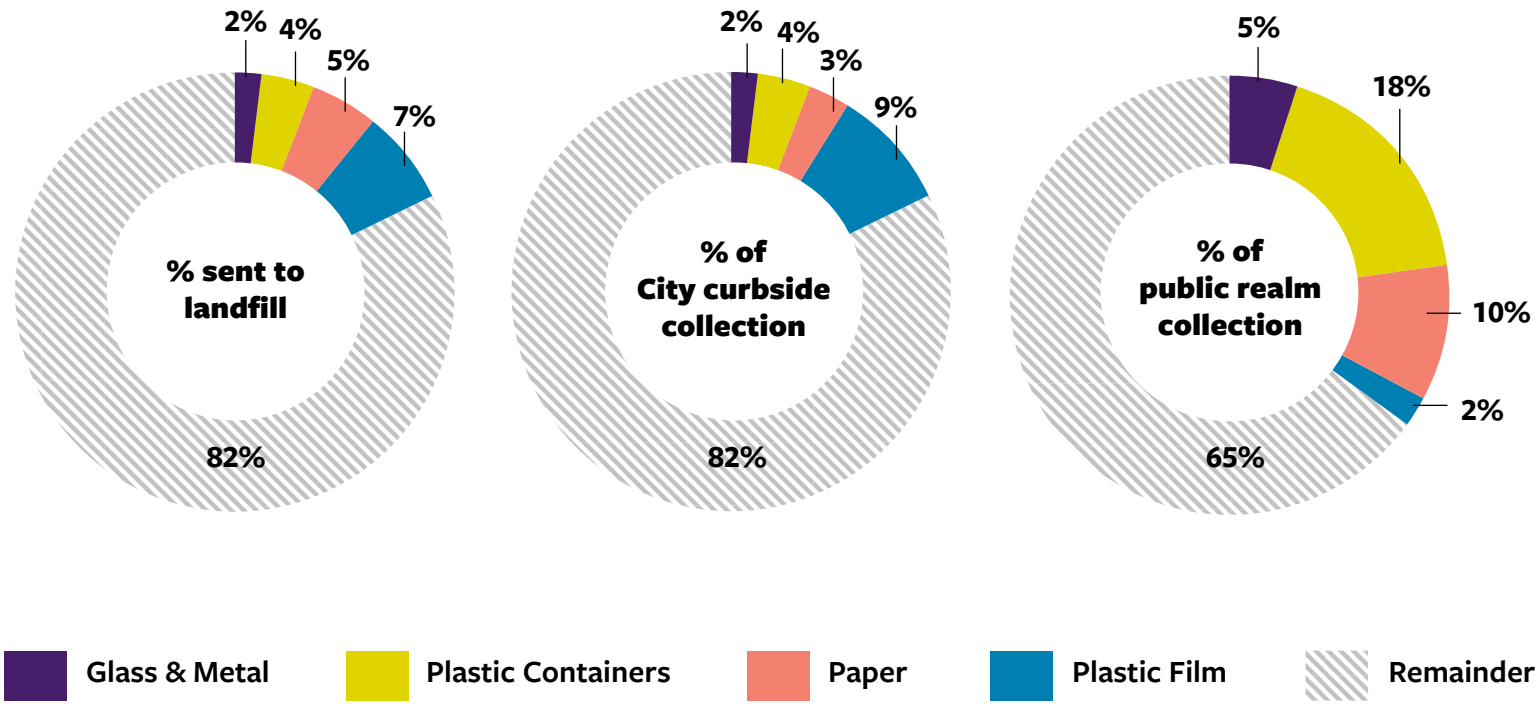
Food & Organics

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%
% of public realm collection
10%
2%
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

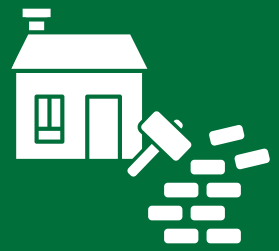
GOALS

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

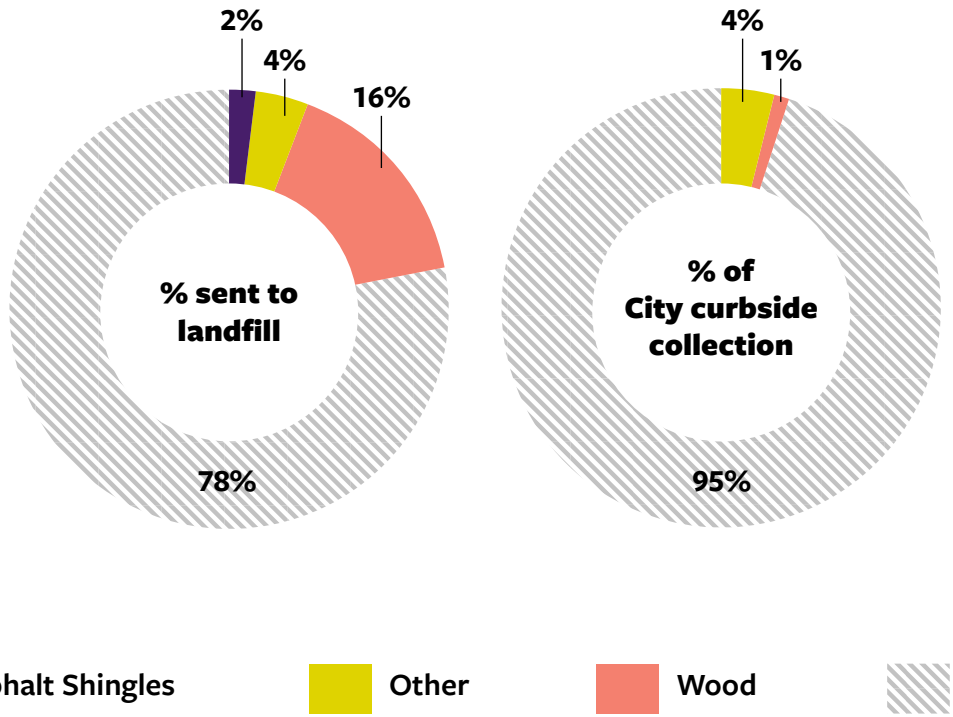


Built Environment

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

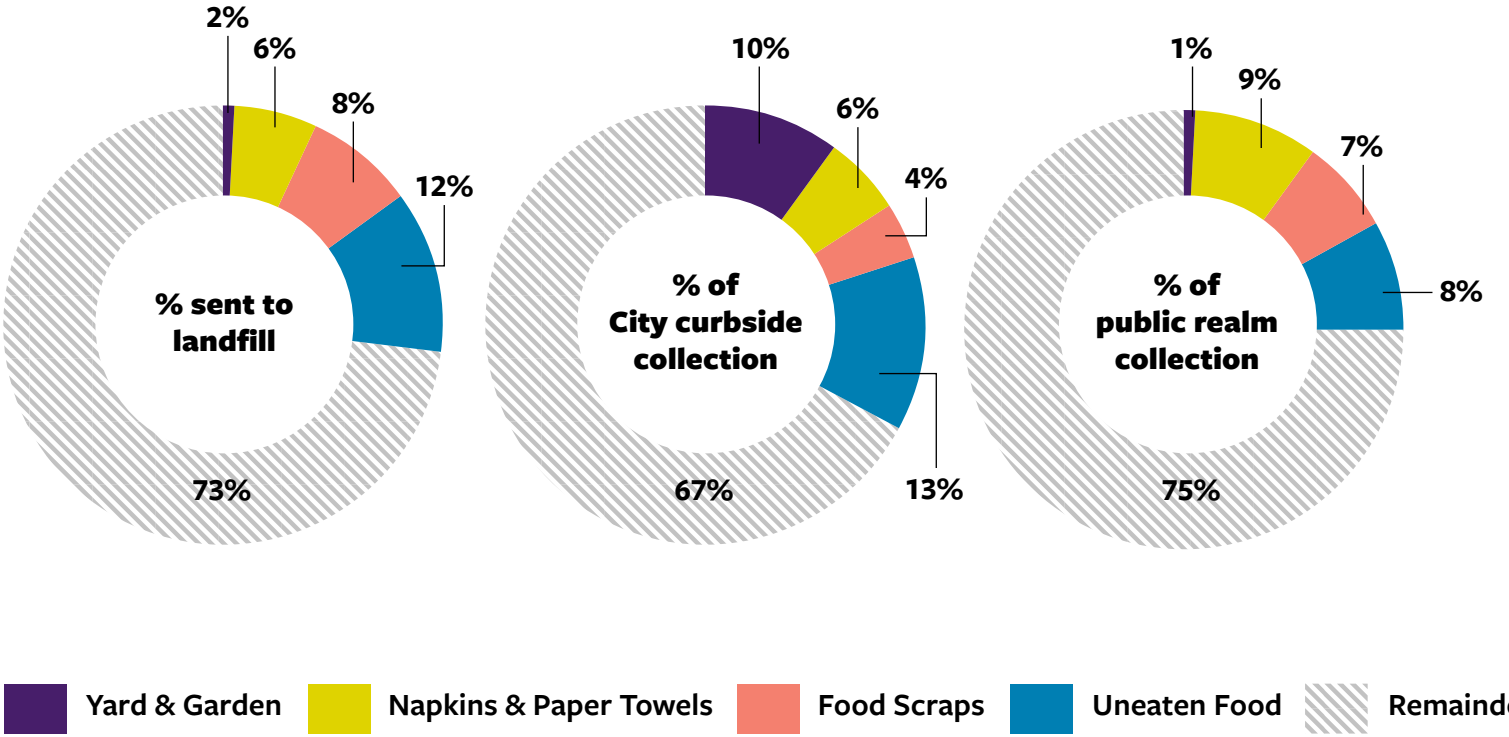
1. **All reusable and recyclable demolition materials are diverted from landfill**
2. **Reuse and deconstruction practices are common**
3. **Buildings are constructed to facilitate longevity and reuse, as well as deconstruction and recovery of materials at end of life**
4. **New construction minimizes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


2%
6%
8%
12%
% sent to landfill
73%
10%
6%
4%
% of City curbside collection
67%
13%
1%
9%
7%
8%
% of public realm collection
75%
Yard & Garden
Napkins & Paper Towels
Food Scraps
Uneaten Food
Remainder

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 City'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 McIllfaterick, 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_McIllfaterick.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**

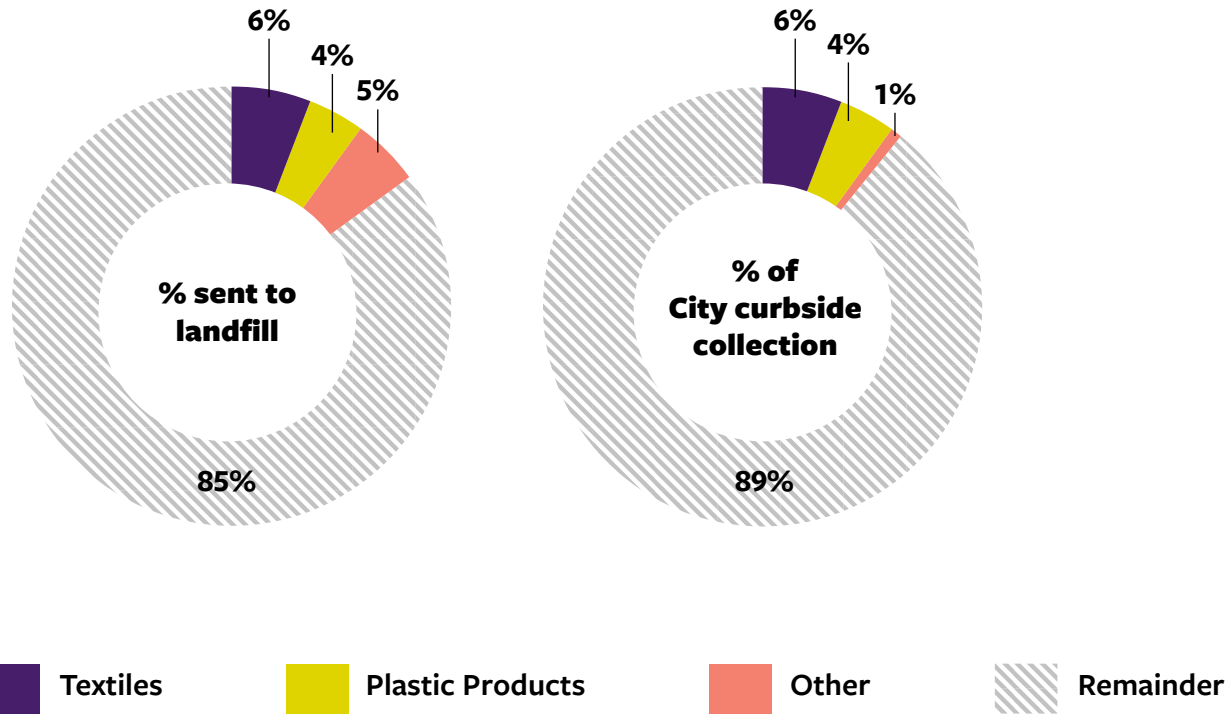
2 **All unavoidable food and organic waste is recovered**

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

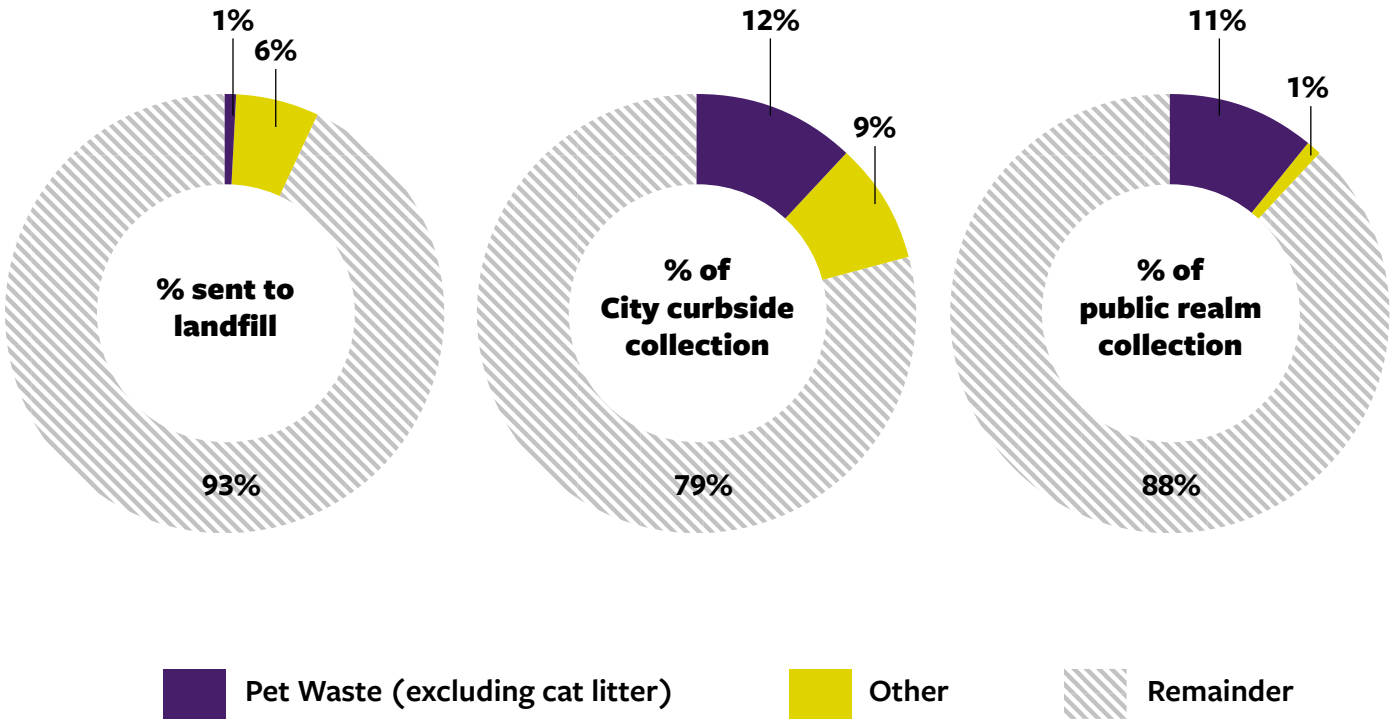
1. **All textiles are repaired or donated for reuse, repurposing or recycling**
2. **Appliance, furniture and electronic goods repair is common and accessible**
3. **All reusable and recyclable appliances and furniture are repurposed or recycled at end of life**
4. **The local sharing economy is robust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


1-866-SEE-TRUX
pepsi

CITY OF VICTORIA

ZERO WASTE VICTORIA

Printed locally on 80# Rolland Enviro Text FSC and 100# Rolland Enviro Cover FSC. This paper contains 100% post-consumer recycled content and is manufactured using renewable biogas energy. The paper is certified FSC®, Processed Chlorine Free and Ancient Forest Friendly™.

BIOGAS ENERGY

PROCESSED CHLORINE FREE

Ancient Forest Friendly™

Short Term Action Plan (2021 - 2023)

	Development
	Implementation

Proposed Initiative and Timeline		Strategy	2021	2022	2023
Single-Use Item Bans					
Single-use item bans and transition to reusable alternatives	• Develop and implement bylaw(s)	SP1.1			
	• Conduct reusable container market scan • Facilitate establishment of reusable container services	SP2.1			
Demolition Material Reuse					
Demolition material salvage	• Report on policy options • Develop and implement program or regulation	BE2.2 BE2.3 BE4.1 BE4.2 BE4.5			
Disaster debris planning	• Develop disaster debris management plan with regional partners • Maintain plan and support preparedness	BE3.2			
Multifamily and Commercial Source Separation					
Source separation for organics and recyclables	• Develop and implement bylaw(s)	SP3.1 SP3.2 SP3.3 FO3.1 FO3.3			

Enhancement of City Services			
Residential organics diversion	• Assess curbside collection of yard and garden waste	FO3.2 FO3.3	
	• Plan for service enhancements aligned with garbage fleet replacement	FO3.2 FO3.3	
Expand zero waste stations	• Install 20 additional zero waste stations in high pedestrian traffic streets and destination parks	SP3.4 FO3.2	
Education and Outreach			
Zero Waste Victoria Awareness	• Build understanding of Zero Waste Victoria and supportive behaviour throughout community • Develop education materials to improve awareness of local and regional reduction, reuse and recycling resources	ALL	
Corporate Waste Reduction			
Benchmark and reduce corporate waste	• Establish baseline data and determine best practices to support waste reduction and diversion in corporate facilities • Develop a zero waste corporate catering policy	SP4.1 SP4.2 FO4.1 FO4.2	

Committee of the Whole Report
For the Meeting of December 10, 2020

To:	Committee of the Whole	**Date:**	November 27, 2020
From:	Philip Bellefontaine, Director, Engineering & Public Works		
Subject:	Zero Waste Victoria		

RECOMMENDATION

That Council:

1. Approve Zero Waste Victoria;

2. Direct staff to begin implementing strategies in Zero Waste Victoria as outlined in the short-term action plan; and

3. Direct staff to report back with draft bylaw(s) for Council's consideration to regulate priority single-use items after new municipal authorities are conferred by the Province.

EXECUTIVE SUMMARY

Every day across the City of Victoria over 120 tonnes of materials are disposed and sent to the landfill. This waste includes demolished buildings, uneaten food, plastic and paper packaging, and old clothes and furniture. Reconsidering these materials as valuable resources instead of garbage and keeping them in use is a foundational principle of the circular economy and the area where cities have the biggest role to play in the transition to a more circular and sustainable future. Circulating materials instead of sending items to landfill is fundamental to preserving natural resources, reducing pollution, mitigating greenhouse gas emissions and supporting a resilient local economy. The City of Victoria is well positioned to lead material reuse and waste reduction initiatives across the community through its role as a solid waste service provider and using regulatory authorities granted to local governments.

This report builds on work completed by staff in the first development phase for the City's zero waste strategy to assess waste generation across Victoria and review best practices for municipal waste reduction. This report proposes a suite of strategies to achieve a 50% reduction in landfill disposal by 2040 through a renewed emphasis on material reduction and reuse. Material and product categories of focus for waste reduction initiatives are single-use items and packaging, materials from the built environment, food and organics, and durable goods. Together these categories represent more than 90% of the material sent to landfill from Victoria.

Stakeholders representing 57 organizations across the region were engaged to review the proposed strategies and identify considerations for prioritization of actions. Overall, participants

supported the strategies proposed in Zero Waste Victoria and commonly noted considerations related to space requirements, accessibility and equity of services, consistency between jurisdictions and across levels of government, and opportunities to leverage existing leaders in the community.

This report also proposes a short-term action plan informed by Council direction and priorities, current staff resources and stakeholder feedback that includes new regulations banning single-use items and improved diversion of organics, recyclable and reusable materials across the community. The short-term actions address the most significant opportunities for waste reduction using existing municipal tools while also laying the foundation for longer term transformative change.

PURPOSE

The purpose of this report is to provide Council with the zero waste strategy and a proposed short-term action plan for approval.

BACKGROUND

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, street cleaning, and public realm garbage, organics and recycling collection. The City's waste management role as a service provider is enabled by Provincial legislation and its responsibility to reduce landfill disposal is guided by the Capital Regional District's Solid Waste Management Plan. Over time, the City's solid waste mandate has evolved from a focus on managing the disposal of garbage to avoid litter towards a more sustainable model that incorporates landfill diversion, waste reduction and environmental stewardship.

In 2019, Council identified the development and implementation of a robust zero waste strategy to help support climate leadership and environmental stewardship strategic objectives. The initial development phase of the zero waste strategy was completed in 2019 and included a comprehensive analysis of waste generation across all sectors of the community and a review of best practice municipal zero waste programs. The outcomes of this work helped to reveal several insights for targeted engagement and strategy development:

- Victoria is generating a higher portion of regional waste than was previously understood due mainly to its position as the region's hub for employment, commerce and tourism.
- More policies and programs are needed to focus on waste avoidance, reduction and reuse.
- There is an opportunity to divert significantly more recyclable and organic material from the regional landfill.
- The City possesses a range of policy tools and services that complement the Capital Regional District's strategies to reduce landfill disposal.
- The City has an opportunity to demonstrate leadership through corporate waste management practices and share lessons with stakeholders.

In November 2019, Council directed staff to proceed with the second development phase of the zero waste strategy including engaging with key stakeholders to understand and develop the strategies and actions needed to shift towards zero waste for priority sectors and materials.

This report describes the analysis and stakeholder engagement that led to the development of the proposed waste reduction strategy and implementation plan.

ISSUES & ANALYSIS

The strategy for waste reduction across all sectors in Victoria – *Zero Waste Victoria* - is presented for Council's approval in Appendix A. The plan was informed by a comprehensive analysis of waste generation across the city, current evidence and scientific assessments of waste-related environmental impacts, municipal zero waste best practices from across the world, market and technology trends, municipal authorities under the *Community Charter* and *Local Government Act*, and direct feedback from a diversity of industry and community stakeholders. Key issues and considerations are presented below.

Focus Areas

Zero Waste Victoria identifies four categories of materials to focus municipal waste reduction strategies:

1. **Single-Use Items and Packaging**: This area consists of materials and products designed to be disposed after a single use or used to package goods, including cups, containers, checkout bags, paper and plastic packaging. Together these products comprise 17% of the material disposed in the regional landfill. In addition, plastic items and packaging that escape collection and enter the natural environment have been shown to harm animals, ecosystems and biodiversity[1]. Residential packaging recycling rates in British Columbia are amongst some of the highest in the world as a result of robust producer responsibility legislation at the Provincial level, but the recovery rate for plastics is less than 50% and flexible plastics less than 25%[2]. This suggests a need for additional initiatives focused on material avoidance and reusable alternatives. The City introduced the first municipal single-use item regulation in British Columbia with the adoption of its Checkout Bag Regulation Bylaw in January 2018. Additional single-use products that are prolific across Victoria but not currently regulated include cups, containers, straws, utensils and paper napkins.

2. **Built Environment**: Products in this category include materials from construction, renovation and demolition activities such as wood, concrete, metals, drywall and asphalt roofing. These materials are responsible for up to 37%[3] of Victoria's landfilled waste with wood products comprising approximately two-thirds of landfilled material from the built environment. Municipal authority to regulate land use and permit development and construction offers an opportunity for the City of Victoria to make a significant impact in this area. Local economic opportunities are also presented through the salvage and reuse of building materials[4]. Notwithstanding hazardous materials, few requirements have been developed to address the responsible management of construction,

[1] Science Assessment of Plastic Pollution. Environment and Climate Change Canada and Health Canada. October 2020. Retrieved from: https://www.canada.ca/en/environment-climate-change/services/evaluating-existing-substances/science-assessment-plastic-pollution.html

[2] Recycle BC – 2019 Annual Report. Recycle BC, 2019. Retrieved from: http://recyclebc.ca/wp-content/uploads/2020/06/RecycleBC2019-Final.pdf

[3] Between 50 – 75% of construction waste is estimated to leave the region and therefore not included in the reporting of material at the Hartland landfill.

[4] The Business Case for Deconstruction: Economic and environmental impacts of a demolition-deconstruction shift in Metro Vancouver. Vancouver Economic Commission. July 2020. Retrieved from: https://www.vancouvereconomic.com/research/the-business-case-for-deconstruction/

renovation and demolition waste.

3. **Food and Organics**: Materials in this category include uneaten food, food scraps (e.g. peels, shells and bones) and organic material generated from yard and gardening activities. Organic materials continue to represent the largest share of materials disposed at the Hartland landfill at 27% of all waste. Landfilled organic waste generated in Victoria produces the equivalent of 21,000 tonnes of CO_2 annually, approximately 6% of community greenhouse gas emissions. Together, apartment buildings and commercial properties are responsible for more than 85% of Victoria's landfilled organics. The City of Victoria's residential kitchen scraps collection service successfully diverts more than 2,000 tonnes of organics from the landfill each year. Nonetheless, organic materials still comprise one third of the City-collected residential garbage stream, indicating a need for enhancements and better compliance with the City's waste collection service. Despite the existence and development of regional organics processing infrastructure, significant improvements in the source separation of organics materials across all sectors of the community is required to mitigate community greenhouse gas emission and extend the life of the regional landfill.

4. **Durable Goods**: This category includes consumer products that can be used regularly for long periods of time such as furniture, appliances, electronics and clothing. Durable goods comprise 15% of the material disposed annually at Hartland landfill, half of which are textiles. Higher quality durable goods tend to retain their value and can be sold and reused through second-hand markets. Provincial producer responsibility programs have also enabled robust recycling systems for appliances and electronics. Nonetheless, excessive consumption, cost competition and the resulting degradation in quality of durable goods reflect broader societal trends that compromise initiatives to increase reuse and reduce waste. Although the outcomes may be less tangible than the categories above, the City of Victoria can help to foster the community values and behaviours for a circular economy by supporting sharing initiatives and local repair services. The City also has an opportunity to influence product design through corporate procurement strategies that encourage product durability and refurbishment.

Additional materials not categorized in the focus areas above include disposable diapers, pet waste and cigarette butt litter. Together these wastes comprise less than 7% of all material sent to the landfill but have considerable impacts on community sanitation and cleanliness.

Approach

Three established frameworks guide Zero Waste Victoria: the circular economy, zero waste and the waste reduction hierarchy.

Zero waste fits under the broader model of a circular economy; a paradigm that contrasts the conventional "linear economy" we currently rely on which extracts resources to create products that are used and then disposed – "take, make, waste" – and aims to build economic, natural and social capital based on three foundational principles:

- Design out waste and pollution.
- Keep products and materials in use.
- Regenerate natural systems.

Cities can incorporate all three principles into their planning and operations to help support the transition to a circular economy. The City of Victoria has already taken meaningful steps towards environmental stewardship through a range of initiatives including sustainable stormwater management and its urban forest master plan and climate leadership plan. However, given the concentration of manufactured products, material and resources that exists in cities, it is the second principle of keeping products and materials in use that presents municipalities with the biggest opportunity to advance the circular economy. Zero waste complements this principle by emphasizing the reduction, reuse and repurposing of products thereby maximizing the value of existing community resources.

Zero Waste Victoria also 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. Zero Waste Victoria acknowledges that recycling alone will not achieve zero waste and therefore establishes a renewed framing of the long established 3R's (reduce, reuse, recycle) into three guiding initiatives that clarify and emphasize the City of Victoria's role and responsibility 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.

Zero Waste Strategies

Zero Waste Victoria proposes 40 strategies to support the transition to zero waste across the community to 2040. The strategies, general implementation timeline and performance indicators are listed in Appendix B. The strategies are intended to be actionable over a 20-year period, guiding Council and staff in the development of new initiatives and continual improvement of existing services and programs.

Broadly, the tools available to the City of Victoria to action the strategies and 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 tools the City uses to implement Zero Waste Victoria will evolve over time as conditions change and as the community approaches waste reduction goals. Where appropriate, actions could reflect

a phased regulatory approach following and supported by market approaches and voluntary measures. In other situations, the regulatory tools will be evaluated based on other considerations, including the viability of sustainable alternatives, community or business readiness, local capacity and understanding, and precedents in other jurisdictions.

Stakeholder Engagement

Between July and October 2020, staff engaged local and regional stakeholders to review draft strategies and inform and prioritize actions for Zero Waste Victoria. Staff conducted 10 online focus group sessions that included 98 participants representing 57 organizations. Participants included representation from government, businesses, private waste management service providers, mission-based organizations and neighbourhood associations.

Summaries of each of the focus group sessions are provided in Appendix C. Overall, participants supported the strategies proposed in Zero Waste Victoria and the need for the City of Victoria to take action to reduce waste across the community. Common considerations for implementing the strategies were noted as follows:

- The availability of space is an underlying issue that needs to be overcome to improve reuse and recycling activities throughout the community. S pace is required to store and sort materials at multifamily and commercial properties, warehouse wholesale and retail salvaged building products and used durable goods, and to locate waste management facilities.
- City solid waste management services ought to be reviewed to consider accessibility, equity and environmental stewardship.
- The City's actions should align with initiatives across levels of government and staff should collaborate with government counterparts.
- The City is well positioned to convene major waste generating institutions across the community and lead collective waste reduction initiatives.
- Clear and consistent education and guidance to support waste reduction initiatives is encouraged.

Implementation Planning

Zero Waste Victoria contemplates the preparation of detailed action plans every 3 – 5 years. Action plans will enable the City to respond to changing conditions and guide budget and resourcing considerations accordingly.

OPTIONS & IMPACTS

The following is the recommended option for the initial short-term action plan, targets and reporting for Council's consideration.

Short-Term Action Plan

Actions to implement the strategies in Zero Waste Victoria from 2021 through 2023 are proposed in Appendix D. Actions are categorized in terms of impactful initiatives and informed by Council direction and priorities, current staff capacity and stakeholder feedback. Priority initiatives include:

1. **Single-Use Item Bans**: Council's 2019 – 2022 Strategic Plan identifies the development of regulations to address problematic single-use items. Both the Federal and Provincial governments have recently announced proposals to address plastic pollution and the Province has indicated that it will provide new authority to local

governments to regulate specific products. This action considers the development of new single-use item bylaw(s) in alignment with other levels of government while incorporating accessibility needs and local issues.

2. **Demolition Material Reuse**: In November 2019, Council directed staff to report on policy considerations for sustainable building demolitions. Emerging services and technologies in the region offer potential opportunities for the City to phase in regulatory requirements to accelerate initiatives to reduce and salvage building demolition waste. A forthcoming report with options will be presented in early 2021 for Council's consideration.

3. **Multifamily and Commercial Source Separation**: Multifamily and commercial properties are served by private haulers providing a range of service levels/standards. The Capital Regional District's (CRD) draft Solid Waste Management Plan proposes the increase of residential and commercial diversion through source separation requirements as a medium-term (5 years) implementation goal. Stakeholder engagement also highlighted the desire for consistent standards for private organics, recycling and waste collection. This action considers development of source separation requirements in alignment with the CRD Solid Waste Management Plan.

4. **Enhancement of City Services**: In November 2019, Council directed staff to develop a plan to enhance the City's residential collection program and improve diversion of materials in the public realm. New public realm Zero Waste Stations were designed, fabricated and installed in 2020 and expansion is proposed in future years. Planning for residential waste collection began in 2020 and enhancements will be proposed for Council's consideration as opportunities arise; notably, operational efficiencies, equipment replacement, new technology or major grants.

5. **Education and Outreach**: Initiatives are proposed to build broad understanding of Zero Waste Victoria and to improve awareness of local and regional services and resources that support reduction, reuse and recycling.

Targets & Reporting

An evaluation of potential waste reduction impacts for each strategy was completed to determine targets for Zero Waste Victoria and to inform key performance indicators (KPIs) for individual strategies. Approximately half of the materials generated in Victoria currently goes to the landfill. Zero Waste Victoria proposes a reduction in this annual landfill disposal of 50% by 2040. This target reflects the opportunity for waste reduction using the current range of tools available to the City of Victoria. Further reductions are possible through supportive actions at higher levels of government and industry-led initiatives.

Focus area KPIs are included in Appendix B. These KPIs may be adjusted over time and new indicators and interim targets added during implementation of Zero Waste Victoria to ensure the City can capture legislative or market changes that arise.

Reporting on the progress of key initiatives and operational highlights will continue to be included as part of regular corporate accountability reporting. Budget and resource requirements will be incorporated into the financial planning process and informed by the short-term action plan. Detailed analysis of progress and issues will be undertaken as part of the proposed 3 – 5 year implementation planning cycles.

Accessibility Impact Statement

Waste management services and infrastructure have direct accessibility benefits and potential impacts. Accessibility stakeholders and people with lived experiences were engaged as part of the focus group sessions with 2 sessions dedicated to equity, inclusion, and accessibility. Equity and accessibility stakeholders will continue to be engaged in the implementation of the City's waste reduction policies, programs and services.

2019 – 2022 Strategic Plan

The draft Zero Waste Strategy and proposed implementation plan presented for Council's consideration in this report address three actions under the Climate Leadership and Environmental Stewardship Strategic Objective: (#1.) Develop a Zero Waste Strategy, (#11.) Introduce regulations to ban and/or restrict problematic single use items (coffee cups, take out containers, straws, etc.) while taking into consideration accessibility needs, and (#16.) Implement a robust Zero Waste Strategy.

Impacts to Financial Plan

In 2019, Council approved budget for two 2-year term staff positions to support development of the Zero Waste Strategy and in 2020 approved one additional continuous staff position. The proposed implementation plan can be accomplished using the staffing capacity of the solid waste engineering and planning section, noting the expiry of two positions in 2022 requiring term renewal or a change to continuous employment status.

Budget to implement Zero Waste Victoria in 2021 is proposed to be carried forward from Council's 2020 one-time commitment in addition to $95,000 proposed in the 2021 base capital budget for public realm collection infrastructure. Future operating and capital budget requirements to implement Zero Waste Victoria will be proposed through the financial planning process.

Official Community Plan Consistency Statement

Waste reduction is consistent with Plan Goals related to Infrastructure and Climate Change and Energy in the City of Victoria's Official Community Plan (OCP No. 12-013). Specifically, the OCP 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.

CONCLUSIONS

Staff have completed the second development phase of the City's Zero Waste Strategy (Zero Waste Victoria), which included drafting of strategies, stakeholder engagement and short-term implementation planning. A target of 50% reduction in annual landfill disposal by 2040 was established based on an assessment of the impacts of robust implementation of the strategies proposed in Zero Waste Victoria. A short-term action plan is proposed to guide the City's waste reduction actions from 2021 through 2023 including new regulations banning single-use items and improved diversion of organics and recyclable and reusable materials across the community.

Respectfully submitted,

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Report accepted and recommended by the City Manager

List of Attachments:

Appendix A: Zero Waste Victoria
Appendix B: Strategies Reference Table
Appendix C: Engagement Summary
Appendix D: Short-Term Action Plan

Participants in the Solid Waste Management System

Who	Roles in Solid Waste Management
BC Ministry of Environment	• Regulates municipal solid waste management through the Environmental Management Act • Establishes provincial targets for management of solid waste in B.C. • Approves regional solid waste management plans • Authorizes discharges to the environment through permits and operational certificates • Enforces provincial regulations and the conditions set out in discharge permits and operational certificates • Mandates EPR in BC through the Recycling Regulation
Capital Regional District	• Operates the Hartland Landfill site and the Port Renfrew transfer station • Provides residential recycling services through a combination of curbside and depot collection (through a contract with Recycle BC) • Prepares the regional solid waste management plan (SWMP) • Works with municipalities and First Nations to implement the SWMP • Regulates the operation of composting facilities through the Compost Facility Bylaw • Regulates the operation of transfer stations on Salt Spring Island through the Salt Spring Island Transfer Station Bylaw • Reports annual MSW disposal rate to ministry • Provides education and outreach • Monitors the implementation of the SWMP through the Solid Waste Advisory Committee
Municipalities	• May provide various curbside collection or drop-off services to residents • Litter collection, streetscape sanitation and waste collection services for public spaces • Provides education and outreach associated with local solid waste services • Municipal waste management planning, which may include zero waste planning • Liaises with the regional district with regards to solid waste services and issues • Participates in the development and implementation of the SWMP • May undertake local zero waste initiatives • Provides land use zoning approval for a variety of solid waste and recycling facilities in their municipality
First Nations	• May provide curbside collection of garbage and kitchen scraps to residents • Provides education and outreach associated with the local solid waste services • Liaises with the regional district on items of mutual interest • May participate in the development and implementation of the SWMP
Producer Responsibility Organizations	• Provides collection services for stewarded products • Provides education/promotion to increase product recovery • Provides deposit refunds to consumers (where applicable) • Monitors and reports on diversion/recovery rates to the Province • Participates in the development and implementation of the SWMP
Private sector involved in waste management (e.g., haulers, facility operators)	• Provides garbage and recycling collection services to municipalities, businesses, residents, institutions, and construction/ demolition projects • May operate private facilities such as bottle depots, recycling depots, transfer stations and composting facilities • May be regulated by Provincial government • Liaises with waste generators (customers) to minimize contamination of waste streams • Complies with CRD requirements for source separation of controlled waste • Participates in the development and implementation of the SWMP
Waste generators (residents and businesses)	• Participates in municipal and regional solid waste management programs and services • Is informed regarding source separation requirements, disposal restrictions and options to minimize waste sent to disposal
Non-profit organizations	• Provide recycling depot services on Salt Spring and the Southern Gulf Islands • Receive reusable good for sale in thrift stores and distribution in social support programs